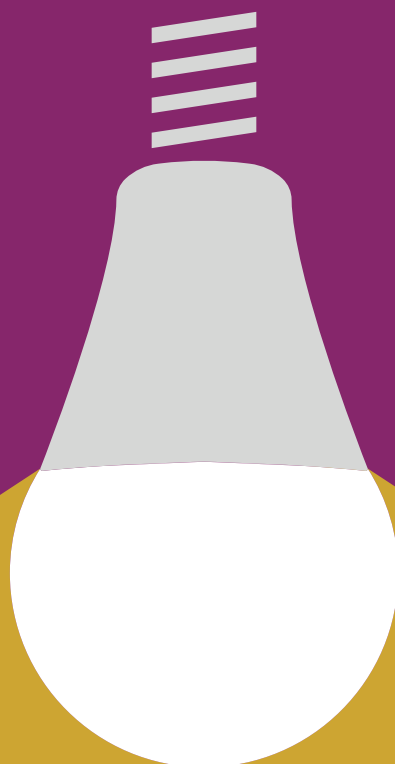


Development Letters

Issue

JAN-MAR '21

A periodical by
Research and Policy Integration for Development (RAPID)
with the support from **The Asia Foundation**



**Strengthening Localisation of SDGs:
A Model Union Approach**
Shamsul Alam | Page 1

Getting Ready for LDC Graduation
Abdur Razzaque | Page 3

**World Rankings of Dhaka University:
How to Improve?**
Muhammed Shah Miran | Page 6

**Economic Governance in Bangladesh:
Potential Roles for the Planning Commission**
Helal Ahammad | Page 8

**Multidimensional Poverty in Bangladesh:
Measurement and Implications**
Mahfuz Kabir | Page 13

Rethinking Bangladesh's Fiscal Year Time Frame
M Abu Eusuf | Page 17

**Combatting Transfer Mispricing:
A New Avenue for Bangladesh Customs**
Nipun Chakma & Mohammad Fyzur Rahman | Page 20

**Do Natural Hazards Make Farmers from Coastal
Areas More Productive? Evidence from Bangladesh**
Syed Mortuza Asif Ehsan & Md Jakariya | Page 24

**The Need for Valuing the Socio-Cultural Aspects of
Wetland Ecosystem Services in Bangladesh**
Alvira Farheen Ria & Raisa Bashar | Page 27

**Plugging Bangladesh into Global COVID-19
Vaccine Supply Chain**
Rabiul Islam Rabi & Md Shahiduzzaman Sarkar | Page 30

Editorial Team

Editor-In-Chief

Abdur Razzaque, PhD
Chairman, RAPID and Research Director, Policy Research Institute (PRI), Dhaka, Bangladesh

Managing Editor

M Abu Eusuf, PhD
Professor, Department of Development Studies and Director, Centre on Budget and Policy, Dhaka University, and Executive Director, RAPID, Dhaka, Bangladesh

Issue Editor

Syed Mortuza Asif Ehsan, PhD
Assistant Professor, North South University and Senior Research Fellow, RAPID

Associate Editors

Rabiul Islam Rabi
Mahir Musleh
Faiza Tahsin

Cover and Visual Design

Zahidur Rahman

Advisory Board

Atiur Rahman, PhD
Former Governor, Bangladesh Bank, Dhaka, Bangladesh

Ismail Hossain, PhD
Pro Vice-Chancellor, North South University, Dhaka, Bangladesh

Bazlul Hoque Khondker, PhD
Professor, Department of Economics, Dhaka University, Dhaka, Bangladesh

Nazneen Ahmed, PhD
Senior Research Fellow, Bangladesh Institute of Development Studies (BIDS), Dhaka, Bangladesh

Syeda Zakia Hossain, PhD
Senior Lecturer, Faculty of Medicine and Health, University of Sydney, Sydney Australia

Mohammad Anisur Rahman, PhD
Professor, Department of Public Health, California State University, Fresno, USA

M Nahid Hasan, PhD
Entrepreneur and owner, Business Connection BV, Delft, Netherlands

Runa Laila, PhD
Senior Research Fellow, Department of Social and Cultural Anthropology, Vrije Universiteit Amsterdam, Netherlands

Badri Narayanan Gopalakrishnan, PhD
Affiliate Faculty Member, School of Environment and Forestry Sciences, University of Washington, Seattle, USA

Jodie Keane, PhD
Senior Research Fellow, Overseas Development Institute (ODI), London, UK

Published in March 2021

Published by Research and Policy Integration for Development (RAPID)



House: 13, Road: 108, Gulshan 2
Dhaka-1212, Bangladesh
Phone: +8801711287444
Email: info@rapidbd.org
Website: <http://www.rapidbd.org>

In partnership with The Asia Foundation



The Asia Foundation

Improving Lives, Expanding Opportunities

Development Letters, a quarterly peer-reviewed periodical, is published by Research and Policy Integration for Development (RAPID). The views expressed in this publication are the views of the authors and not necessarily those of The Asia Foundation and Research and Policy Integration for Development (RAPID).

For future issues, email at info@rapidbd.org.

Foreword

'Development Letters' is a new periodical that aims to promote ideas with important policy and practical implications for a developing country like Bangladesh. This publication provides a platform to introduce thought-provoking ideas on broad development issues through short and concisely-written articles that are comprehensible to policymakers and development practitioners.

Development Letters is different from other established academic journals in several respects. First and foremost, it emphasises on communicating the propositions in a manner that can help integrate senior policymakers and other relevant stakeholders into the policy discourse. Therefore, its objective is to help disseminate potentially important and timely ideas without being stifled by technical details and unnecessarily long and ambiguous review of other studies.

Furthermore, Development Letters will also select and publish ideas that should require full-blown research to be undertaken to gather evidence. These days, policy-relevant analytical studies are often in short supply given the lack of financial support needed for conducting those. This journal will showcase the underlying ideas that need to be supported to bridge the gap between analytical research and informed policymaking.

Development Letters will also offer an opportunity to learn from those who based on their experience can share insights into the factors that cause development results to be less than optimal. This can help generate invaluable lessons for future interventions.

Finally, Development Letters is about dealing with issues that are topical and demand immediate attention by policymakers and development practitioners. It is a usual phenomenon in social sciences that empirical research can be quite time-consuming, and any evidence gathered may require further verifications. Development Letters will duly acknowledge this challenge while highlighting the promising ideas that need due consideration. To summarise, this periodical focuses on bringing together relevant issues, ideas, and approaches that can be researched, refined, experimented, and investigated further.

This particular issue of Development Letters contains 10 articles that include, amongst others, some practical ideas on COVID-19 vaccine supplies, preparation for LDC graduation, localisation strategy to implement sustainable development goals, and considering an alternative fiscal year timeframe to make the implementation of national budgets more effective.

Research and Policy Integration for Development (RAPID) and The Asia Foundation remain committed to promoting multidisciplinary socio-economic research with practical implications for generating informed policy-inputs and improving the implementation of development activities. Development Letters, in this regard, should play an important role. After tremendous socio-economic achievements of the past decades, the Bangladesh economy is now at a critical transition phase marked by its alleviation to a lower middle-income country (since 2015) and impending graduation from the group of least developed countries. While these transitions are already challenging, the COVID-19 global pandemic threatens to cause a dent on the past progress. It is in this context that the policy discourse on socio-economic development ideas becomes more critical than ever. Development Letters aims to contribute to this process by providing some timely and potentially worth considering ideas.

Abdur Razzaque, PhD
Editor-in-Chief, Development Letters
Chairman, RAPID

Kazi Faisal Bin Seraj
Country Representative
The Asia Foundation, Bangladesh

Strengthening Localisation of SDGs: A Model Union Approach

Shamsul Alam

The pursuit to achieve the Sustainable Development Goals (SDGs) cannot be accomplished exclusively at the behest of governments or world leaders at the United Nations (UN) level, even with only national-level programmes. Attaining these multifaceted development goals calls for taking account of the 'local' context and then devising and implementing appropriate interventions. The United Nations defines "localising" as "the process of considering subnational contexts to achieve the 2030 Agenda, from the setting of goals and targets, to determining the means of implementation and using indicators to measure and monitor progress". In Bangladesh, the administrative structure from largest to smallest are: division, district, upazila, union, ward, and village. Therefore, localising SDGs in Bangladesh will mean implementing the development agenda across this administrative structure catering to the needs of the local communities, households, and individuals, particularly of those who are at risk of falling behind.

The government of Bangladesh (GoB) has taken several important national initiatives to effectively introduce the SDGs since 2016. In the meantime, by assigning the roles of ministries and departments based on the goals and metrics of the SDGs, a national work plan has been developed. Data review was carried out to determine the data gap to meet the SDG goals, and a report on the 'SDG Monitoring and Assessment Process' was prepared for evaluation and monitoring of implementation progress, and the SDGs' first evaluation report was released in 2018. The priorities and objectives of the SDGs are expressed in the 'flagship development plan' of the Government, i.e., in the Seventh Five Year Plan (2016-2020).

The General Economics Division (GED) of the Bangladesh Planning Commission has proposed an 'SDG Localisation Framework' through which a

workplan for the implementation of the SDGs in all of Bangladesh's upazilas has been prepared. Recently, under the guidance of the Cabinet Division, a committee on the execution and coordination of SDGs was formed at the upazila, district, and divisional levels. Its main responsibility is to adopt the action plan, and implement, coordinate, and monitor the implementation of the SDGs, giving importance to the SDG priority list of Bangladesh, fitting the upazila needs. Localisation of SDGs has already been undertaken in Natore at the district level with the help of the existing committee for SDG localisation, but no workplan at the upazila level has started elsewhere yet.

However, some NGOs (non-governmental organisations) have taken initiatives to localise SDGs at the union level. In fact, The Hunger Project-Bangladesh (THP-Bangladesh) has taken initiatives to achieve the SDGs and formulate local level planning in the Saharbari Union under Gangni Upazila of Meherpur District which offer quite interesting insights. Taking a close look at the SDG implementation approach of the Meherpur NGO experience and the SDG localisation framework developed by the GED, one difference becomes evident. The GED's SDG localisation structure is mainly upazila-centric; but The Hunger Project's SDG implementation in the Saharbari Union is union-centric. Subtle observation shows that in THP's approach, the upward link between upazilas and union parishads have not been fully established in the implementation of the SDGs. However, in order to implement the SDGs at the union level, The Hunger Project signed an agreement with the Saharbari Union in 2016 to build it as a model 'SDG union'.

A community-led development approach is the core strategy of The Hunger Project for localising SDGs. The union parishad's involvement in the implementation of

the SDGs has been ensured by training them as 'Animators' through the Special Animators' training. The group of trained volunteers created by The Hunger Project include: (1) Animators, (2) Women Leaders, (3) Youth Leaders, (4) Community Facilitators, (5) Members of National Girl's Advocacy Forum, (6) Participatory Action Research by the ultra-poor (PAR) Facilitators, (7) Trained Women Nutrition Facilitators, (8) Volunteer Civil Society Leaders, and (9) a Concerned Citizen Committee. With the leadership of these volunteers, a total of nine village development teams have been formed in the Saharabati Union, and village-based priority assessment and formulation of plan have been done through a baseline study by using social mapping, well-being ranking, and problem ranking tools.

There are three main components of The Hunger Project's strategy of localising SDGs in the Saharabati Union: (a) planning, (b) finalising development priorities, and (c) implementation of activities. The union parishad formulates the plan in five steps:

1. Village-based needs assessment, prioritisation, and planning;
2. Organising Ward Shavas (Ward Assembly) and gathering information from standing committees' meetings for identification of priorities;
3. Priorities and planning related data collection from government and non-government organisations working at the union level; and
4. Finalising union-based priorities and formulating annual and five-year plans in the light of priorities set by relevant stakeholders for SDG localisation, which are reviewed by the Union Planning Committee and revalidated at Ward Shavas.

The second phase in the SDG localisation is the formulation of the development vision for the union and the finalisation of priorities based on the participation of people of all levels of the society. In localisation of the SDGs, Saharabati Union's vision is to "create a prosperous union by ensuring modern and environment friendly production, improved education and health, social justice, and good governance, whereby every woman, man, and child can reach their full potential." The priority areas of the Saharabati Union include improvement of education; development of agriculture, livestock and fisheries; development of livelihoods; development of environment and plantation; resolving family disputes and preventing violence against women; communication and infrastructure development; safe water and sanitation; increased efficiency and good governance of the union parishad; prevention of drugs, terrorism, and militancy; and promote social harmony. It is important to note that the priority areas of the Saharabati Union are similar to the potential action areas identified under the framework proposed by the GED.

Effective mobilisation of financial resources to enforce the SDG localisation programme is critically important. The possible sources of funding identified in the implementation of the plan adopted for the localisation of the SDGs in the Saharabati Union are: the district and upazila projects and LGSP (Local Governance Support Project); private sector/donors; Kabikha (Food for Work); Kabita (Taka for Work); employment generation schemes; donation from wealthy locals; volunteers based social capital; surplus of the union revenue budget; land transfer tax (1%); and the programmes/resources of various departments/projects allocated for the Union Parishad. A closer look at these potential sources of financing shows close similarity with the five sources mentioned in the 'Demand Assessment and Financing Strategy for SDG Implementation' proposed by the GED.

Since many unions make up an upazila, unions are the focal points of all relations. The above-mentioned case study provides some practical and useful ways forward in implementing SDGs through a union-centric approach. It is in this context, a government initiative to create 'SDG Model Unions' will be helpful for upazila parishads and local government organisations are to play a pivotal role in implementing the SDGs. For this purpose, in order to strengthen the SDG-related activities at the local level, all government offices and agencies under the upazila parishads need to be strengthened with transparency and made accountable for their performance according to the 'Local Government Act, 2009'. Upazila administration can be instructed to take integrated steps, the sooner the better.

The general framework used for the Saharabati Union can be refined and tailored to local needs of the respective unions. In designing such interventions, we must not lose sight of the matter that administrative processes involved in building SDG model unions should be easy to replicate and serve the purpose, i.e., benefitting the local communities and leaving no one behind.

**A modified version of this article appeared in The Financial Express on 5 April, 2020.*

Shamsul Alam, PhD, is Member (Senior secretary), General Economics Division (GED), Bangladesh Planning Commission.

