



## BANGLADESH

### SELECTED ISSUES

September 2019

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# BANGLADESH

## SELECTED ISSUES

August 5, 2019

Approved By  
Asia and Pacific  
Department

Prepared by Ragnar Gudmundsson, Racha Moussa, and  
Muhammad Imam Hussain (all APD)

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# CLIMATE CHANGE MITIGATION AND ADAPTATION IN BANGLADESH: POLICY OPTIONS<sup>1</sup>

*Bangladesh is one of the countries most vulnerable to the impact of natural disasters, and the authorities have taken a series of measures in recent years to adapt to climate change and mitigate its impacts. This chapter summarizes achievements of the authorities to date and describes several options to support their ongoing efforts.*

## A. How Does Climate Change Impact Bangladesh?

**1. With sixty percent of its land surface at five meters or less above sea level, Bangladesh is considered especially vulnerable to tropical cyclones, storms and tidal surges.** In addition to loss of human lives, the most significant impacts include damages to crops, destruction of road and other infrastructure, and disruptions to industry and commerce. These events disproportionately affect regions with higher concentrations of poor communities. In its 2018 review, the Global Climate Risk Index identifies Bangladesh as the sixth country most affected by climate change-related natural disasters. It estimated that between 1990 and 2008, average annual extreme weather event-related losses amounted to 1.8 percent of GDP. The worst flooding episode in 1998 that affected over two-thirds of the country resulted in damages and losses estimated at close to 5 percent of GDP. More recently, flooding in the northern and central parts of Bangladesh in 2017 affected eight million people and caused severe damage to crops, prompting a sharp rise in food prices and a subsequent deterioration in the trade balance, with direct costs estimated at USD 750 million, about 0.3 percent of GDP.

**2. The economic impact of climate change on Bangladesh is likely to become more pronounced.** The outlook for Bangladesh is a source of concern, with experts from the Intergovernmental Panel on Climate Change predicting that a rise in sea levels and coastal erosion could lead to a loss of 17 percent of land surface and 30 percent of food production by 2050. In addition, rural migration caused by the loss of arable land looks set to exacerbate already crowded and difficult living conditions in urban centers such as Dhaka. At present, one-third of Bangladesh's population is estimated at risk of displacement because of rising sea levels. A recent study by the Bangladesh Ministry of Finance projects that, depending on scenarios of sea level rise, the annual cost of climate change due to loss of capital and slower economic activity would range between 1.49 and 3.02 percent of GDP by 2031, with significant employment losses. More frequent natural disasters would also divert limited revenue away from growth-enhancing development expenditure to emergency relief efforts.

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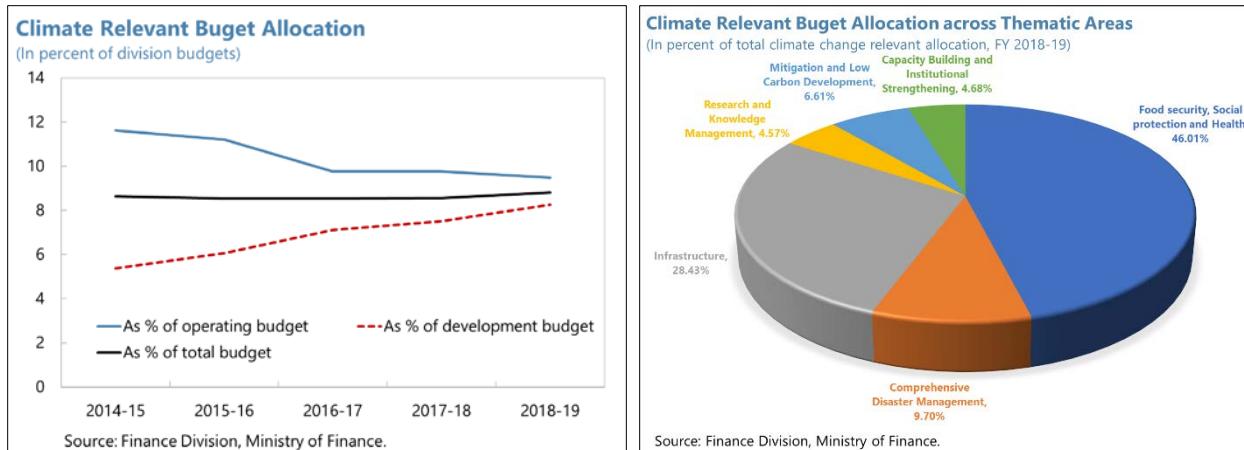
<sup>1</sup> Prepared by Ragnar Gudmundsson (APD).