Email: sambau23@gmail.com

Getting Ready for LDC Graduation

Abdur Razzaque

As a testimony to its impressive socio-economic progress, Bangladesh is set to graduate from the group of least developed countries (LDCs). Bangladesh met the graduation criteria in the second consecutive triennial review by the United Nations Committee for Development Policy (UNCDP). The UNCDP has recommended Bangladesh for graduation in 2026.

This important achievement however will bring in certain challenges such as loss of trade preferences in more than 75 per cent of Bangladesh's exports. Our exporters could see average tariffs on their exports rising from zero to 17 per cent in Canada, 16 per cent in China, 8.7 per cent in Japan, and 8.6 per cent in India (along with various items being put back on the negative list, for which India does not provide any preferences). Post-graduation market access provisions in the EU are not settled yet, but under the existing terms, Bangladesh will not qualify for the GSP+ (GSP plus) scheme that allows non-LDC countries to have duty-free market access in the EU. This would result in the average tariff rate facing Bangladesh's garment exports in the EU rise from zero to about 10 per cent.

What would be the impact of rising tariffs on Bangladesh's 75 per cent of exports? According to one recent estimate by the World Trade Organization (WTO), such tariff hikes could cause Bangladesh's export to decline by a staggering 14 per cent. While there are people upbeat about our export competitiveness, they should realise—perhaps from the recent episode of the U.S.-China trade war—that tariffs do hurt exports from a country on which those are imposed.

Bangladesh's clothing exports have flourished to those countries only where trade preference exists. In 2000, Bangladesh had almost an identical garment market

share of 3.3 per cent in Canada, the EU, and the United States. Over the next two decades, our market share in Canada and the EU—that provided generous duty-free market access—would rise to 13 per cent (in each market), in contrast to just about 6 per cent in the US, which never allowed zero-duty imports from Bangladesh. Since 2011, Bangladesh's export market share in the US has remained virtually stagnant. On the other hand, taking advantage of duty-free access, Bangladesh's market share in Australia and Japan has risen from virtually nothing to close to 9 per cent and 4 per cent, respectively.

LDC graduation will also curtail our policy space. For instance, while WTO members are generally prohibited from providing export subsidies, Bangladesh as an LDC in recent years have spent around US\$ 550 million on export incentives. One can question the merits of export incentives, but the fact is we will lose the policy option of considering such export support measures not only for the RMG sector but also for all other exports. Whether we like the idea of export incentives or not, withdrawing those measures would also imply loss of export competitiveness.

Another major benefit which Bangladesh enjoys as an LDC is the right to manufacture any medicines regardless of their patent protection. This privilege, according to the WTO's TRIPS provisions, should be applicable for LDCs until 2033, but graduation would bring an abrupt end to this benefit immediately.

I do not think LDC graduation will have any major impact on foreign aid inflows into the country. Donors hardly consider LDC status in offering financial assistance. Recipient countries' historical relationship with donors, such country-specific situations as natural disasters, civil wars, refugee crisis, and donor countries'

geo-political interests, etc. are more dominant reasons for allocating foreign aid. It is true that foreign borrowing costs have risen and conditionalities have become more stringent even before LDC graduation. This is because of Bangladesh's transition from low-income to lower-middle income country, as per World Bank classification of global economies.

Dependence on foreign aid has fallen in Bangladesh from more than 8 per cent of GDP in the mid-1980s to just above 1 per cent in recent years. On the other hand, our absorptive capacity of foreign aid remains much lower than the availability—as reflected in surging foreign aid in the pipeline now totalling more than US\$ 50 billion. Graduation from the LDC category is not expected to have major consequences for UN assistance. Although some UN technical and financial resources are devoted to LDCs, this is generally based on individual country needs except for UNDP and UNICEF that provides a part of their overall aid to LDCs. There are some other sources of assistance which could be inaccessible for Bangladesh after LDC graduation—in some cases with a transition period—like Technology Bank for LDCs, the Least Development Country Fund (LDCF) for supporting climate change-related projects, and the Enhanced Integrated Framework (EIF) for trade-related capacity building. But there should be no immediate impact as the assistance received from these schemes is quite small.



What would be the impact of rising tariffs on Bangladesh's 75 per cent of exports? According to one recent estimate by the World Trade Organization (WTO), such tariff hikes could cause Bangladesh's export to decline by a staggering 14 per cent.

Preparing for graduation: What is to be done?

If export shocks can be avoided, the impact of graduation will be minimal. Therefore, the most critical component of any graduation strategy should aim for retaining or prolonging the current level of market access. Many observers often suggest that preferential market access is not needed after graduation. They are wrong! Almost all countries in the world proactively seek for trade preferences following the globally established rules and practices to enhance their competitiveness.

Free trade agreements (FTAs) are now being strongly advocated for seeking new market access and their importance in building future trade development strategies must not be undermined. However, it must be kept in mind that FTA outcomes can be ambiguous in nature. That is, given a country's initial conditions (e.g., existing trade policy regimes, comparative advantage vis-à-vis potential FTA partners, etc.), FTAs can have adverse welfare consequences as well. A well-established case in the academic literature is that when a country has a huge dependence on tariff revenue—for instance, Bangladesh with almost one-third of its government revenue being sourced from imports—FTAs can lead to massive welfare consequences. Furthermore, it is also true that for a variety of reasons, other trade partners might not have any appetite for considering FTAs with Bangladesh. When perceived gains—either economic and/or geo-political—are small, many developed countries will not like to spend their senior officials' and legislators' valuable time on lengthy negotiations. Therefore, Bangladesh must opt for different options for different partners. Prolonging the current market access in the EU will be the topmost priority. The EU can be requested for extending LDC transition period further in the aftermath of the disruptions caused by Covid-19, which threatens to derail the progress towards achieving the sustainable development goals.

Bangladesh should approach Australia, Canada, Japan, and the U.K. to commit to at least an additional 3-year transition period following the example of the EU. These countries should be requested to consider gradual phasing out of preferences (rather than raising the full tariff amount at once) after the expiration of the extended transition period.

The current duty-free market access in China and India are very important considering future export development prospects and thus Bangladesh must provide special attention to retain the existing benefits. After Samoa's LDC graduation, China extended preferences to it. Similarly, under SAFTA article 12, the Maldives have continued with the same LDC preferences to access India's market. Using these precedents, Bangladesh can ask for the continuation of similar unilateral preferences from both China and India. Striking FTAs with India and China may be appealing to

many. It is, however, worth noting that given these two countries' enormous supply-side capacities, potential trade diversion effects (translated into adverse welfare consequences) could be extremely high.

WTO rules allow preferential trading arrangements (PTAs) involving developing countries only, while any trade deal with developed countries must be an FTA. The key difference is that countries in a PTA can be selective about the products in which they want to exchange preferences while the coverage of trade items in an FTA should be "substantially all trade", which is usually interpreted to mean an average of 90 per cent of all items currently traded between the two countries. I do think that if Bangladesh can negotiate well, PTAs could be an immensely powerful route for exploring export opportunities in developing countries.

As continuing with export subsidies (cash assistance) will not be possible, devising WTO-consistent export incentive mechanisms will be critical. Contrary to popular beliefs, transforming cash assistance programmes into equivalent export incentives schemes is not an easy task. In this context, learning from other countries' WTO-consistent support measures is important

Any loss of export competitiveness due to forgone duty-free access can be offset (either partially or to the full extent) by cost-saving measures. I tend to think that Bangladesh can easily materialise a 10 per cent cost saving, which can help recoup a significant part of lost competitiveness. The real exchange rate for taka is hugely overvalued and dealing with it is just one source of gaining back some competitive strength. Our cost of doing business is excessively high, which needs urgent attention. Efficiency gains through improved customs procedures, inland transportation system, and reduced administrative complexities/corrupt practices will also come as very handy.

It is now time to develop and implement a comprehensive approach to improve Bangladesh's export competitiveness through a transformed trade and investment policy regime backed by analytical reasoning and empirical evidence.

**A modified version of this article appeared in The Business Standard on 20 January, 2021.*

Abdur Razzaque, PhD, is Chairman, Research and Policy Integration for Development (RAPID) and Research Director, Policy Research Institute (PRI) of Bangladesh.

Email: m.a.razzaque@gmail.com



Any loss of export competitiveness due to forgone duty-free access can be offset (either partially or to the full extent) by cost-saving measures. I tend to think that Bangladesh can easily materialise a 10 per cent cost saving, which can help recoup a significant part of lost competitiveness.

World Rankings of Dhaka University: How to Improve?

Muhammed Shah Miran

Established on July 1, 1921, the famous Dhaka University (DU), previously dubbed as the “Oxford of the East”, can be called the lighthouse of Bangladesh. The university is creating skilled manpower from the beginning of its establishment. Dhaka University has made unique contributions to various struggles including the independence movement, which no other institution in the world has. Nowadays, it is often discussed that the values and traditions of the university are not like how they have previously been. Discussions and criticisms begin, especially, when the university rankings are published every year. Currently, several organisations around the world publish rankings of the world's universities every year. Among them, the world rankings by the UK-based education and research organisation, Quacquarelli Symonds (QS), and the rankings published by the UK-based Times Higher Education magazine, are the most acceptable rankings. The main indicators of the ranking of the two organisations are almost the same but the results are different. DU ranks 801-1000 in the QS list in 2021 but according to the Times Higher Education rankings, it ranks 1000 plus. It is worth mentioning that DU ranks 134th position in Asia this year and the top position in our country according to the QS list. Indicators in Times Higher Education rankings (with weights) are teaching (30%), research (30%), citations in publications (30%), international reputation (7.5%), and institutional or industrial income (2.5%). The QS method is almost the same; there is an additional component—reputation in the job market. According to data from the Times magazine's website, DU scored 15.3 per cent in teaching, 8.6 per cent in research, 36.7 per cent in the citation, 33.7 per cent in institutional income and 42.4 per cent in international reputation in 2021. DU got a very low score in teaching, which will surprise everyone. In reality, there are many factors in the teaching environment, such as reputation survey (15%),

student-teacher ratio (4.5%), undergraduate and Ph.D. student ratio (2.5%), and teacher-to-PhD student ratio (2.5%), and institutional income (2.5%). Reputation surveys include assessments of how teacher teaches in the classroom, student-teacher relationships, examination methods, and curricula consistent with sustainable development. According to Times Higher Education, the number of students in DU is 210,758, where the number of students of affiliated colleges has been included. But there are 35–40 thousand regular students of DU. The number of students per teacher was found to be 16.9. Every year many researchers from the university get M.Phil. and Ph.D. degrees. If only regular students are accounted for, then the rankings of the university may vary according to the above indicators. Research is another important indicator on which 30 per cent of the total score depends. There are also some aspects such as research reputation, research income, and productive research. The total number of publications per year from a university and the journals published per teacher is assessed as a research reputation. Needless to say, many more publications are now published in high impact factor journals than ever before, albeit less than others in the world. The country's money is turned into knowledge through various projects, while the acquired knowledge can be turned into wealth through technology. The rich countries of the world have become developed countries by using technology. Teachers abroad market their acquired knowledge or technology through universities or their own companies. From this, the quality or acceptability of the research can be determined. Marketing requires connecting the industry with the university and working jointly.

Research-citation index per teacher is a component based on which 30 per cent score is obtained. This is the ratio of the number of research papers cited

worldwide to the total number of research papers published in five years by the researchers of a university. The ratio of the number of international faculties to students shows the ability of a university to attract foreign teachers and students or the international reputation of that institution. According to Times Higher Education, the number of international students at DU is only 3 per cent, while the top university namely Oxford University has 41 per cent and MIT has per cent. In the developed world, a student has to rent a room in the dormitory for Tk 20 to 40 thousand per month, in our country it needs only Tk 200/300. The monthly tuition fee of a student abroad is Tk 20 to 30 thousand but in our country, it is Tk 30/50. So, if it was ranked as a cost per graduate, DU would be at the very top of the list. However, to improve the ranking, it is necessary to improve the quality of fundamental research because the effect of research is also useful in the score of teaching. It is to be hoped that the present administration of DU has taken some steps to improve the rankings including master plan formulation, the formation of Institutional Quality Assurance Cell, curriculum development in line with 4th Industrial Revolution and Sustainable Development Goals, and adoption of National Integrity Strategy. Key ways to improve world university rankings of DU are to collaborate among researchers at home and abroad, incentivise raising research fund, attend the international conference, recruit foreign faculties and draw in more international students, establish industry-university connections, control quality, hire the best faculties, know the talent list and congratulate the successful people, train up young faculties, hire a scholar as a leader, and create suitable jobs for young researchers. If these are implemented, the rankings of the university may improve in the future. But the reality is that some issues in the index are very costly and time-consuming to implement; so, rankings cannot be expected to improve overnight. However, we believe that our beloved centennial university will be able to retain its glory and tradition, as well as improve its rankings in the near future.

*Muhammed Shah Miran, PhD, is a Professor,
Department of Chemistry, University of Dhaka.*

Email: shahmiran@du.ac.bd



To improve the ranking, it is necessary to improve the quality of fundamental research because the effect of research is also useful in the score of teaching.

Economic Governance in Bangladesh: Potential Roles for the Planning Commission

Helal Ahammad

Background

Bangladesh has experienced a relatively high economic growth over the past decade or so. Paradoxically, this rapid growth has occurred despite a persistently sub-par economic governance regime in Bangladesh. Economic governance in this essay is taken to mean a whole-of-government coordinated approach to public policy-making duly informed by evidence on the ground, as well as enforcing efficient, effective, and equitable regulations and programme deliveries. The so-called 'growth paradox' is reasonably well known in the Bangladeshi development discourse (see, e.g., Mahmud, 2020; Asadullah and Chakravorty, 2019; Asadullah et al., 2014). Interestingly, the flashpoint in the Bangladeshi development discourse has been the remarkable social and human resource development achieved over the years on the back of low-cost initiatives and measures particularly in areas of micro-financing, specialist health and education services provision, and social-awareness campaigns by non-governmental organisations (NGOs) such as BRAC (see, e.g., Sen, 2020). While successive governments have provided no-regret enabling environments for the NGOs to operate in such specialist areas, the lack of institutional capacities for sound economic governance in Bangladesh has stubbornly remained to be the weakest links in the economic-governance and socioeconomic-development nexus. Hence, one working hypothesis for this essay is that the past economic growth has failed to actualise the potential economic growth in Bangladesh by a considerable margin. To close the actual-potential gaps going forward, this essay seeks to advance a few important institutional innovations including new remits for the Bangladesh Planning Commission.

Bangladesh is well poised to graduate out of its

long-held LDC status by 2026 and aspiring to become a developed country by mid-century. The government's Vision 2041 seeks to transform Bangladesh into a high-income country by 2041 (Alam, 2019). Reiterating such national aspirations, the Bangladesh Government has released its 8th Five Year Plan (FYP) aiming to implement the plan and its goals through annual national budgets and Annual Development Programmes (ADPs). As has been done almost religiously over the past 50 years since independence, the 8th FYP sets out detailed macroeconomic and sector-specific annual targets for the period 2021 to 2025 (Khatun, 2020), presumed in this essay to be internally consistent given the planning mandates and the underlying models and frameworks. However, in light of the past FYPs' targets and achievements, the threshold question posed in this essay is: How pragmatic and valid are the 8th Five Year Plan targets and the national aspirations embedded therein when the lack of institutional capabilities and a whole-of-government coordinated approach to economic management has stubbornly impaired the governance regimes in Bangladesh for so many years?

The rest of this essay is set out to deal with the issue of sub-par institutional capabilities and economic governance by (i) articulating some chronic economic malaises; (ii) highlighting the key principles and institutional settings that must underpin 'good' public policy-making; and (iii) suggesting some institutional innovations to catalyse the much-needed transformation in economic governance for the public services delivery. While economic governance is closely tied to the broader political governance regime, this essay is exclusively focused on the former. Readers interested in the dynamics between economic governance and political governance may resort to the relevant literature on 'good governance', for example, Khan (2013a, 2013b).

Chronic Economic Malaises: Evidence for Sub-Par Economic Governance

To achieve the best outcomes, economic governance must entail process integrity, operational transparency, and public creditability. In this regard, a fundamental transformation in the approach to, and processes for, whole-of-government policy deliberations, regulations enforcement and programmes delivery is urgently needed in Bangladesh. It is fair to suggest that the economic governance in Bangladesh has been largely ill-conceived and mostly un-coordinated, and the integrity of policy deliberations and programme deliveries has often been severely compromised and convoluted by reactive, revisionists', and Band-Aid policy reforms. Over the years in Bangladesh, public policies, regulations, and programmes have allegedly been geared towards managing symptoms of economic ills and not effectively treating the deeper underlying sources of the economic ailments. Evidently, given the entrenched practices of policy-making and the lack of a conducive environment for effectively implementing the existing ones, most public policy deliberations and programme deliveries in Bangladesh are obscured, biased, or sluggish; and, at the core, convoluted. Often such policies inflict excessive regulatory burdens or 'implicit' taxes on the private sector and on the economy more broadly; and, thereby, invariably creating institutional and administrative ecosystems for the breeding and thriving of 'inappropriate' practices (see the Transparency International's Corruption Perception Index that has consistently ranked Bangladesh among the worst performers). The overall outcome of such disingenuous institutional governance manifests itself in subdued economic performance, inevitably creating a wedge between the realised and the potential economic growth.

Successive governments have yielded to special interests and implemented multi-layered, convoluted tax systems including value-added and corporate taxes, offered anti-competitive subsidies and exemptions as well as mounting protectionist measures at the border. The inapt public policies and discriminatory industrial assistances to selected businesses or sectors such as agriculture and food, and energy and power, as well as certain manufacturing activities namely, ready-made garments, electronic equipment, and pharmaceutical companies can be detrimental for a sustainable and inclusive economic growth.

In 'picking winners' and protecting special interests, successive governments have deeply damaged the financial sector; extensively fragmented and distorted the credit markets; and maintained an overvalued domestic currency at a significant cost to domestic production and international trade. Together with their own debts and deficits management practices particularly through bank and non-bank borrowings, governments' deep-rooted policy biases and policy failures have severely twisted incentives for domestic

private savings and also eco-engineered a volatile investment climate within Bangladesh.

It is not surprising that the leading international comparative rankings such as The World Bank's Ease of Doing Business and the World Economic Forum's Global Competitive Index have placed Bangladesh in the bottom of the piles consistently for many years. As these rankings reflect the appalling 'business climate' within Bangladesh relative to those in the rest of the world, deep and credible regulatory and policy reforms are urgently warranted to encourage productive and substantive investments and attract foreign direct investment inflows. Without such reforms to substantially improve the domestic investment climate and business confidence, it will be difficult to achieve accelerated economic growth and job creation as projected in the 8th FYP; and its 'headline' ambition of 'Promoting Prosperity and Fostering Inclusiveness' will essentially remain aspirational.

Furthermore, during the SARS-Cov-2 pandemic, the lack of institutional capacity in Bangladesh has been exposed, particularly in the health and education sectors. Also, during this global economic downturn, the extent of misgovernance has become quite evident, particularly in the delivery of Covid-19 stimulus packages to targeted industries as well as ensuring social protection for the most vulnerable.



***To achieve the best outcomes,
economic governance must
entail process integrity,
operational transparency, and
public creditability. In this
regard, a fundamental
transformation in the approach
to, and processes for,
whole-of-government policy
deliberations, regulations
enforcement and programmes
delivery is urgently needed in
Bangladesh.***

At the operational end, serious concerns are being voiced regarding the quality and coverage of the official statistics (Asadullah and Chakravorty, 2019; Bhattacharya, 2019). Credible data mining and knowledge management including their public access for evidence-based decision making could hardly be overemphasised. Unless socio-economic performances can be measured accurately and extensively, the tasks of monitoring and management of the key performance indicators can be futile.

As such, in the wake of the current and ongoing pandemic and the accompanying aspirations for building a better Bangladesh, it is appropriate and timely for the government to delve deep and redress the perennially reactive and discriminatory economic governance approach. The sub-par public programs delivery systems in Bangladesh should be reformed as a matter of national priority. If for nothing else, an urgent reform in economic governance and transformation in public services delivery should be deemed prerequisites for realising the economic targets and tasks set out in various plans and vision-statements by the government for the next decades and beyond.

Key Principles and Institutional Settings for Making ‘Good’ Public Policies

By discharging important regulatory responsibilities and through perusing evidence-based policies and programmes, modern governments tend to create enabling environments for private businesses to thrive and markets to work quasi-competitively, if not fully efficiently. In performing this enabling role, governments’ policies and programmes need to satisfy three guiding principles as follows:

Economic efficiency: Government regulations and programmes achieve any carefully set, ‘appropriate’ policy goals at the lowest costs, taking into account both explicit (or direct) costs and implicit (indirect or hidden) costs, and generating the maximum net-benefits for the economy as a whole.

Policy effectiveness: If and when ‘appropriate’ policy goals are not politically palatable or administratively feasible, an effective policy must ensure that the ‘negotiated’ policy goal(s) be achieved at least costs with minimum unwarranted impact, if any.

Equity or fairness: This rather vexed principle for public policy-making is to reflect society’s perceptions about what is ‘just and proper’ to ensure broad public support for, and acceptance of, the policy and programme under consideration.

As for the institutional settings for good economic governance, the best practice in designing and implementing public policy and programmes warrants that governments’ policy advisory agency (or unit) must (i) recognise realities on the ground including the key

stakeholders’ perspectives; (ii) should maintain ‘professional independence’; and (iii) be administratively separated from government’s programmes-delivery agencies and ministries. These are to ensure public credibility and process integrity of the government’s programme and policy deliberations. In this regard, the current administrative arrangements for the National Board of Revenue for both designing and implementing tax policies for the Government of Bangladesh is an obvious violation of the crucial criterion of ‘administrative separability’.

The key rationales for government interventions and, hence, the economic justifications for public policies are to provide various ‘public goods’ and to eliminate anti-competitive and inefficient market outcomes. In the main, government regulations and programmes are to facilitate market-mechanisms and certainly not to mount road-blocks to strangle economic activities and restrain private-sector-led economic growth and job creation. Wherever possible, the government should cease to be a ‘doer’ as well as a ‘ruler’. The ongoing mismanagement of the banking sector, among many others, is an inevitable yet avoidable outcome of the economic governance that has been pursuing the incompatible twin roles of being a ‘player’ and a ‘referee’, both at once!

In Bangladesh, years of reactive, revisionist, Band-Aid, and, ultimately, incoherent policy-making with limited adherence to sound principles and institutional integrity have led to a plethora of convoluted regulations and measures whose overall impacts are either intractable or seriously counter-productive. The underlying regulatory impacts of these policies on private entities and businesses are rarely assessed or publicly debated. Often, the winners of such policy-making are obvious, while the losers happen to be numerous, dispersed, and rarely organised. Nonetheless, given the ‘public good’ nature of ‘public support’ or ‘social licensing’, it is crucial for the government to assess, and bring to light, the ‘unintended’ consequences of its regulations and programmes without which the full extent of economic potentials of a sector or the economy can be ascertained and achieved, if at all.

Proposed Institutional Innovations

The business-as-usual economic governance is not an option for realising the national aspirations, the economic potentials, and the socio-economic goals already committed to in various plans and programmes. To be fair, in some instances government has adhered to ‘good practices’ in policy-making. However, rather than exceptions, such practices should become ‘routine exercises’ for instituting the ‘market enabling’ economic governance. Such institutional ‘switch’, regardless of how much is desired, will not happen organically. As such, transformative institutional innovations are to be carefully crafted, seriously committed to, and indeed rigorously enforced for any realistic chance to enhance regulatory quality and improve economic governance outcomes.

Indeed, the spectacular development transition experience of the Republic of Korea, which incidentally took lessons from the then Pakistan in the art of making five-year plans, does highlight the importance of the induced 'switch' in public policy-making as well as illustrating the significance of a diligent and informed bureaucracy for instituting a 'market enabling' economic governance.

In what follows, a few institutional innovations are proposed to generate constructive public debates and to induce public appetite for an efficient and 'market enabling' economic governance:

Instituting a Regulatory Impact Assessment (RIA) Practice

A rigorous process for assessing the economic impact of regulations and policy reforms needs to be instituted. The RIA process should be practiced as a matter of 'routine' for new regulations as well as for existing regulations and policies earmarked for further reform; and most certainly, for public policies targeting major industries or sectors, and/or with broader economic ramifications. Any existing processes and practices such as the Environmental Impact Assessment (EIA) could be revised to undertake the proposed broader economic impact assessment. The Terms of Reference for undertaking individual RIAs and the summary Regulatory Impact Statements (RIS) must be public knowledge to ensure transparency and integrity of the RIA process as well as for securing social acceptance for the final regulatory measure(s) and policy outcome(s). At a minimum, such assessments must engage key stakeholders early in the process and, wherever appropriate, the final proposed regulations or policy reforms be informed by inter alia stakeholders' inputs and considered views. Nevertheless, the proposed RIA process could be further customised or even exempted for certain regulations and policies on the ground of national defence and security interest.

Instituting a Professionally Independent Policy Evaluation Agency

Currently, the Ministry of Finance and Ministry of Planning are playing a pivotal role in public policy formulations. However, a statutory agency needs to be given the responsibility to evaluate the government's major policies and regulations or proposed reforms. The agency should be professionally independent and must function at arm's length from the government to routinely monitor and evaluate the working and efficacy of various government regulations, policies, and programmes. Should that become a governance imperative, the proposed agency will also advance various options for further refinements of the existing regulations, policies, and programmes; and identify pragmatic mechanisms for their implementation. For this 'check and balance' mechanism to work as intended, monitoring, evaluation, reporting, and improvement (MERI) framework should be enacted and enforced. A professionally independent statutory agency armed

with a legal and transparent MERI process will act as a catalyst, and certainly influence economic governance as well as instil public confidence in government policies and regulations.

New Remits for the Bangladesh Planning Commission

Until a professionally independent statutory agency as discussed above is in place, the Planning Commission could be tasked to enforce RIAs and undertake MERI activities, together with its existing plan and policy development mandates. The interim arrangements will allow the Commission to take advantage of its proximity to government policy-making processes yet remaining professionally independent and functioning at arm's length from the government and, thereby, ensuring process integrity for RIAs and MERI and earn public credibility. It is entirely conceivable that the remits of the Bangladesh Planning Commission be customised to transform the Commission into the proposed professionally independent statutory body.

Final Remarks

Moving forward, what Bangladesh needs are millions of new jobs for its ever-increasing working-age population; and accelerated investment and economic growth to realise the national aspirations and commitments. The relative calm in the political arena is presenting the Bangladesh Government with a unique opportunity for evidence-based policy-making and revamping its economic governance regimes as well.

The key areas crying out for comprehensive public inquiries and fundamental regulatory reforms include, but are not limited to, financial markets; state-owned-and-managed enterprises; agriculture and energy support policies; taxation regimes; public debt and deficit management; domestic investment climate; and foreign direct investment.

Wherever possible, the economic governance regime in Bangladesh must steer economic activities and businesses to market disciplines and away from anti-competition traps! Without extensive and deep regulatory and policy reforms, most private businesses and enterprises would continue to shoulder significant hidden costs and mounting regulatory burdens; private investments will remain stalled; and materialising the national aspirations and commitments will seem elusive.

References

Alam, S. (2019, April 07). Bangladesh: Vision 2041: Alignment with Other Macro Plans: Commentary. *South Asian Journal*. <http://southasiajournal.net/bangladesh-vision-2041-alignment-with-other-macro-plans/>.

Asadullah, M. N. & Chakravorty, N.N.T. (2019). Growth, governance and corruption in Bangladesh: A re-assessment. *Third World Quarterly*, 40(5): 947-965.

Asadullah, M. N., Savoia, A., & Mahmud, W. (2014). Paths to Development: Is there a Bangladesh Surprise? *World Development*, 62: 138-154.

Bhattacharya, D. (2019, May 04). *Way Forward: Options for Action, A Panel Discussion*. ERP National Conversation on Emerging Challenges and the National Budget: Options for Action, North South University, Dhaka, Bangladesh.

Khatun, F. (2020, December 21). Expectations from the Eighth Five Year Plan. *The Daily Star*. Dhaka.

Khan, M. H. (2013a). *The Political Settlement, Growth and Technical Progress in Bangladesh*. DIIS Working Paper 2013:01; pp. 1-160.