## B. What Has the Government's Response Been Thus Far?

**3. Bangladesh stands out for its early response to the challenges posed by climate change.** Bangladesh accounts for less than 0.35 percent of global greenhouse gas emissions. Still, because of its extreme vulnerability, it has become one of the most active countries in terms of planning and action on climate change. In South Asia, Bangladesh was the forerunner to submit intended nationally determined contributions (INDCs) for adaptation and mitigation activities in the context of the United Nations Framework Convention on Climate Change. Its proposed unconditional contribution was to reduce greenhouse gas (GHG) emissions 5 percent below Business-As-Usual (BAU) levels by 2030 in the power, transport, and industry sectors. Its proposed conditional contribution was to reduce GHG emissions by 15 percent below BAU levels in the same sectors, subject to appropriate international support in the form of finance, investment, technology development and transfer, and capacity building.

**4. The authorities' response has benefitted from efforts to estimate the cost of adaptation and mitigation investments.** The financial requirements of INDCs for adaptation activities over the 2015-30 period have been estimated by the government at about USD 21 billion, of which approximately USD 6 billion have been included in budgetary allocations for the FY16-FY19 period. Requirements for mitigation activities designed to reduce carbon emissions have been estimated at about USD 27 billion, with budgetary allocations amounting to about USD 0.5 billion for the FY16-FY19 period. Adaptation investments, which are to be met through a combination of domestic and external funding, are broadly on track, while mitigation investments, which are expected to be financed in large part with support from donors, appear to be lagging.

**5. Adaptation and mitigation investments are closely tracked and monitored throughout the budget.** Tracking and monitoring of public spending to address climate change was initiated with the establishment in 2014 of a Climate Fiscal Framework (CFF) which is integrated in the medium-term budgetary framework and now extends to twenty ministries which account for 45.8 percent of the total national budget. According to the June 2018 report published by the Ministry of Finance, 8.8 percent of the national budget is allocated for climate change mitigation and adaptation activities, translating to 0.75 percent of GDP. Within that envelope, the largest share, 46 percent, goes to *food security, social protection and health*, followed by *infrastructure*, which accounts for 28.4 percent of allocations. Mitigation and low carbon development activities account for 6.6 percent of allocations.



### Bangladesh Delta Plan 2100: A Long-Term Strategy to Address Flooding

Bangladesh has one of the largest deltas in the world, formed by the confluence of three major rivers: the Ganges, the Brahmaputra, and the Meghna. This delta presents significant risks related to flooding and river erosion, including for food security, water security, and land degradation. While delta management has been a concern for several decades, as demonstrated by the establishment of the Bangladesh Water Development Board shortly after independence in 1972, the issue has gained greater prominence as cyclones and droughts have become increasingly frequent and their impact more pronounced.

Recognizing the need for long-term strategies to mitigate the adverse impact of flooding, the Bangladesh Planning Commission formulated the Bangladesh Delta Plan 2100, officially launched in 2014. Under the plan, mitigation and adaptation measures will focus on flood protection, river erosion control, river management, water supply and waste management, and flood control and drainage. The additional investment required for implementation of the plan will amount to 2 percent of GDP in FY21, 2.5 percent of GDP in FY31, and 2.8 percent of GDP in FY41. 80 projects have been identified for implementation by FY31, of which 65 are physical projects and 15 are institutional and knowledge development projects, with an estimated total capital investment of about USD 37 billion.

**6. Bangladesh Bank (BB) has spearheaded efforts in the financial sector to respond to climate change.** In parallel to the above government initiatives, BB has introduced several innovative tools and policy guidelines since 2008 to promote green financing in the financial sector, recognizing the risks linked to the banking sector's high exposure to flood-prone areas. In 2009, BB introduced a revolving finance scheme from its own funds to enhance financing for low-carbon emission project initiatives defined as green products. Under this scheme, loans provided by banks and non-bank financial institutions (NBFIs) for green products are refinanced by BB at a rate of 5 percent, and banks and NBFIs can charge a maximum rate of 9 percent to the borrower,

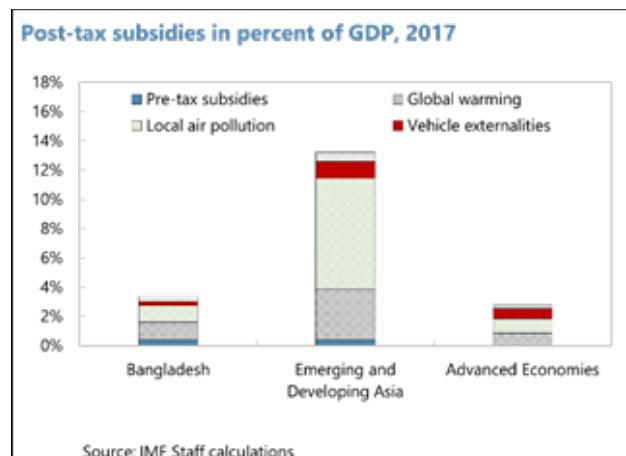
depending on the tenure of the project.<sup>2</sup> Moreover, in 2016, BB launched a USD 200 million Green Transformation Fund (GTF) to provide low-rate long-term financing for purchases of more efficient, cleaner machinery and equipment in the textile, leather, and jute sectors. Disbursed funds amounted to USD 22.8 million as of June 2019 and are expected to increase following adoption in January 2019 of a circular allowing GTF access to manufacturers of all export-oriented sectors.

**7. Regulations and guidelines have also been adopted to reflect environmental risk and promote green banking.** In 2011, BB issued Environmental Risk Management Guidelines for banks and financial institutions to incorporate the assessment of environmental risk in credit management. These were updated in 2017 with the Guidelines on Environment and Social Risk Management and the introduction of an Excel-based risk rating model which became enforceable in January 2018. Under these guidelines, equity margin and loan pricing incentives for beneficial projects are supplemented with disincentives for projects with negative impacts. BB also issued Policy Guidelines for Green Banking for banks in 2011 and NBFIs in 2013, which covered the formulation of green banking policy, governance, and the creation of a Climate Risk Fund (CRF) in every financial institution. Banks and NBFIs are requested to allocate ten percent of their corporate social responsibility budgets to their CRF to finance economic activities in flood, cyclone, and drought-affected areas, and there are incentives for green compliant lending, including better CAMELS ratings. Although performance still falls somewhat short of expectations, banks and NBFIs are moreover encouraged to set a green financing target of 5 percent of their total investments. As of end-March 2019, the amount invested as green financing reached TK 30.493 billion (about USD 360 million), representing 1.29 percent of banks' total loan disbursements, and 1.33 percent of NBFIs' total loan disbursements.

## C. Forward-Looking Policy Options

### *Fiscal Options for Mitigation and Adaptation*

**8. Responding effectively to the impact of climate change depends on designing an appropriate set of fiscal policies.** These can play a key role in mobilizing both public and private sources of finance for mitigation and adaptation activities. A first priority should be to identify, reduce, and eventually eliminate energy subsidies. Energy subsidies reduce the incentive for energy efficient consumption and entail social and environmental costs. According to IMF calculations, pre-tax energy subsidies in Bangladesh in 2017 amounted to USD 1.05 billion, while post-tax subsidies reflecting negative environmental impacts and other

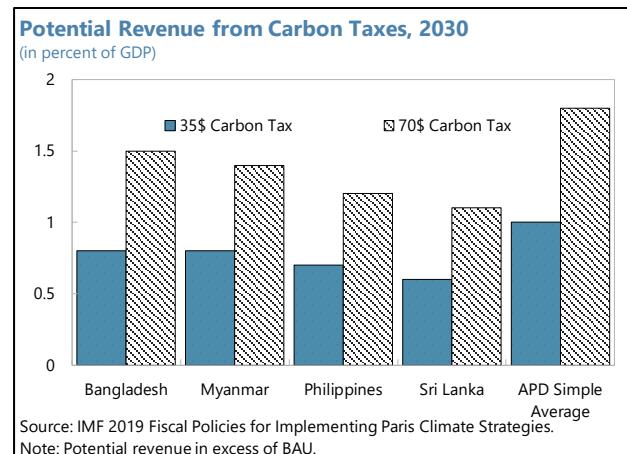


<sup>2</sup> In the case of loans provided through micro finance institutions, agent banking, or outsourcing, an additional maximum 2 percent commission fee can be charged.

externalities amounted to USD 8.83 billion—about 3.4 percent of GDP. These subsidies run the risk of increasing closer to levels observed in neighboring emerging markets, notably as imports of more expensive liquified natural gas are required to meet the country's growing energy needs.

**9. A second priority for Bangladesh is to raise domestic revenue from its current low base, including through introduction of a carbon tax.** At less than ten percent of GDP, domestic revenue is insufficient to adequately invest in mitigation activities and adaptation infrastructure while at the same time addressing other SDG 2030 objectives. The authorities could consider the introduction of a carbon tax, including for the following reasons:

- it could raise significant revenues. A recent policy note by the World Bank estimates that the revenue impact for Bangladesh would amount to 1 percent of GDP.
- carbon taxes are considered easy to implement: they can be linked to existing fuel taxes and can be revised based on fiscal needs or political economy considerations.
- it would help limit urban pollution. Dhaka is now considered the second most polluted capital city, and a 2018 World Bank study estimates losses linked to urban pollution and environmental degradation at close to three percent of GDP.
- carbon taxes are relevant in a low-income environment, as (i) they are less regressive where poor households have limited access to the power grid or personal vehicles; and (ii) the revenues they generate can finance targeted transfers and social spending.