Khan, M. H. (2013b). Bangladesh: Economic Growth in a Vulnerable Limited Access Order. In Douglass, N., Wallis, J., Webb, S., & Weingast, B. (eds.), *In the Shadow of Violence: Politics, Economics and the Problems of Development* (pp. 24-69). Cambridge: Cambridge University Press.

Mahmud, W. (2020, March 09). Keynote Presentation. বাংলার পাঠশালা ফাউন্ডেশন আয়োজিত বছরব্যাপী বাংলা ভাষায় অমর্ত্যসেন পাঠচক্র উদ্বোধন, Dhaka.

Sen, A. (2020, March 09). Inaugural Speech. বাংলার পাঠশালা ফাউন্ডেশন আয়োজিত বছরব্যাপী বাংলা ভাষায় অমর্ত্যসেন পাঠচক্র উদ্বোধন, Dhaka.



Moving forward, what Bangladesh needs are millions of new jobs for its ever-increasing working-age population; and accelerated investment and economic growth to realise the national aspirations and commitments.

Helal Ahammad, PhD, is an Economics Professor & the Director of Economics Research Platform at North South University.

Email: helal.ahammad@northsouth.edu

Multidimensional Poverty in Bangladesh: Measurement and Implications

Mahfuz Kabir

Introduction

Multidimensional poverty (MP) has widely attracted the attention of researchers and policy-makers at global and national levels. The notion has originated from Sen's works in the 1980s and 1990s (see Sen, 1987, 1992, 1993). The availability of data on various indicators of human and social development has made it possible to develop its theoretical framework and estimation, which replaced the concept of human poverty a decade ago. In the MP, a framework is used to capture and illustrate the fundamental deprivations in very basic services and core human functioning (viz. health, education, and standard of living) in a coherent manner, which has created a unique appeal for applying it to complement the performance of a nation or a population group vis-à-vis standard monetary (income or expenditure) poverty. A 'counting' method has been developed to estimate the MP (Alkire & Foster, 2009b). The methodology proposed by Alkire and Foster (2007, 2009a) is used to identify the poor households and construct an aggregate measure to reflect the combination of deprivations at individual and household levels at the same time.

The present paper argues that there are some serious drawbacks at the conceptual level and estimation of the MP. It also calculates the MP headcount ratio at district and national levels in Bangladesh for the year 2019 and compares them with the estimates of the Oxford Poverty and Human Development Initiative (OPHI). Finally, it identifies some drawbacks and suggests a way forward to improve its estimation.

Methods and Data

Based on Bennett and Mitra (2011), the MP can be defined as follows. Let $Y = (Y_1, \dots, Y_d)$ denote a random draw from a population with a joint distribution of achievement S , where S takes dichotomous values (0, 1). For dimensions j , a fixed threshold k ($1 \leq k \leq d$), a pre-determined vector of poverty lines $L \in [0, L]^d$, and $\omega = d \times 1$ vector of weights, Alkire-Foster MP headcount ratio can be expressed by

$$H(L, k, \omega, F) = \mathbb{E}_S \left[\mathbb{1} \left(\sum_{j=1}^d \omega_j \mathbb{1}(Y_j \leq L_j) \geq k \right) \right]$$

For a given choice of k , ω , and L , an individual with observed S can be identified as poor if $\sum_{j=1}^d \omega_j \mathbb{1}(Y_j \leq L_j) \geq k$. A two-step cut-off approach is followed to identify the multidimensionally poor individuals. First, deprivation in j is determined by comparing the S_j to the corresponding poverty line. Second, an individual is identified as being poor only if the weighted (by ω) sum of the indicators of dimension-specific poverty are at least equal to the multidimensional poverty threshold. According to Alkire and Santos (2010), the multidimensional poverty headcount ratio (H_p) is the proportion of poor people. That is, $H_p = q/n$, where q is the number of poor people and n is the size of the population. It represents the incidence of the MP.

Table 1: Dimensions, indicators, and weights of the MP

Dimension	Indicator	Weight
Health	Child Mortality	1/6
	Nutrition	1/6
Education	Years of Schooling	1/6
	School Attendance	1/6
Standard of Living	Electricity	1/18
	Drinking Water	1/18
	Sanitation	1/18
	Flooring	1/18
	Cooking Fuel	1/18
	Assets	1/18

Source: UNDP & OPHI (2020).

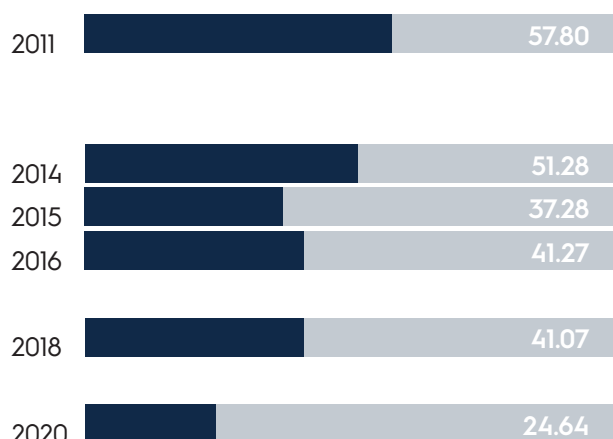
The raw data of the Multiple Indicator Cluster Survey (MICS) 2019 has been used to calculate the incidence of MP at the national level and by the district for the year 2019.

Results and Analysis

UNDP’s Human Development Report has been reporting the MP of Bangladesh vis-à-vis other countries since 2010. OPHI has been estimating the MP since the beginning. However, its estimation at disaggregated level covered district level only for the year 2012-13—for other years the MP headcount ratio has been reported by the administrative division including its Global Multidimensional Poverty Index (MPI) 2020.

According to OPHI, the incidence of MP in Bangladesh was 24.64 per cent in 2020. It has decreased by about 134 per cent between 2011 and 2020 (see, Figure 1). However, its estimated value has not been consistent in the following years because of using different data sources, such as MICS and Bangladesh Demographic and Health Survey (BDHS).

Figure 1: Trend of multidimensional poverty headcount Ratio in Bangladesh (%)¹

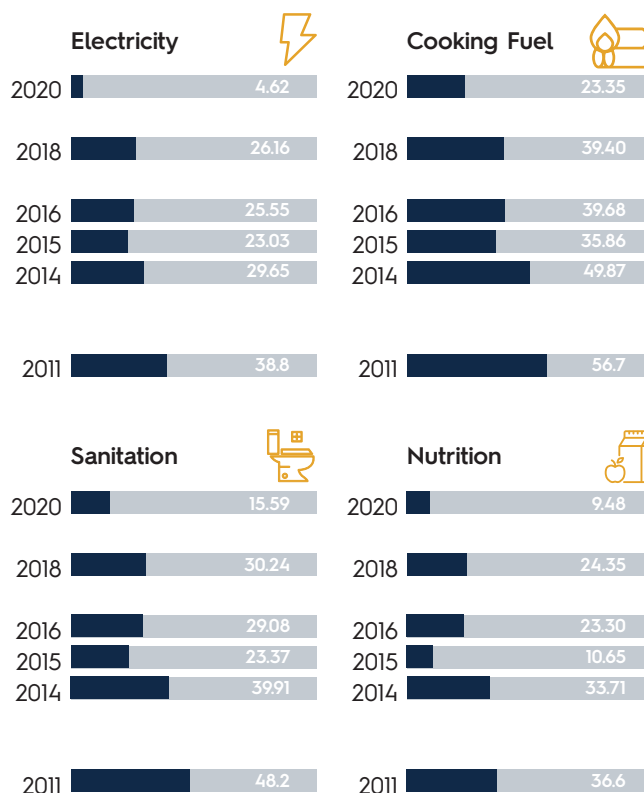


Source: Author’s presentation based on Global MPI data tables 2020.

¹ Data obtained from <https://ophi.org.uk/multidimensional-poverty-index/data-tables-do-files>.

OPHI has used MICS 2019 data to estimate the MP of Bangladesh in 2020 for the global MPI report of 2020. The present study re-estimates the country’s MP for the year 2019 based on the same data source with two prime objectives: first, to check the consistency of the value of deprivation by an indicator in the OPHI’s estimates, and second, to obtain estimates of the MP headcount ratio by the district to comprehend the pattern of changes of the incidence of MP over time.

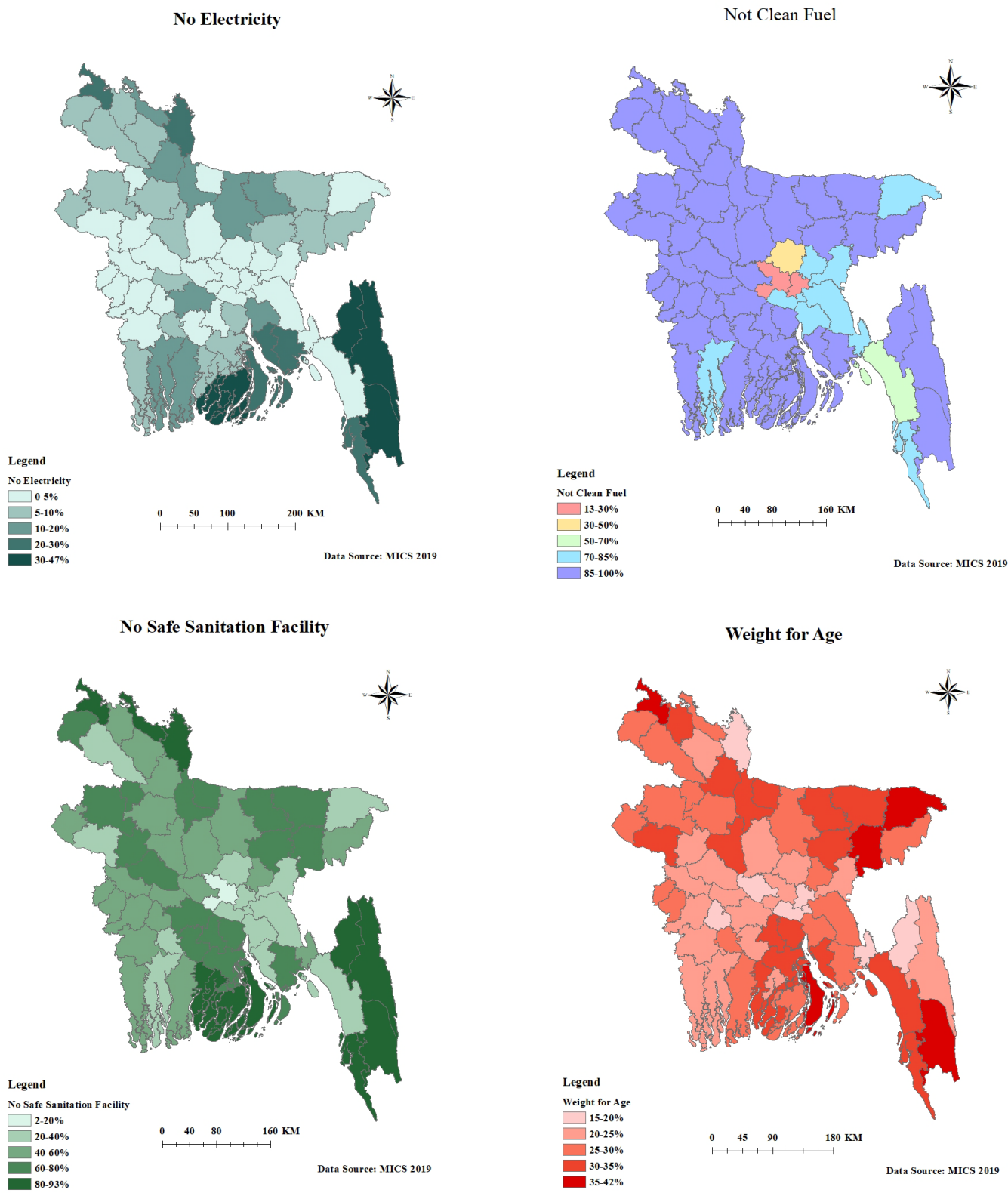
Figure 2: (a) Percentage of population without electricity (top left), clean fFuel (top right), and sanitation services (bottom left), and (b) Incidence of malnutrition (per cent) in Bangladesh, 2020



Source: Author’s presentation based on Global MPI data tables 2020.

OPHI reports that persons deprived of electricity, clean cooking fuel, and sanitation as per the MPI standard are 4.64, 23.35, and 15.59 per cent, respectively. In contrast, while corresponding figures are 10.1, 84.99, and 54.88 per cent, respectively, which are significantly higher than that of OPHI. In this study, data on access to electricity has been taken for both on-and-off-grid, while the definition of “clean” has been used to calculate the data cooking fuel. The definition of “safely managed sanitation” has been used to calculate the data on deprivation in sanitation following the Joint Monitoring Programme (JMP) for Water Supply and Sanitation by WHO and UNICEF to remain consistent with the Sustainable Development Goal (SDG) 6. Data is available for child malnutrition in MICS 2019 but not for all ages. Weighted average has been taken for stunting, wasting, and underweight to calculate the incidence of malnutrition at the district level, and it turned out to be 21.3 per cent at the national level. The district-level statistics reveals that while most of the districts perform well in access to electricity, their statuses in other indicators are dismal.

Map 1: (a) Percentage of population without electricity (top left), clean fuel (top right), and safely managed sanitation (bottom left), and (b) Incidence of child undernutrition (per cent) in 2019

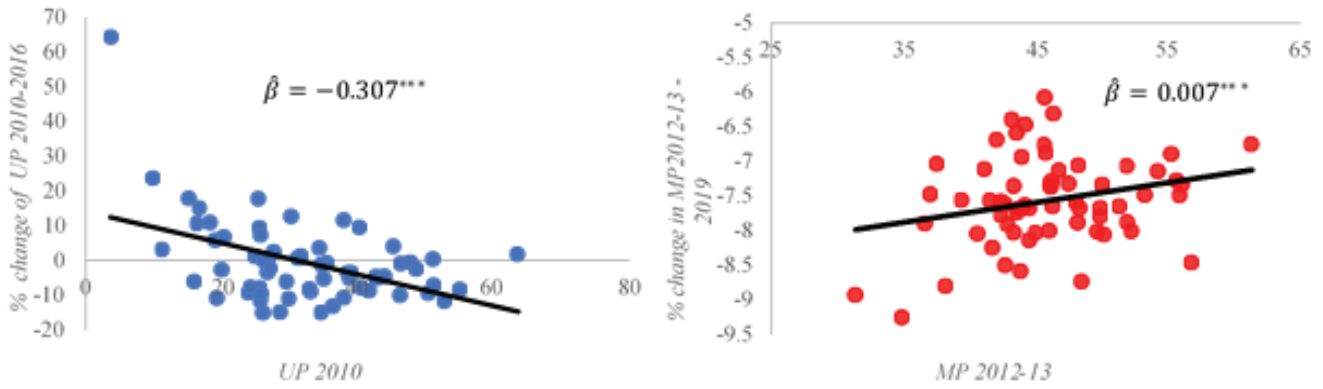


Source: Author's calculation.