**10. By helping establish a predictable price for carbon emissions, carbon taxes also provide clear incentives to promote investments in emissions-saving technologies.** While opponents argue that such taxes harm economic activity and slow job creation, the revenue they generate may over time be used to reduce other distorting taxes on labor and capital. It may also be used to facilitate continued investment and research into the use of renewable energy, which at present accounts for less than two percent of Bangladesh's power production. At the same time, regional initiatives should promote cross-border energy trade and secure access to cheaper and cleaner energy from neighboring countries.

**11. Possible negative impacts on more vulnerable households from subsidy reforms and carbon taxes will need to be addressed, including though targeted transfers.** While using taxes and the elimination of subsidies to promote mitigation and raise revenue for adaptation should be encouraged, energy pricing needs to remain affordable to facilitate the country's inclusive growth objectives. A recent study by the Policy Research Institute in Dhaka notably emphasizes that political

economy considerations warrant a gradual approach, where the tax should initially apply to petrol and diesel at the pump, before eventually applying to fuel oil or coal for electricity generation.

### ***Managing the Impact of Natural Disasters***

**12. In addition to longer-term investments in infrastructure, a priority should be to have fiscal buffers to cope with the immediate consequences of flooding and droughts.** Since 2007, the authorities have introduced a line in the budget to cover “unforeseen expenditures”, which also include food buffer stocks to cope with unanticipated crop loss. In order to increase availability and predictability of financing from a medium-term perspective, the authorities could consider introducing a dedicated contingency line in the national budget that would be geared more specifically at crisis management and emergency relief efforts in the event of severe flooding or droughts. Unused funds could be placed in a natural disaster reserve fund with strict governance and transparency requirements, as already the case in Mexico. In the context of a medium-term budgetary framework, another option would be to increase allocations for climate adaptation investments in the following year’s budget without modifying the cumulative fiscal deficit target. This would help ensure a greater proportion of the budget is allocated to adaptation activities over time.

**13. Resorting to insurance mechanisms should also help manage the impact of severe natural disasters.** To better manage and reduce the fiscal impact of severe natural disasters—the costs of which exceeds the resources that can be set aside as a budget contingency line—the authorities could resort to catastrophe bonds and insurance instruments, as Turkey, Mexico, and the Philippines have, as these “can transfer climate-damage risks to those who are better able to bear them.” Investors in catastrophe bonds tend to be pension funds and institutional investors seeking higher returns than on more traditional fixed income and equity investments. While the market has been expanding, including through regional pooling arrangements and initiatives such as the Global Platform for Risk Insurance which help ease some of the cost of such instruments, one hurdle remains the difficulty of correctly pricing risk and estimating potential losses.

### ***Stimulating Climate-Friendly Private Investments***

**14. A comprehensive strategy to promote adaptation and mitigation efforts would benefit from further efforts to involve the private sector.** As highlighted above, BB has undertaken a number of measures to promote green financing. Further efforts could usefully focus on better integrating environmental risks in financial sector supervision, including through data collection on regional and sectoral exposure to such risks. Additional measures could also help create better conditions for the private sector to invest in mitigation and adaptation. For example, in addition to lending incentives, the taxation system could be used to incentivize environmentally friendly ventures and discourage harmful ones, including through taxation of polluting industries. Moreover, ongoing efforts to enhance the business environment should help attract foreign investors seeking to promote the adoption of new technologies that are both profitable and compatible with mitigation targets.

***Seeking Financial Support from Donors***

**15. The international community has a role to play in supporting the efforts of low and lower middle-income countries to cope with climate change.** This has been highlighted as a way to internalize the costs of GHG emissions for which advanced and emerging market economies are responsible. Under the December 2015 Paris Agreement, advanced economies are expected by 2020 to mobilize USD 100 billion per year from public and private sources to support adaptation and mitigation activities in developing countries, and by 2025 set a new, higher quantified financing goal.<sup>3</sup>

**16. Looking forward, the authorities should intensify their efforts to seek higher concessional financing for mitigation and adaptation.** A Green Climate Fund was established in 2013 to support developing countries to limit or reduce their GHG emissions and adapt to climate change impacts, with the total value of the Fund amounting to USD 18.7 billion in July 2019, commitments reaching USD 5.2 billion and projects under implementation reaching USD 2.4 billion.<sup>4</sup> As of July 2019, Bangladesh had received grants from the GCF amounting to USD 85 million for three climate change projects. The authorities should intensify their efforts to mobilize grants for mitigation and adaptation, by developing a pipeline of suitable projects, raising awareness to the challenges faced by Bangladesh, and strengthening their negotiating capacity.

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<sup>3</sup> Climate financing was estimated at USD 64 billion in 2014.

<sup>4</sup> <https://www.greenclimate.fund/what-we-do/portfolio-dashboard>

## References

- Sadiq Ahmed, Bazlul H. Kondler, 2018, "Towards a Carbon Tax in Bangladesh", Policy Research Institute, Dhaka, Bangladesh.
- Government of Bangladesh, 2015, "Intended Nationally Determined Contributions", Ministry of Environment and Forests.
- \_\_\_\_\_, 2018, "Climate Financing for Sustainable Development, Budget Report 2018–19", Ministry of Finance.
- \_\_\_\_\_, 2019, "Integrating Climate Change in the Medium-Term Macro Framework, A Structural Econometric Approach", Inclusive Budgeting for Climate Resilience Project, Ministry of Finance.
- International Monetary Fund, 2013, "Energy Subsidy Reform: Lessons and Implications", IMF (Washington).
- \_\_\_\_\_, 2016, "After Paris: Fiscal, Macroeconomic and Financial Implications of Climate Change, IMF Staff Discussion Note SDN/16/01 (Washington).
- \_\_\_\_\_, 2018, M. Nozaki, S. Cook, "Coping with Natural Disaster Risk in Sri Lanka", Sri Lanka 2018 Article IV Consultation (Washington).
- \_\_\_\_\_, 2019, "Building Resilience in Developing Countries Vulnerable to Large Natural Disasters", IMF (Washington).
- \_\_\_\_\_, 2019 "Fiscal Policies for Paris Climate Strategies: From Principle to Practice", IMF (Washington).
- \_\_\_\_\_, 2019, David Coady, Ian Parry, Nghia-Piotr Le, Baoping Shang, "Global Fossil Fuel Subsidies Remain Large: An Update Based on Country-Level Estimates", IMF (Washington).
- World Bank, 2017, "Bangladesh Development Update, September 2017."
- \_\_\_\_\_, 2018, "Enhancing Opportunities for Clean and Resilient Growth in Urban Bangladesh: Country Environmental Analysis."
- \_\_\_\_\_, 2018, "Policy Note on Options for a Carbon Tax in Bangladesh."

## EXPORT DIVERSIFICATION IN BANGLADESH,

Rapid growth in the Ready-Made Garment (RMG) sector in Bangladesh has significantly strengthened growth and stability of the economy. However, exports have become increasingly concentrated in the RMG sector. Though the country has recorded important welfare gains as this concentration occurred, a broader and more complex export base would help start integration into global supply chains, increase potential growth, and improve the sustainability of growth.

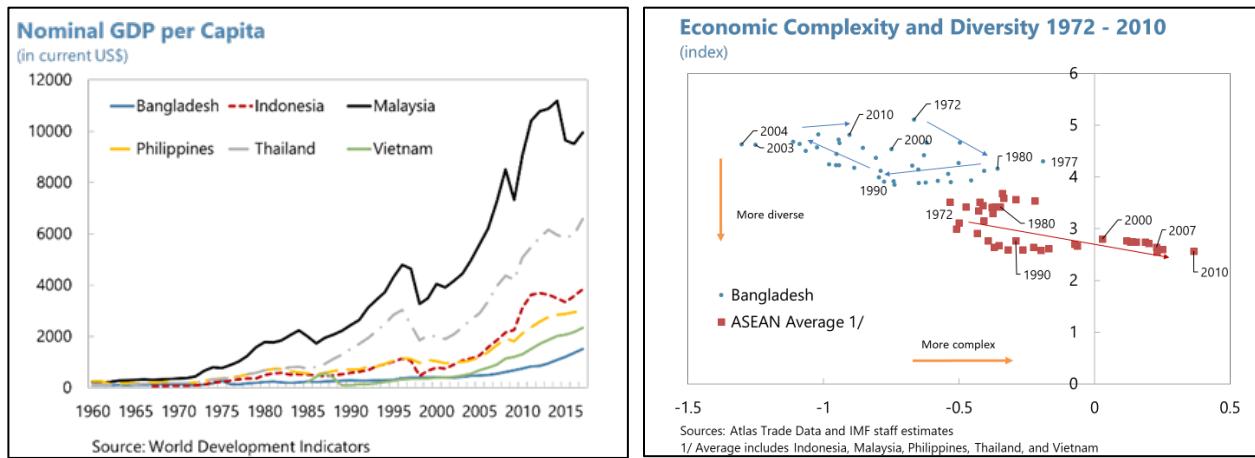
### A. The State of Diversification in Bangladesh vis-à-vis Neighbors