In the present study, the MP headcount ratio is 24.96 per cent, which is closed to the finding of OPHI (24.64 per cent). Here, the bottom five districts are Bandarban, Cox's Bazar, Khagrachhari, Rangamati, and Panchagarh, with the highest incidence of MP in Bandarban (36.5 %). This Chattogram Hill Tract (CHT) area was also the poorest with a headcount ratio of 61.35 per cent in

2014. However, the best performing five districts are Munshiganj, Feni, Gazipur, Narayanganj, and Dhaka, with the lowest incidence of MP in Dhaka (14.55 %). The incidence of MP was 31.34 per cent in 2014 in the capital district with the lowest headcount ratio. Thus, the position of these two districts has not changed over time.

Figure 3: β -convergence for poverty and MP



*** indicates that the estimated β -coefficient is significant at 1 per cent level. UP means the proportion of households living under the upper poverty line. Source: Author's estimation.

Finally, we examine whether there was a force of convergence in the reduction of poverty at the district level. We find the presence of β -convergence in the monetary poverty between 2010 and 2016. It implies that the rate of reduction of poverty of the lagging districts was generally higher than that of the relatively advanced districts over this period. However, there is evidence of β -divergence in the case of MP albeit of a very low speed. It implies that even though some lagging districts has performed well in the MP between 2014 and 2019 compared to their relatively advanced counterparts, the general rate of reduction of the MP in districts has been greater in the advanced districts compared to the poorer ones.

Concluding Remarks

The present study analyses the MP of Bangladesh by estimating its incidence at national and district levels. By analysing the estimates of OPHI and data of MICS 2019, it argues that there are some serious shortcomings in the methodology of the MP and its estimation by OPHI. Based on the above analysis, the present study reveals the following.

First, the notion of MP has been developed to estimate poverty at the individual level instead of the household level of the standard monetary poverty measure. So, the results of the MP are not directly comparable with the standard monetary poverty which is based on Household Income and Expenditure Survey (HIES).

Second, MICS data is a good resource for estimating the MP, which is internationally comparable with national representation. However, all dimensions of the MPI cannot be matched with the MICS variables (e.g., nutrition, sanitation, etc.). Therefore, additional variables should be included in the MICS which are direct measures of the MPI dimensions.

Third, it is not possible from the raw data of MICS to work out the MP for geographically vulnerable regions, such as riverine and coastal islands (chars), depression areas (haors), and even by rural and urban areas at district and upazila levels.

Fourth, the MP consists the component—deprivation from safe drinking water; however, deprivation from safe non-drinking water for other uses by households is associated with mortality and burden of waterborne diseases, which is missing in the discourse of the MP.

Fifth, the MP estimates are not fully inclusive of the SDG indicators. For example, dimensions of MPs such as cooking fuel and sanitation are not in line with these global indicators of safely managed sanitation, clean fuel, etc. Therefore, all MP indicators should be revised to reflect the SDGs.

Finally, national attributes are absent in the presentation of the MP. For example, climate change is a major factor in Bangladesh, which affects almost all dimensions of poverty. However, there are no such national adjustment factors for constructing the MPIs. Planetary pressure adjusted HDI has been calculated in HDR 2020. National MPI should also be reported based on adjustment for local factors besides reporting the standard cross-country MPIs.



It is not possible from the raw data of MICS to work out the MP for geographically vulnerable regions, such as riverine and coastal islands (chars), depression areas (haors), and even by rural and urban areas at district and upazila levels.



National attributes are absent in the presentation of the MP. For example, climate change is a major factor in Bangladesh, which affects almost all dimensions of poverty. However, there are no such national adjustment factors for constructing the MPIs. Planetary pressure adjusted HDI has been calculated in HDR 2020. National MPI should also be reported based on adjustment for local factors besides reporting the standard cross-country MPIs.

References

Alkire, S. & Foster, J. (2007). *Counting and Multidimensional Poverty Measurement*. OPHI Working Paper No. 7, UK: University of Oxford (Oxford Department of International Development).

Alkire, S. & Foster, J. (2009b). *Counting and Multidimensional Poverty Measurement*. OPHI Working Paper No.32, UK: University of Oxford (Oxford Department of International Development).

Alkire, S. & Foster, J. (2009a). Counting and Multidimensional Poverty. In von Braun, J. (ed.), *The Poorest and Hungry: Assessment, Analysis and Actions*. Washington, DC: International Food Policy Research Institute.

Alkire, S. & Santos, M. E. (2010). *Acute Multidimensional Poverty: A New Index for Developing Countries*. OPHI Working Paper No.38, UK: University of Oxford (Oxford Department of International Development).

Bangladesh Bureau of Statistics & UNICEF Bangladesh. (2019). *Multiple Indicator Cluster Survey (MICS) 2019*. Dhaka: BBS and UNICEF. https://www.unicef.org/bangladesh/media/3281/file/Bangladesh%202019%20MICS%20Report_English.pdf.

Bennett C. & Mitra, S. (2011). *Multidimensional Poverty: Measurement, Estimation, and Inference*. OPHI Working Paper No. 47, UK: University of Oxford (Oxford Department of International Development).

Sen, A. (1987). The Standard of Living. In: Hawthorn, G.

(ed.), *The Standard of Living* (pp. 1-38). Cambridge, UK: Cambridge University Press.

Sen, A. (1992). *Inequality Re-Examined*. Oxford, UK: Clarendon Press.

Sen, A. (1993). Capability and Well-Being. In: Nussbaum, M. & Sen, A. (eds.), *Quality of Life* (pp. 30-53). Oxford, UK: Clarendon Press.

UNDP & OPHI. (2020). *Global Multidimensional Poverty Index 2020-Charting pathways out of multidimensional poverty: Achieving the SDGs*. New York and Oxford, UK: UNDP and OPHI.

UNDP. (2010). *Human Development Report 2010-The Real Wealth of Nations: Pathways to Human Development*. New York: UNDP.

Mahfuz Kabir, PhD, is the Research Director at Bangladesh Institute of International and Strategic Studies (BISS).

Email: mahfuzkabir@gmail.com

Rethinking Bangladesh's Fiscal Year Time Frame

M Abu Eusuf

A fiscal year is a period of time used by respective governments across the world for budgeting and accounting purposes. It is also known as the financial year or budget year. The fiscal year time frame varies from country to country. Generally, governments set their own fiscal year time frame and there is no established rule to follow any particular period.

Bangladesh has been traditionally using the July-June period as the fiscal year, following the practice of the Pakistani era. Pakistan and Bhutan also use the same fiscal year. Many countries (e.g., Canada, India, Japan, Singapore, Sri Lanka, etc.) use the April-March period as the fiscal year. The United States follows October-September as its budget year whereas the United Kingdom sticks to the April-March period.

Bangladesh's adherence to the July-June period has been called into question by many analysts. Is this time frame posing an implementation challenge of the national budget? Do businesses face difficulties to adjust their reporting while dealing with foreign businesses? What can be an optimal time frame if these issues are hindering budget implementation and smooth functioning of businesses? These questions can be taken under consideration for a full-blown research to rethink the fiscal year time frame.

If we think of two possible alternatives to the existing fiscal year, it can be either the January-December or the April-March period. It is important to note that each period comes with unique pros and cons which can be researched further. Considering the fiscal year

Table 1: Comparison of various fiscal year time frame

Country	Fiscal Year Time Frame	GDP (ranked by country, 2020)
Bangladesh	1 July-30 June	41
Pakistan	1 July-30 June	207
Bhutan	1 July-30 June	162
India	1 April-31 March	5
Sri Lanka	1 April-31 March	67
Myanmar	1 April-31 March	74
Singapore	1 April-31 March	36
Canada	1 April-31 March	10
Malaysia	1 January-31 December	35
Thailand	1 October-30 September	25
United States	1 October-30 September	1
United Kingdom	6 April-5 April	6

Source: Various sources from the internet

starting in January, Bangladesh might be able to reduce many complexities in matters of counting. Alternatively, the country can begin the fiscal year from April in tune with the Bengali calendar and the climatic cycle, and this is not uncommon in the world.

Many countries, such as Germany, Saudi Arabia, Greece, Nepal, Austria, and France, follow their indigenous calendar. Both of these cases may have a better representation of the seasonal, climatic, and economic cycles in our society.

There are other justifications as well. Take the case of implementation of the national budget, particularly various project works under the Annual Development Programme (ADP). A close look at the ADP implementation data reveals that there has been a consistent spike in the release of funds during the May–June period. Specifically, infrastructural works get hampered as there is a tendency to initiate project works in the rainy season. Initiating road and pipeline works, erecting buildings, and starting other infrastructural works often get delayed and require redoing due to rain and other climatic disruptions. This

Table 2: A snapshot of recent cyclones

Cyclone	Period
Cyclone Amphan	16 May 2020
Cyclone Bulbul	9 November 2019
Cyclone Fani	4 May 2019
Cyclone Mora	29–31 May 2017
Cyclone Ronau	21 May 2016
Cyclone Komen	29 July 2015
Cyclone Viyaru	16–17 May 2013
Cyclone Aila	22–29 May 2009
Cyclone Bijli	19–21 April 2009
Cyclone Rashmi	26–27 October 2008
Cyclone Akash	14–15 May 2007
Cyclone Sidr	15 November 2007

Source: Various sources from the Internet

also makes the lives of people living in those cities and towns unbearable as the general movement gets heavily disrupted.

It is worth pointing out that during the May–September period, the monthly rainfall is more than 300 mm. Usually, the highest rainfall occurs in June and July accounting for around 500 mm. Observing the natural disaster occurrences, it is quite difficult to ascertain an exact ‘safe’ month. During 2000–2020, Bangladesh has experienced several cyclones in the May–July period (Table 2). These have consistently hampered project and development activities and incurred losses to life and livelihood. It appears that the May–June period has particularly experienced more cyclones since 2000 compared to other periods.

Switching over to the January–December or

April–March fiscal year perhaps can provide a leeway to complete the infrastructural works including those in the public works and communication sector before the start of the rainy season. This can enable contractors to finish their works without major disruptions. It is also expected to align the Bangladesh economy with the prevailing practice in many developed states. This may also result in a convenient transition for the local economy as it gets increasingly connected with the global economy. Aligning the fiscal year with widely prevalent practice in many countries can provide relief to numerous business entities and organisations. Adopting the January–December fiscal year can be looked into as this period can better align with the vital monsoon cycle and crop harvests for both Rabi and Kharif varieties. Many analysts are also of the view that the current time frame leads to suboptimal utilisation of the harvest season.

Needless to say, changing the fiscal year will entail certain costs. These will include the one-time cost of making major adjustments in documenting and bookkeeping, amongst others, by business entities, organisations, and government bodies. Is the cost worth it? That remains a question for further research.

Along with the readjusted time frame, there is also a critical need to develop robust mechanisms that can facilitate budget implementation amid potential constraints.

In light of these circumstances, it is understood that aligning the fiscal year to adjust with global norms and practices has the potential to benefit Bangladesh’s economy through linkages with the global economy and the vital monsoon period. A comprehensive study can be undertaken to identify which period can help with better budget implementation and smooth business operations.

M Abu Eusuf, PhD, is Professor, Department of Development Studies and Director, Centre on Budget and Policy, University of Dhaka & Executive Director, Research and Policy Integration for Development (RAPID).

Email: eusuf101@gmail.com

Combatting Transfer Mispricing: A New Avenue for Bangladesh Customs

Nipun Chakma & Mohammad Fyzur Rahman

In the advanced world, tax and customs administrations are jointly involved in combatting transfer mispricing due to its linkage not only to tax avoidance but also to illicit capital flow, money laundering, and other financial wrongdoings (Rahman, Ahmed, & Khan, 2011). Unlike developed countries, customs agencies in the developing world show limited importance in combatting transfer pricing manipulations due to their lack of knowledge. As a result, with the speedy growth of international trade and expansion of the corporate world, scope for abuse of transfer pricing has also increased and the countries, especially the least developed countries, have become more susceptible to it. The objective of this article is to provide a way forward for Bangladesh Customs in combatting transfer mispricing to collect legitimate revenues for the government and protect the country's capital from going outward.

What is Transfer Mispricing?

When interrelated corporate entities—such as multinational enterprises (MNEs)—operating in different tax jurisdictions are engaged in the transfer of goods or services or intangible assets and they are required to assign specific prices for those transactions (World Customs Organization, 2018). This strategy of assigning price is known as transfer pricing, a common phenomenon in the international trading system. Fraudulent or abusive use of this transfer pricing phenomenon is termed as transfer mispricing which is aimed at manipulating the market or shifting company profit

Relationship between Customs Valuation and Transfer Pricing

Customs valuation and transfer pricing have a special relationship between themselves. On one side, customs valuation is the procedure, set out in the WTO Agreement on Implementation of Article VII of the General Agreement on Tariffs and Trade 1994 (the 'Agreement'), followed by most of the countries to determine the customs value of imported goods for calculating ad valorem customs duties. On the contrary, tax administrations of most of the countries follow the Arm's Length Principle, in determining transfer prices, as set out in the OECD Transfer Pricing Guidelines¹. It is interesting to note that though both the customs and tax administrations use different methodologies in determining the transfer price, they aim to find out a neutral market price as if the parties were not related.

Profit Shifting Mechanism by Transfer Mispricing

Ensuring the just customs duty and tax liability of MNEs is a global challenge. It is alleged that MNEs usually try to shift their profit to a lower taxation region from a higher taxation region through transfer mispricing. For instance, the Internal Revenue Service (IRS) of the U.S. alleges that Facebook Inc. (Facebook) transferred US\$ 6.5 billion of intangible assets to Ireland in 2010 to avoid huge amount of taxes (Shobhit, 2019). The following example can help to understand the problem at hand better.