#### 1. This paper uses concepts of *diversity* and *complexity* to assess export diversification of Bangladesh. These concepts are defined as follows;

*Diversity* is measured as an IMF index of the concentration of goods that an economy produces (IMF 2014).<sup>2</sup>

*Complexity* relies on two concepts: *ubiquity* and *diversity* (Hausmann et al., 2014).<sup>3</sup> A product is *ubiquitous* if many economies have a revealed comparative advantage<sup>4</sup> in producing it. An economy is *diverse* if it has a revealed comparative advantage in the production of many products.<sup>5</sup> The *complexity* of an economy is negatively related to the *ubiquity* of the products, and positively related to *diversity*.

#### 2. As Bangladesh has made important strides in improving GDP per capita, the economy has become more concentrated and less complex compared to peers. After the RMG sector



<sup>1</sup> Prepared by Racha Moussa and Muhammad Imam Hussain (APD).

<sup>2</sup> The IMF diversification index <https://www.imf.org/external/np/res/dfidimf/diversification.htm>.

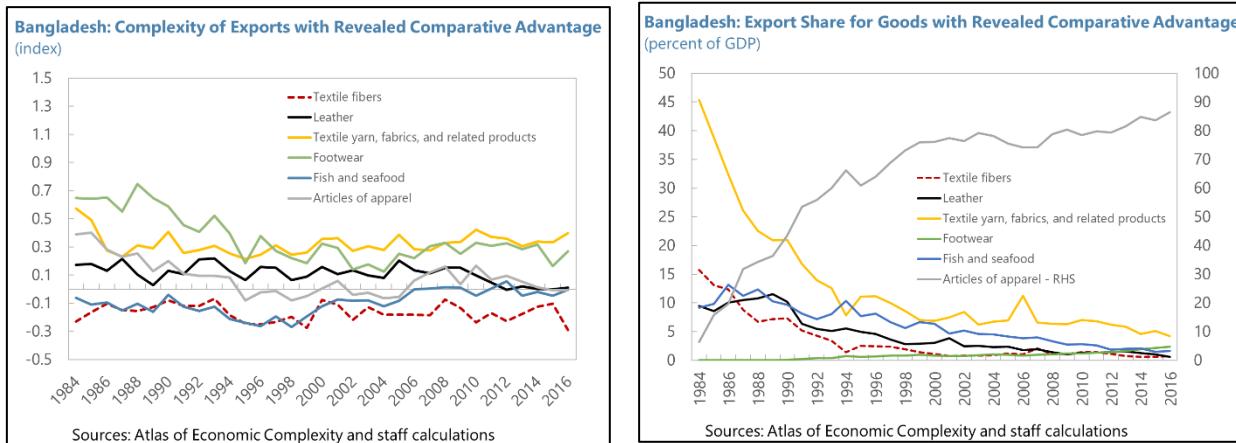
<sup>3</sup> We use the Complexity index from the Atlas of Economic Complexity.

<sup>4</sup> A country has a revealed comparative advantage in a product if the product's share in the country's exports is greater than the share of the product's total exports in global exports.

<sup>5</sup> This concept of diversity which depends on revealed comparative advantage is different from the IMF diversity index, which is a Theil index.

started to grow, the country shifted from an agrarian to a more manufacturing based economy. This led to higher diversity and complexity until the 1980s. However, this trend has reversed and the economy's complexity and diversity have been declining since the 1990s. In contrast, ASEAN economies have consistently seen an increase in the diversity of the products they produce and an increase in the complexity of their economies, coupled with higher GDP per capita growth.

**3. Significant success in the RMG industry has led to a less diverse and complex structure of the economy.<sup>6</sup>** RMG and other products where Bangladesh has a revealed comparative advantage have become less complex over time. This has occurred since more economies have a comparative advantage in these products and they become more ubiquitous. The higher share of RMG sector in exports, which is currently more than 80 percent, also implies that Bangladesh has a revealed comparative advantage in few products, making it less diverse.