¹ Arm's Length Principle (ALP) is the principle, stated in paragraph 1 of article 9 of the OECD Model Tax Convention, that requires that the conditions (prices, profit margins etc.) in transactions between related parties should be the same as those that would have prevailed between two independent parties in a similar transaction under similar conditions.

Let us imagine a multinational enterprise named ABC Inc., that has two subsidiaries—ABC(X) and ABC(Y)—in Country X and Country Y. Corporate tax rate of Country 'X' and Country 'Y' are 10% and 45% respectively. ABC (X) produces the raw materials that is imported by ABC (Y).

Table 1: Regular situation (prices declared at arm's length price)

Country 'X'		Country 'Y'	
ABC (X)		ABC (Y)	
Sales	200	Sales	500
Export duty at 0%	0	Purchase	200
Cost and expenses	100	Customs Duty at 5%	10
Profit	100	Expenses	90
Tax at 10%	10	Profit	200
		Tax at 45%	90
Combined customs duty and tax liability for ABC Inc. = 10+10+90 = US\$ 110			

In a regular situation where prices are declared at arm's length price, as described in Table 1, the market price of the raw materials is US\$ 200. ABC (X) exports the raw material at US\$ 200 and ABC (Y) imports it at that price, not considering insurance and freight charge for simplicity. It is shown in Table 1 that the total revenue for Country 'X' is US\$ 10 and revenue for Country 'Y' is US\$ 100 (10+90). The combined customs duty and tax liability for ABC Inc. is US\$ 110.

Let us consider a transfer mispricing situation where prices are not declared at arm's length price, as illustrated in Table 2.

Table 2: Transfer mispricing situation (prices are not declared at arm's length price)

Country 'X'		Country 'Y'	
ABC (X)		ABC (Y)	
Sales	300	Sales	500
Export duty at 0%	0	Purchase	300
Cost and expenses	100	Customs Duty at 5%	15
Profit	200	Expenses	90
Tax at 10%	20	Profit	95
		Tax at 45%	42.75
Combined customs duty and tax liability for ABC = 20+15+42.75 = US\$ 77.75			

ABC (X) inflates the selling price to US\$ 300. In this scenario, we observe from Table 2 that ABC (X) is taxed US\$ 20 at 10 per cent, and ABC (Y) is taxed US\$ 15 and US\$ 42.75 for customs duty and tax, respectively. The combined tax and customs duty liability for ABC Inc. is US\$ 77.75.

Table 3: Revenue effect

	Regular Situation	Transfer Mispricing Situation
Total revenue of Country X	10 <i>(Export Duty 0, Tax 10)</i>	20 <i>(Export Duty 0, Tax 20)</i>
Total revenue of Country Y <i>(Customs duty + Tax)</i>	100 <i>(Export Duty 0, Tax 90)</i>	57.75 <i>(Export Duty 15, Tax 42.75)</i>
Combined revenue of Country X and Country Y	100 <i>(Export Duty 0, Tax 100)</i>	77.75 <i>(Export Duty 15, Tax 62.5)</i>
Loss of revenue for Country 'Y' = 100 - 57.75 = USD 42.25 Money Laundered from Country 'Y' to Country 'X' = 300 - 200 = USD 100		

The overall revenue effect is shown in Table 3. Due to the transfer mispricing, Country 'Y' loses revenue of $(100-57.75) = \text{US\$ } 42.75$ whereas Country 'Y' gains revenue by an amount of $(20-10) = \text{US\$ } 10$. The combined customs duty and tax liability of ABC Inc. decreases by an amount of $(110-77.75) = \text{US\$ } 32.25$. Thus, ABC Inc. shifts its profits from Country 'Y' to Country 'X' by an amount of $(100-32.25) = \text{US\$ } 67.75$ while laundering $(300-200) = \text{US\$ } 100$ from Country 'Y' to Country 'X'.

This example shows how MNEs can manipulate transfer pricing to shift profit and/or launder money.

Are Customs Administrations Empowered to Work on Transfer Mispricing?

Customs administration can play a vital role in the fight against transfer mispricing. Customs Valuation Agreement (CVA) of WTO empowers Customs Authorities to examine 'circumstances surrounding the sale' to determine whether the declared value is influenced by the associated parties. Most importantly, Customs authority has access to its huge trade database of previous transactions which is crucial in conducting customs audits. In fact, all the trading parties must declare value of goods for the assessment purpose along with other trade documents. Customs authorities scrutinise those declared values and submitted documents as per customs valuation rules. According to Customs Valuation Agreement (CVA), 'transaction value' is the preferred method in the valuation process. Though it is the recommended method for customs valuation for all the trading parties including related party transactions, the customs administration can raise questions about the transaction value when the authority suspects that the relationship between the parties influenced the transfer values. In order to analyse the relationship, Customs administrations will examine the 'circumstances surrounding the sale' as described in article 1(2)(a) of CVA. Technical Committee of Customs Valuation (TCCV) also acknowledges in Commentary 23.1 that the transfer pricing study should be considered for examining the circumstances of the sale on a case-by-case basis. Technical Committee of Customs Valuation (TCCV)² also acknowledges in Commentary 23.1 that the transfer pricing study should be considered for examining the circumstances of the sale on a case-by-case basis.³

Way Forward for Bangladesh Customs

The National Board of Revenue, the apex authority for revenue collection in Bangladesh, can play a significant

role in combatting transfer mispricing while the MNEs declare transaction values at Bangladesh Customs during customs valuation. Though NBR has recently established a transfer pricing cell, its officials are not properly trained and they lack adequate knowledge on transfer pricing. Hence, crucial initiatives need to be taken and implemented carefully to build the capacity of the cell and thus making it an effective and efficient enforcement unit. A few of such initiatives could be:

1. Capacity building of human resources by providing sector-specific training and education on cross border trade and transaction as well as transfer pricing methods. For instance, each training programme could be designed focusing on a particular sector—such as tobacco, telecommunication, pharmaceutical, leather, or cement sector;
2. Formulation of transfer pricing rules and guidelines by elaborating procedural and documentary requirements under customs valuation legislation. The practice statement of the Australian Customs and Border Protection Service, published in 2013, could be a useful material in this regard ;
3. Ensuring access to the transfer pricing literature or Advanced Pricing Agreement to the customs officials during the process of valuation, establishing a joint working group for transfer pricing combining customs and tax officials and conducting a joint audit programme on transfer pricing to recover lost government revenues;
4. Rejuvenating the existing Joint Group of Customs (JGOC) forum with India and negotiating with the Indian counterpart for the inclusion of transfer pricing in the discussion agenda; and
5. Advising the government to arrange Customs Mutual Assistance Agreements (CMAA) with foreign countries, based on the importance and trade volume with Bangladesh, for the exchange of information, intelligence, and documents which are vital for prevention and investigation of transfer pricing and trade-based money laundering offenses.

The relevant guidelines and manual developed by the WCO (World Customs Organization), the OECD, and the UN will provide the necessary guidance to Bangladesh Customs to formulate any regulation and policy relating to transfer pricing. However, cooperation between Customs and Tax administrations is required to educate the relevant officials about the transfer pricing processes since their effects overlap with both administrations and due to the complexities involved in the processes. It is recommended that to get a tangible effect in the fight against transfer mispricing, local and

² Technical Committee of Customs Valuation (TCCV) is a committee constituted by article 18 of the WTO's CVA and supposed to submit report about its work to the Council of WTO which is constituted by delegates of WCO members.

³ At the 31st Session in October 2010, the TCCV approved Commentary 23.1.

international cooperation and information sharing among international organisations are critical. Hence, initiatives should be taken to tie up with the local and international networks for imparting knowledge and skills through capacity building programmes with the support of the WCO and the OECD.

Final Words

With the rise of internal trade among multinational corporations, transfer mispricing has become an increasing global economic phenomenon. With the significant increase of international trade, presence of multinational corporations, and absence of proper monitoring, the economic environment of Bangladesh is susceptible to transfer mispricing. A number of studies and international reports provide evidence of trade and transfer mispricing by which the nation is losing a significant amount of capital as well as revenues. Like many advanced and modern revenue administrations, the NBR should utilise both of its revenue wings, Customs and Income Tax, to detect and investigate transfer mispricing cases that will lead to recover lost and legitimate government revenues. Therefore, it is high time for the NBR to take appropriate policies to build up the capacity of its corresponding regulatory bodies to detect, track, and deter transfer mispricing with a view to collecting just revenue from the MNEs as well as combatting trade-based money laundering which is closely associated with transfer mispricing.

**A modified version of this article appeared in the Newsletter of Bangladesh Customs published in March 2021.*

References

Rahman, M., Ahmed, M. S., & Khan, T I. (2011). *Adopting Transfer Pricing Regime in Bangladesh: Rational and the Needed Initiatives*. Working paper: 94, p.56, Centre for Policy Dialogue (CPD).

Shobhit, S. (2019). Transfer Pricing. *Investopedia*. <https://www.investopedia.com/terms/t/transfer-pricing.asp>.

United Nations. (2017). *Practical Manual on Transfer Pricing for Developing Countries*. Available at: <https://www.un.org/esa/ffd/wp-content/uploads/2017/04/Manual-TP-2017.pdf>.

World Customs Organization. (2018). *WCO Guide to Customs Valuation and Transfer Pricing 2018*. p.4.

Nipun Chakma is a Second Secretary, National Board of Revenue and Deputy Project Director, Bond Management Automation Project and an independent researcher with an interest in international trade.

Mohammad Fyzur Rahman is a Commissioner of Customs (CC), National Board of Revenue and Project Director, Bond Management Automation Project.

Email: nipun.chakma@nbr.gov.bd



The National Board of Revenue, the apex authority for revenue collection in Bangladesh, can play a significant role in combatting transfer mispricing while the MNEs declare transaction values at Bangladesh Customs during customs valuation.

Do Natural Hazards Make Farmers from Coastal Areas More Productive? Evidence from Bangladesh

Syed Mortuza Asif Ehsan & Md Jakariya

Introduction

The economy of Bangladesh has been growing at a stellar rate of 6.76 per cent per annum since 2010. Despite playing a vital role in the tremendous economic growth and providing food security for the growing population, the agricultural sector's contribution to GDP has gradually been declining. In 2018 the GDP contribution of the agricultural sector was 14.23 per cent, which declined to 13.60 per cent in 2019. However, according to the World Bank 2020 dataset, a large portion of the population (38.58 %) are still primarily employed in the agricultural sector. Hence, the agricultural sector plays a crucial role not only in providing food security but in alleviating poverty, especially in the rural areas of the country.

The dominant food crop in the agricultural sector of Bangladesh is rice, which is also the source of livelihood for 48 percent of the rural population. The rice sector constitutes about 70 per cent of the agricultural GDP and about 92 per cent of total food grain in Bangladesh. However, to meet the demand for food-grain for the growing population, the country needs to improve rice productivity through efficient agricultural practices substantially. Important preconditions to ensure efficiency in rice production are the optimal use of inputs and effective management of production practices at the farm and household level. Existing literature suggests that the Rice production efficiency is much lower in the low-lying floodplain and coastal regions of Bangladesh compared to the other areas. The level of inefficiency will further deteriorate as the salinisation of water and soil become severe due to progressive climate change.

Against this backdrop, the existence of a higher degree of inefficiency of rice production in the coastal regions of Bangladesh warrants further research. This paper estimates the technical efficiency in the rice sector of the coastal disaster-prone areas of Bangladesh and conduct a comparative study of the groups of households based on their vulnerability and natural disaster exposure during the last five years. Additionally, factors that can improve or deter the household-level production-efficiency in these low-lying floodplain areas are also identified.

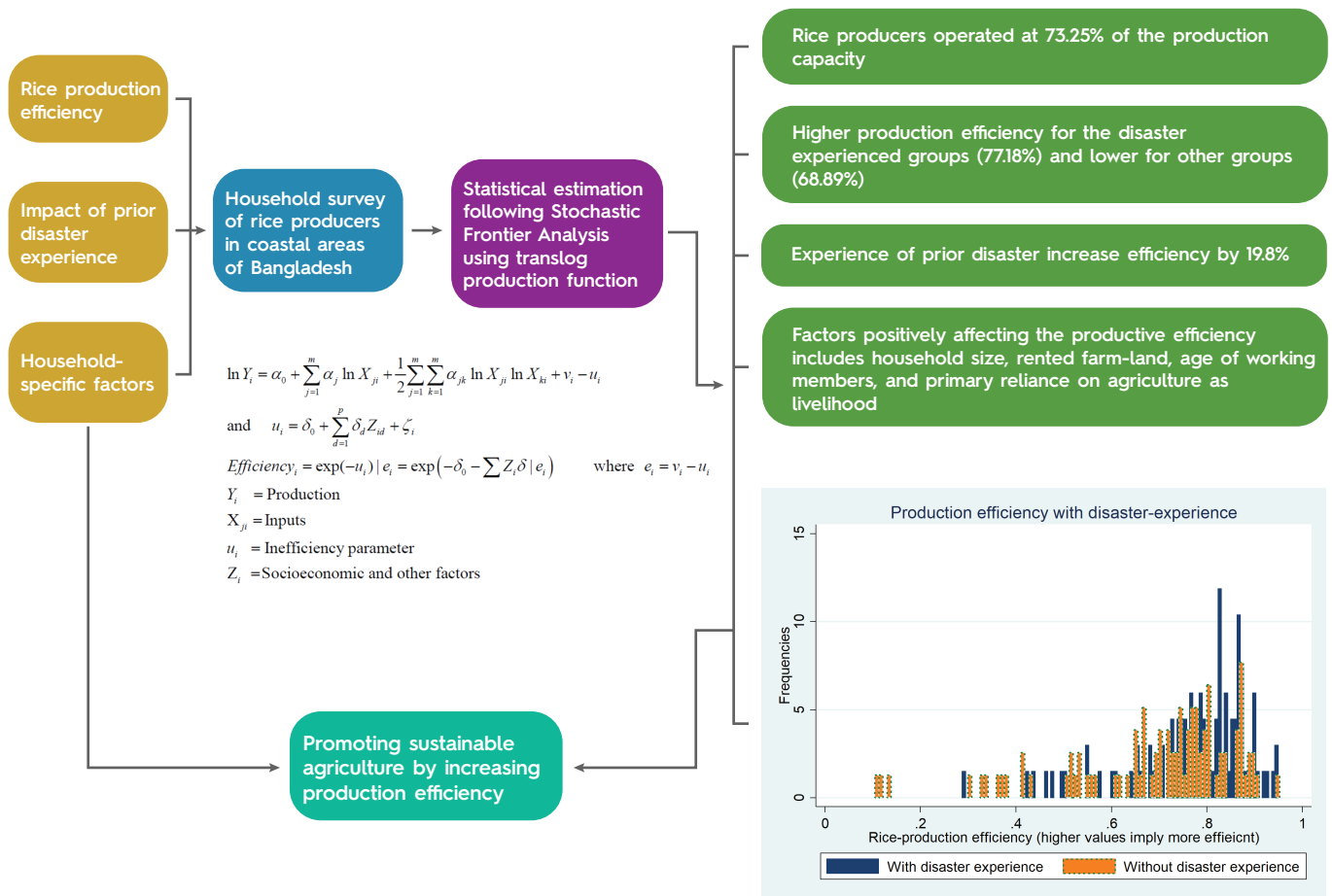
Dataset and Methodology

Four upazilas from three coastal districts, Patuakhali, Cox's Bazar, and Khulna, have been chosen for the questionnaire survey of this study. A disproportionate multistage stratified random sampling was used in selecting 303 households, who were surveyed to understand their agricultural-livelihood practices in rice production and the household-specific socioeconomic factors. In the empirical analysis part of the paper, using Stochastic Frontier Analysis, we examine whether the surveyed households are production efficient, and if not, how their magnitude of inefficiency depends on their disaster-exposure, vulnerability, as well as on several individual and household level characteristics.