**4. Bangladesh has had limited integration into global supply chains to date compared with neighboring economies (Figure 1).** Over time, Bangladesh's top export partners have changed little as the primary export sector has remained RMG. Vietnam is an example in Asia that is more integrated into global value chains. Vietnam's diversified away from exporting fish in the 1980s and moved to garments and footwear in the 2000s. By 2016 the export share of more complex products such as machinery and telecommunication equipment had increased markedly along with the share of exports to China, indicating increased integration into global value chains. Bangladesh does not yet have comparative advantage in the production of intermediate goods used in the production of more complex final goods. Diversifying into these more complex intermediate goods would be a good step in increasing the complexity of exports and would help integrate Bangladesh into global supply chains and help the external sector become more robust to shifts in global demand.

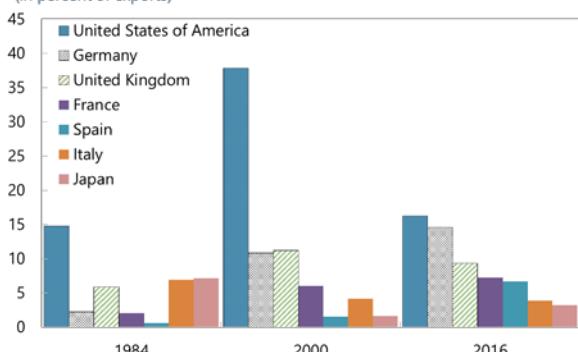
<sup>6</sup> IMF, 2019 includes a broader discussion of diversification in South Asia.

## B. Looking Forward

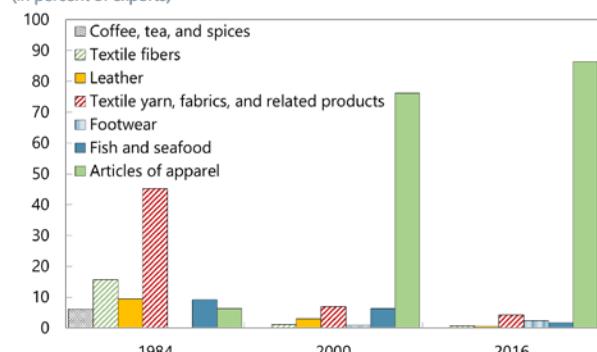
**5. Bangladesh stands to gain from its large and growing manufacturing base.** Empirical evidence suggests that increased growth in manufacturing is associated with increases in the complexity of the economy (Table 1). However, the garment sector has few linkages to other more complex manufacturing industries (Figure 2). Though it might take some time that automation significantly impacts the RMG sector in Bangladesh, factories are working to increase productivity which will eventually free resources for other uses and necessitate expansion into different sectors. Implementing policies that would allow the private sector to enter new industries will be important. This includes (i) improving the business environment to ease the entry of new firms and (ii) investment in human capital to prepare the labor force.

**Figure 1. Major Export Partners and Products with Revealed Comparative Advantage Over Time 1/**

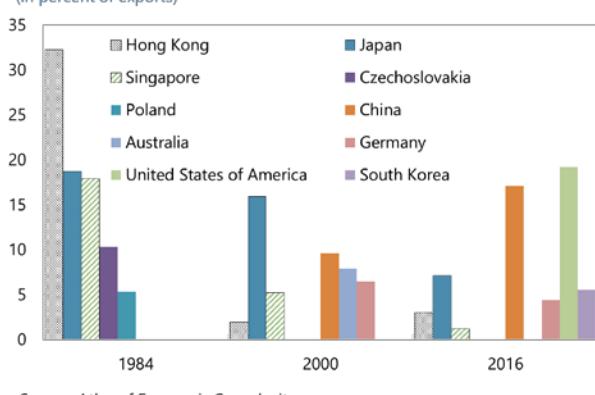
**Bangladesh: Major Export Markets**  
(in percent of exports)



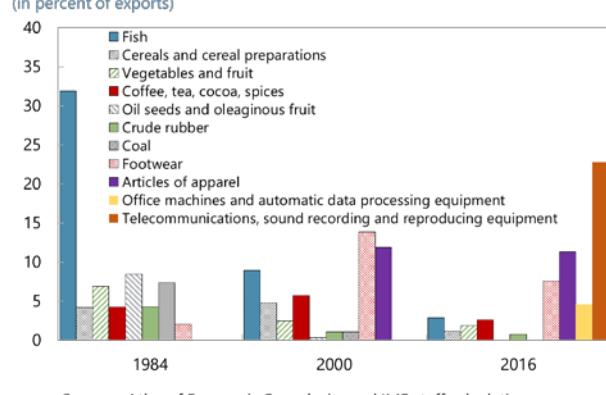
**Bangladesh: Exports with Revealed Comparative Advantage**  
(in percent of exports)



**Vietnam: Major Export Markets**  
(in percent of exports)



**Vietnam: Exports with Revealed Comparative Advantage**  
(in percent of exports)



1/ The set of countries include top 5 export markets in the years examined.