Findings

Findings from our paper suggest that the coastal areas of Bangladesh register a lower level of production efficiency compared to the other regions of the country. While the technical efficiency in rice production has significant room for improvement, farmers who faced disaster in recent years are involved in more resilient agricultural practices, which improve their production

A summary of the paper:



Source: Ehsan, S.M.A., and Jakariya, Md. (2021).

efficiency compared to the rice producers that did not experience disaster. Farms that are operated by households who experienced disasters had 19.8 per cent more technical efficiency compared to their counterparts.

Our results also suggest that age of working-age members and having a household member with agriculture as a primary occupation positively affect the technical efficiency in rice production. This result indicates that having more experienced agricultural workers in the household has a positive impact on production efficiency. Other factors that positively affect the rice production efficiency include the size of the households, recent experience with natural disasters, and access to agricultural inputs such as fertilisers and seeds.

Concluding Remarks

The proposed budget allocation for the agricultural sector in Bangladesh has increased by Tk 1,005 crore from 21,484 crores in 2019-20 to 22,489 crores in the financial year 2020-21. In the backdrop of the Covid-19 pandemic situation, the agricultural sector can play a crucial role in providing livelihoods and employment for the unemployed labour force and to the out-migrating

households from the urban areas. Additionally, ensuring food security for the growing population of Bangladesh with limited resource allocation warrants more attention in improving the production efficiency of the dominant food crop, the rice sector. Hence, this paper presents a comprehensive assessment of the current state of productive efficiency in the rice sector of coastal areas of Bangladesh.

Findings from our paper suggest that the production of rice in the coastal areas of Bangladesh register a lower level of production efficiency compared to the other regions of the country. Also, farms that are operated by households who experienced disasters show significantly more technical efficiency compared to their counterparts. Possible reasons behind this result might be that the natural-hazard experiencing households engage in more resilient production techniques, and they utilise their productive capacities at a higher level considering the likelihood of being exposed to natural disasters in the future. Our results also suggest that age of working-age members and having a household member with agriculture as a primary occupation positively affect the technical efficiency in rice production. Hence, the government can undertake several training and extension programmes for the working-age farmers in the coastal areas to improve efficiency in the rice sector.



Findings from our paper suggest that the production of rice in the coastal areas of Bangladesh register a lower level of production efficiency compared to the other regions of the country. Also, farms that are operated by households who experienced disasters show significantly more technical efficiency compared to their counterparts.

Based on the findings from our study, some additional recommendations can be made for the development of rice production in coastal areas of Bangladesh. In the coastal areas, agricultural practices often involve non-optimal usage of production inputs such as quality seeds of appropriate varieties, required irrigation, excessive use of urea as fertilisers, etc. Our survey of local households also suggests that most agricultural resources are highly priced in the coastal areas, resulting in non-optimal use of those factors in rice production. To make the essential agricultural inputs more affordable to the households, the Government of Bangladesh should take appropriate measures. Public interventions and awareness should be increased to ensure both the price and the quality of the inputs of rice production in these areas. Also, the salinity level is high in the soil and water of the coastal region, which creates difficulties for conventional agriculture. Adequate training and extension programmes should be initiated to make the rice producers engage in optimal use of inputs and with agricultural practices that are more resilient to soil and water salinity. Considering the level of salinity, the inland areas should be further utilised for expansion and improving the resilience of rice production. The rice producers in the coastal areas should be encouraged to produce diversified food products and engage in fishing as their livelihood. The government can provide skill development training to farmers so that they can adopt an integrated system where shrimp cultivation or fishing can be done besides rice and vegetable production.

Reference

Ehsan, S.M.A., and Jakariya, Md. (2021). *Do natural hazards make farmers from coastal areas more productive? Evidence from Bangladesh*. Working Paper (under review in Agricultural Systems).

Syed Mortuza Asif Ehsan, PhD, is an Assistant Professor, Department of Economics, North South University.

Md Jakariya, PhD, is a Professor, Department of Environmental Science and Management, North South University.

Email: syedmae@vt.edu

The Need for Valuing the Socio-Cultural Aspects of Wetland Ecosystem Services in Bangladesh

Alvira Farheen Ria & Raisa Bashar

Wetlands have historically served as a source of inspiration to build and shape the world's communities. They benefit humans in a myriad of ways, ranging from provisional and regulatory services to supporting and cultural services—all of which are vital for people's livelihoods and well-being. Wetlands play an important role in climate regulation, flood control, and water purification, while housing a rich biodiversity of flora and fauna and supporting processes like nutrient recycling and soil formation (De Groot et al., 2018). In addition to these services and economic benefits, wetlands also contribute significantly towards cultural and societal norms of communities through their aesthetic appeal and potential for recreational activities, along with their influence on people's education/knowledge generation and religion/spirituality (De Groot et al., 2018). However, although the ecosystem services approach of valuation is gaining impetus in science and policy worldwide (Scholte et al., 2015) to encourage conservation of such regions, market prices in developing countries, such as Bangladesh, often do not reflect the immense cultural values, i.e., the "nonmaterial benefits people obtain from ecosystems..." (McMichael et al., 2005)—that locals derive from their resource-rich surroundings like wetlands (Lehmann et al., 2018). Socio-cultural aspects surrounding ecosystem services are still grossly ignored in contrast to their ecological/economic counterparts (Bullock et al., 2018). Discounting these socio-cultural aspects, which are different from "cultural ecosystem values" and more individualistic (incorporating both society and culture), can seriously undermine the significance of ecosystems such as wetlands.

Consequently, since both the locals and authorities today have not aptly valued the importance of wetland conservation over their economic needs, valuable ecosystems in wetlands are quickly vanishing (Milcu et al., 2013). Wetlands cover almost 50 per cent of

Bangladesh's national land area, but are declining at unprecedented rates (Khan et al., 2004). Between 1980 and 2000 alone, over 3 million hectares of land have already been lost to developmental activities (Khan et al., 2004), with several major wetlands in Bangladesh—the freshwater wetlands of Karcher 'Haor'; the vast and large waterbody of Southeast Asia, Tanguar Haor; the saline mangrove wetlands of Arial Beel/Sundarbans Swamps; and the Chanda-Baghia 'Beel'—under massive threat (Islam, 2010). Wetlands in Bangladesh are being irreversibly damaged due to the rise in population and increased economic activities, both of which encourage more intensive agricultural practices, overfishing, and pollution. Furthermore, issues such as siltation, climate change, saltwater intrusion, encroachment, reclamation, flood control, haphazard infrastructure planning, and institutional co-ordination problems also contribute to their degradation (Islam, 2010; Byomkesh & Nakagoshi, 2008). This degradation of Bangladesh's wetlands has resulted in detrimental consequences such as reduction in biodiversity, damage to flora and fauna, and disruption to ecosystem services, while also deteriorating the livelihoods and socio-economic status of locals, and impacting their cultural heritage negatively (Byomkesh & Nakagoshi, 2008).

Although studies on ecosystem services have made great progress over the years, there is still a lack of knowledge on the socio-cultural values linked to ecosystems (Iniesta-Arandia et al., 2012). Such socio-cultural aspects are deeply tied to the perspectives and experiences of locals and are therefore, understandably, difficult to measure. However, solely relying on "monetary" values of ecosystem services to assess their worth has also raised questions, as equally important non-tangible socio-cultural benefits are kept out of the picture (Scholte et al., 2015).

perspectives and experiences of locals and are therefore, understandably, difficult to measure. However, solely relying on “monetary” values of ecosystem services to assess their worth has also raised questions, as equally important non-tangible socio-cultural benefits are kept out of the picture (Scholte et al., 2015). Monetary valuations have various limitations and are highly dependent on market methods while ignoring other intangible benefits. Focusing on only cultural ecosystem services would not be a practical form of valuation either. Therefore, nowadays, researchers are increasingly leaning towards socio-cultural valuation of ecosystem services, which is a middle ground to obtaining a pluralistic idea of all the ecosystem services. Socio-cultural aspects of ecosystem services go beyond simple economic benefits or cultural ecosystem services alone—they encompass both the immaterial and material benefits that people may value from ecosystem services (Scholte et al., 2015). Stakeholders directly dependent on ecosystem services of their surroundings such as in wetlands, often place great importance on these non-quantifiable socio-cultural values. In the case of landscape planning and conservation, and natural resource management, there are often many trade-offs of values made, and multiple groups of stakeholders involved, who value ecosystem services differently and have varying priorities (Maestre-Andrés et al., 2016). It is therefore important to evaluate and explore the perceived values all ecosystem services provided by unique ecosystems like wetlands, especially the socio-cultural aspects that are so heavily interlinked with the stakeholders, to take participative and inclusive approaches for natural resource management and conservation policies. This approach would be particularly valuable for management of ecosystem services and goods across spatial scales. For example, where cultural ecosystem services and provisioning services of wetlands are prioritised by local communities in an area, its regulatory and supporting services require more attention on regional, national, and global scales (Darvill & Lindo, 2016).

It is high time that Bangladesh puts effort into taking account of the socio-economic benefits of vital ecosystems like wetlands, following the steps of countries such as Spain (Maestre-Andrés et al., 2016), Peru (Velásquez-Milla et al., 2011), Brazil (De Souza Queiroz et al., 2017), the U.S., and Thailand (Hein et al., 2018) that have already incorporated socio-economic and cultural aspects in their conservation efforts and research. A popular way to assess such socio-economic values are the use of socio-cultural valuation methods, which can be defined as analysing “human preferences towards ecosystem services in non-monetary units” (Santos-Martin et al., 2017). Exploring the social cultural aspects of ecosystems in depth would help gain a better understanding of the complex relationship between human stakeholders and their surroundings, allowing for improved planning, management, and decision-making regarding natural resources management (Scholte et al., 2015). Conducting assessments through socio-cultural valuation would give

policy-makers an appropriate idea of the perceived importance of ecosystem services—which ecosystem services rank higher in people’s preferences and how the negative and positive connotations with ecosystem services vary among different people (Walz et al., 2019). This would ultimately allow for better management practices and trade-offs, taking into consideration what the people (directly impacted by these decisions and actions) truly want. Moreover, there is also a dire need for raising awareness regarding the various ways in which wetlands help humans, and in order to create incentives for wetland conservation, more research on services that directly affect humans such as the socio-cultural aspects of wetlands need to be explored.



Exploring the social cultural aspects of ecosystems in depth would help gain a better understanding of the complex relationship between human stakeholders and their surroundings, allowing for improved planning, management, and decision-making regarding natural resources management.

References

- Bullock, C., Joyce, D., & Collier, M. (2018). An exploration of the relationships between cultural ecosystem services, socio-cultural values and well-being. *Ecosystem Services*, Elsevier, 31: A, pp. 142-152.
- Byomkesh, T., Nakagoshi, N., & Shahedur, R. Md. (2008). State and management of wetlands in Bangladesh. *Landscape and Ecological Engineering*, 5(1):81-90. doi: 10.1007/s11355-008-0052-5.

- Darvill, R., & Lindo, Z. (2016). The inclusion of stakeholders and cultural ecosystem services in land management trade-off decisions using an ecosystem services approach. *Landscape Ecology*, 31, pp. 533-545. <https://doi-org.uml.idm.oclc.org/10.1007/s10980-015-0260-y>.
- De Groot D., Brander L., & Finlayson C. (2018). Wetland Ecosystem Services. In Finlayson C. et al. (Eds.), *The Wetland Book* (pp. 323 - 333). Springer, Dordrecht doi: 10.1007/978-90-481-9659-3_66.
- De Souza Queiro, L., Rossi, S., Calvet-Mir, L., Ruiz-Mallén, I., García-Betorz, S., Salvà-Prat, J., & de Andrade Meireles, A. J. (2017). Neglected ecosystem services: Highlighting the socio-cultural perception of mangroves in decision-making processes. *Ecosystem Services*, 26, 137-145. doi: 10.1016/j.ecoser.2017.06.013.
- Iniesta-Arandia, I., García-Llorente M., Aguilera, P., A., Montes, C., & Martín-López, B. (2014). Socio-cultural valuation of ecosystem services: uncovering the links between values, drivers of change, and human well-being. *Ecological Economics*, 108, pp 36-48. doi.org/10.1016/j.ecolecon.2014.09.028 Get rights and content
- Islam, S. N. (2010). Threatened wetlands and ecologically sensitive ecosystems management in Bangladesh. *Frontiers of Earth Science*, 4(4), pp. 438-448217.
- Khan, S. M., Haq. E., Huq. S., Rahman, A. A., Rashid, S. M. A., & Ahmed, H. (2004). *Wetlands of Bangladesh*. Dhaka: Holiday Printers Limited, pp. 1-88.
- Lehmann, I., Martin, A., & Fisher, J. A. (2018). Why Should Ecosystem Services Be Governed to Support Poverty Alleviation? Philosophical Perspectives on Positions in the Empirical Literature. *Ecological Economics*, 149, pp 265-273. doi: 10.1016/j.ecolecon.2018.03.003.
- Maestre-Andrés, S., Calvet-Mir, L. & van den Bergh, J.C.J.M. (2015). Sociocultural valuation of ecosystem services to improve protected area management: a multi-method approach applied to Catalonia, Spain. *Regional Environmental Change*, Springer, 16, pp 717-731. doi: 10.1007/s10113-015-0784-3.
- McMichael, A., Scholes, R., Hefny, M., Pereira, E., Palm, C., & Foale, S. (2005). Linking ecosystem services and human well-being. In Capistrano, Doris, Samper K., Cristián, Lee, Marcus J., & Raudsepp-Hearne, Ciara, (eds.) *Ecosystems and Human Well-being: multi-scale assessments* (pp. 43-60). Millennium Ecosystem Assessment Series, 4. Island Press, Washington DC, USA.
- Milcu, A. I., Hanspach, J., Abson, D., & Fischer, J. (2013). Cultural Ecosystem Services: A Literature Review and Prospects for Future Research. *Ecology and Society*, 18(3). doi:10.5751/es-05790-180344.
- Santos-Martin, F., Kelemen, E., Garcia L., M., Jacobs, S., Oteros-Rozas, E. & Barton, D., Palomo, I., Hevia, V., & Martín-López, B. (2017). Socio-cultural valuation approaches. In Benjamin B., Joachim M. (Eds.), *Mapping Ecosystem Services* (pp.104-114). Pensoft https://www.researchgate.net/publication/315716370_Socio-cultural_valuation_approaches.
- Scholte, S. S. K., van Teeffelen, J. A., & Verburg, P.H. (2015). Integrating socio-cultural perspectives into ecosystem service valuation: A review of concepts and methods. *Ecological Economics*, Elsevier, 114. pp 67-68. <https://doi.org/10.1016/j.ecolecon.2015.03.007>.
- Walz, A., Schmidt, K., Ruiz-Frau, A., Nicholas, K. A., Bierry, A., de Vries Lentsch, A., Dyankov, A., Joyce, D., Liski, A. H., Marbà, N., Rosário, I. T., & Scholte, S.S.K. (2019). Sociocultural valuation of ecosystem services for operational ecosystem management: mapping applications by decision contexts in Europe. *Regional Environmental Change*, Springer, 19, pp. 2245-2259. Retrieved in December 2020 from: <https://doi.org/10.1007/s10113-019-01506-7>.
- Hein, M., Y., Birtles, A., Willis, B., L., Gardiner, N., Beeden, R., & Marshall, N., A. (2019). Coral restoration: Socio-ecological perspectives of benefits and limitations. *Biological Conservation*, Elsevier, 229, pp. 14-25. doi: 10.1016/j.biocon.2018.11.014.
- Velásquez-Milla, D., Casas, A., Torres-Guevara, J., & Cruz-Soriano, A. (2011). Ecological and socio-cultural factors influencing in situ conservation of crop diversity by traditional Andean households in Peru. *Journal of Ethnobiology and Ethnomedicine*, 7, 40. doi:10.1186/1746-4269-7-40.

Alvira Farheen Ria is a Masters Student at the Natural Resources Institute of the University of Manitoba in Canada and has an undergraduate degree in Environmental Science from North South University's Department of Environmental Science and Management.

Raisa Bashar is a PhD student at the Centre for Environment and Sustainability of the University of Surrey and a Senior Lecturer (on leave) at the Department of Environmental Science and Management, North South University, Dhaka.

Email: raisa.bashar@northsouth.edu

Plugging Bangladesh into Global COVID-19 Vaccine Supply Chain

Rabiul Islam Rabi & Md Shahiduzzaman Sarkar

After a year of fighting against the Coronavirus through physical and social measures, discussions on COVID-19 vaccines now take a centre stage as some 170 countries have started their immunisation campaigns. Countries across the world are now facing the mammoth task of inoculating their population, which is likely to be the biggest immunisation drive that the humanity has ever experienced. How the capacity-constrained developing countries can access vaccines and bring their most vulnerable population groups under immunisation coverage constitute important global development issues.

Indeed, fair and equitable access to affordable tests, treatments, and vaccines are now under the spotlight in countries with under-resourced healthcare systems. Important questions are also there for efficient procurement and delivery systems and effective administration of immunisation programmes. In this initial phase of vaccine production and distribution, the massive demand is outstripping the supply. There is thus an apprehension that populations in resource-poor countries could be left behind, at least temporarily. A recent study by the Duke Global Health Innovation Centre indicates that many people in low-income countries may not get vaccines until 2024.

COVID-19 has already shown just how vulnerable global supply chains are when relying on a small number of manufacturers for raw materials and final products. Therefore, it is extremely important to integrate more capable manufacturers into the supply network to ensure mass availability of vaccines. An estimated 3 billion people in low-income countries are likely to lack access to a COVID-19 vaccine for years after it becomes available. According to the International Federation of Pharmaceutical

Manufacturers and Associations (IFPMA), the global vaccine manufacturing capacity today is at five billion doses per year. IFPMA estimates also reveal that to achieve sufficient level of immunity of the global population with a two-dose vaccine, the world would need between 12 billion and 15 billion doses—more than twice the world's current vaccine manufacturing capacity. As of December 2020, 12 COVID-19 vaccine manufacturers have informed their plans for vaccine production with an estimated capacity of nearly 10 billion doses by the end of 2021 (Wang et al, 2020). However, this figure is perhaps an overestimate because it does not consider factors such as some vaccine candidates might not be licensed by the end of 2021, some might be dropped due to lower efficacy, and vaccine production chains could suffer unexpected delays (Wang et al. 2020). Furthermore, moving to exclusive manufacturing of COVID-19 vaccines is not an option as it will mean shortages of other vaccines such as those for preventable childhood diseases (e.g., measles, mumps, and rubella). So prioritising COVID-19 could affect other health objectives. It also needs pointing out that it takes between five to 10 years to build a new vaccine manufacturing plant. Therefore, any existing vaccine manufacturing capacity should be aptly utilised to address the immediate need.

While most low and lower-middle income developing countries lack vaccine research, development, and production capacities, Bangladesh is a unique least developed country (LDC) with notable pharmaceutical manufacturing capacities, supplying an estimated 97 per cent of the domestic demand for medicines (Razzaque et al, 2020). According to available estimates, the value of annual pharmaceutical production in the country is about US\$ 3 billion. The industry has developed end-stage (known as fill-finish) production capacities. It

is worth mentioning that in May 2020, Bangladesh became the first country in the world to produce generic medicine 'Remdesivir'—a direct acting antiviral drug which was originally developed by U.S.-based Gilead Sciences and approved by the United States Food and Drug Administration (USFDA) for emergency use authorisation (EUA) for treating severe COVID-19 patients. Later on, the medicine was exported to many other countries as well. Making this crucial drug accessible and affordable to patients in many middle-and-low-income countries has been a significant milestone for Bangladesh. However, when it comes to vaccines, Bangladesh has largely been dependent on the rest of the world.

Currently, two Bangladeshi firms have vaccine production capacity. One of these companies (Incepta Vaccine Ltd.) is capable of producing vaccines from the molecular stage to the final stage, while the other (Popular Pharmaceuticals Ltd.) is equipped with vaccine fill-finish operations. These two local companies have a combined capacity of supplying close to 220 million vials of vaccines each year for the population of nearly 170 million. According to industry experts, local manufacturers are currently using just one-tenth of their capacity. If these two companies are under full-fledged operation, they cannot only supply vaccines to majority of the Bangladeshi population, can also export to other countries, playing an important part in the global vaccine supply chain.

However, early initiatives taken in the country mainly focused on purchasing ready-to-push vaccines and not manufacturing them. With soaring infections and uncertainty of receiving vaccine shipments, Bangladesh has recently sent a proposal to AstraZeneca (a British-Swedish multinational pharmaceutical company) seeking its technology to produce vaccine from seed (manufacturing the vaccine) or vaccine in bulk (importing and repackaging it). Earlier, Bangladesh has been mainly expecting to have Oxford-AstraZeneca COVID-19 vaccines through the Serum Institute of India since the two other vaccines of Moderna and Pfizer-BioNTech are unsuitable for the country due to preservation related problems. Unlike the two, Oxford-AstraZeneca does not require preservation at ultra-cold temperature, making it easier to distribute in developing countries. As of March 2021, Bangladesh has received 3.3 million vaccine doses as a 'gift' from India. Bangladesh has also received seven million doses of COVID-19 vaccines in two shipments from the Serum Institute of India. These shipments were part of 30 million vaccine doses to reach the country under a tripartite agreement among Beximco Pharmaceuticals Ltd., the Serum Institute of India, and the Bangladesh government. According to the deal, Bangladesh was supposed to receive five million doses per month. However, the country received only two million doses in February and yet to get the shipments of March. India has now stopped supplying COVID-19 vaccines to Bangladesh as it plans to accelerate its own immunisation drive amid rising infections. Even if India resumes the supply, with some 33 million vaccines, just

16.5 million people (about 9% of the population in Bangladesh) can be vaccinated across a period of six months. By June 2021, Bangladesh plans to collect another 10.9 million vaccines through the World Health Organization's COVAX programme. While these initiatives will partly address the immediate need of immunisation, such pursuits are expected to be short-lived. Due to the nature of COVID-19, the vaccination programme is expected to be a yearly routine rather than a one-off inoculation campaign. This means addressing the immunisation campaign will require a long-term sustainable solution.

In the early stage of the pandemic, Bangladesh refused to host the clinical trial from Sinovac Biotech Ltd., a Beijing-based private firm with a track record of developing vaccines. Many industry experts consider this as a missed opportunity. They claim that since Sinovac has a long-standing commercial relationship with several of the leading Bangladeshi pharmaceutical manufacturers, such clinical trials might have paved the way for technology transfer besides ensuring vaccines for local consumers. Now, one Bangladeshi firm—Incepta Pharmaceuticals Limited—is incessantly trying to strike a deal with Sinovac. This vaccine manufacturer has the infrastructural setup for vaccine production but will require appropriate transfer of technology from the molecular level to ready-to-push stage. This will entail a government-to-government (G2G) involvement to seal a firm-level agreement on vaccine manufacturing. Such an initiative will not only act as a catalyst for capacity building of the local pharmaceutical industry and cater to domestic demand, but also can facilitate the country's integration into the global supply chain. It is important to note that Indonesia has leveraged such an opportunity to ensure technology transfer from Sinovac. As mentioned above, efforts are underway through G2G engagements to secure vaccines.

Surely, the government of Bangladesh deserves due credit to roll out the mass vaccination campaign since early February while more than 130 countries are still waiting to the jobs. However, one thing that COVID-19 pandemic has revealed that this crisis keeps unfolding with unpredictable challenges and countries need to plan carefully to contain the virus. At this stage, pharma manufacturers are of the view that in the absence of a clearly articulated vaccination policy, securing vaccines in an efficient manner will become extremely difficult. Vaccine manufacturing requires long-term and huge investments.

For a sustainable approach to address the crisis, a practical idea could be opting for a long-term solution, given the country's vibrant pharmaceutical sector. In this regard, there are two policy options that Bangladesh can pursue. First, G2G-backed firm-level collaboration with international vaccine manufacturers is a policy priority which the government of Bangladesh has been pursuing very recently. Under such arrangements, working closely with local manufacturers, the government can play a key role to negotiate bulk

import and fill-finish of vaccines as two pharmaceutical manufacturers are ready to act immediately and another local pharmaceutical company (Healthcare Pharmaceuticals Ltd.) is expected to be ready for vaccine manufacturing by mid-2021. This will secure vaccines for domestic population and reduce pressure on global vaccine suppliers. In this regard, Bangladesh should not single out any vaccine candidate and should keep options open to negotiate any strategic collaboration.

Another policy option is to incentivise private initiatives to produce vaccines through contract manufacturing. Local firms have longstanding commercial relationships of contract manufacturing in many segments of pharmaceutical products and exploiting the same for vaccine manufacturing can help in this context. Indeed, the erstwhile success of the local pharmaceutical industry in providing generic medicines to the mass population should call for focussing on long-term capacity building in vaccine production.

**A modified version of this article has been submitted for publication in 'Trade Insight', published by the South Asia Watch on Trade, Economics and Environment (SAWTEE).*

References

Razzaque, M. A., Rabi, R. I., & Akib, H. (2020). Bangladesh's Pharmaceutical Exports: Trends, Market Prospects, and Policies. In: Razzaque, M. A. (2020). *Navigating New Waters: Unleashing Bangladesh's Export Potential for Smooth LDC Graduation*, Bangladesh Enterprise Institute, Dhaka.

Wang, W., Wu, Q., Yang, J., Dong, K., Chen, X., Bai, X., Chen, X., Chen, Z., Viboud, C., Ajelli, M., & Yu, H. (2020). Global, regional, and national estimates of target population sizes for covid-19 vaccination: descriptive study. *bmj*, 371.

Rabiul Islam Rabi is a Research Economist at Research and Policy Integration for Development (RAPID).

Md Shahiduzzaman Sarkar is a Civil Servant and an independent researcher with an interest in political economy.

Email: eco.rabi@gmail.com



Another policy option is to incentivise private initiatives to produce vaccines through contract manufacturing. Local firms have longstanding commercial relationships of contract manufacturing in many segments of pharmaceutical products and exploiting the same for vaccine manufacturing can help in this context.

A periodical by
Research and Policy Integration for Development (RAPID)
with the support from The Asia Foundation

Development Letters

Issue
JAN-MAR '21



Development Letters, a quarterly periodical, focuses on bringing together issues, ideas, and approaches that can be researched, refined, experimented, and investigated further. This periodical intends to advance innovative research/intervention ideas so that analytical work and evidence can meaningfully lead to practical actions and maximise developmental impact.