**Table 1. Bangladesh: Regression Results for Complexity 1/**

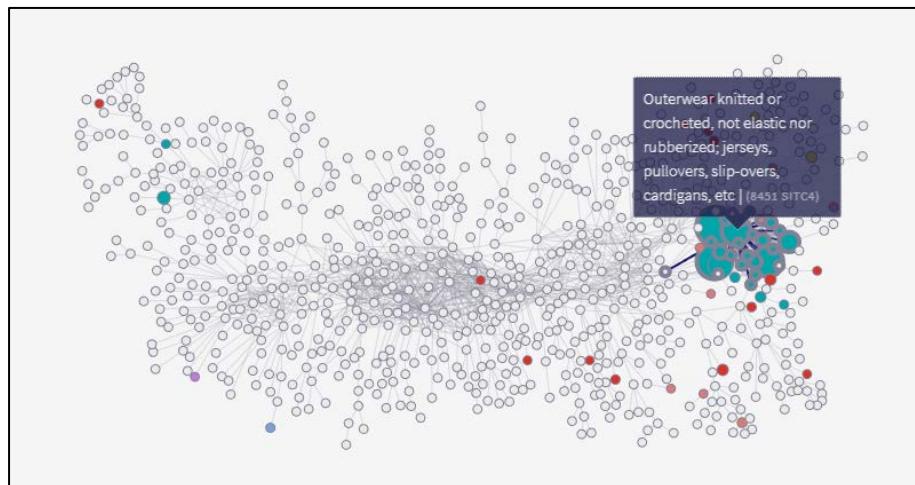
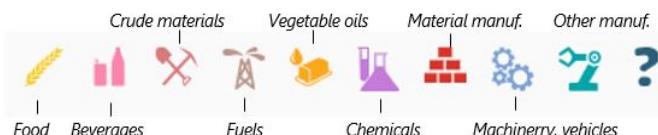
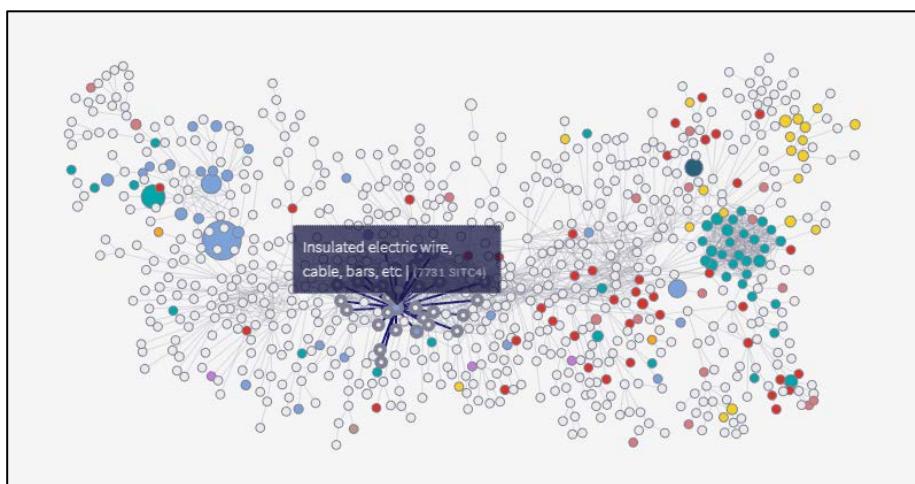
	Dependent variable: complexity				
	(1)	(2)	(3)	(4)	(5)
Manufacturing	0.118 (67.18)**	0.119 (67.57)**	0.023 (23.82)**		
Services	-0.039 (20.07)**	-0.041 (21.25)**		0.000 (0.48)	
Agriculture	-0.136 (62.46)**	-0.133 (61.01)**			-0.045 (31.97)**
Product Complexity		0.031 (2.82)**			
Constant	0.96 (29.32)**	0.85 (19.62)**	-0.935 (44.33)**	-0.451 (20.29)**	0.553 (17.02)**
Adjusted R2	0.83	0.84	0.83	0.83	0.83
N	467,045	460,318	467,045	470,029	470,029

\*  $p<0.05$ ; \*\*  $p<0.01$

Source: IMF Staff Estimates

1/ Complexity is the index of economic complexity by economy from the Atlas of Economic Complexity. Manufacturing, Services and Agriculture variables are the log of value-added manufacturing, services, and agriculture from the UN National Accounts data. Product complexity is calculated by sector as the average complexity of economies with revealed comparative advantage in the sector. This variable is lagged. Data are an unbalanced panel from 1970 to 2016 with 250 countries and 70 sectors. The regression has country fixed effects.

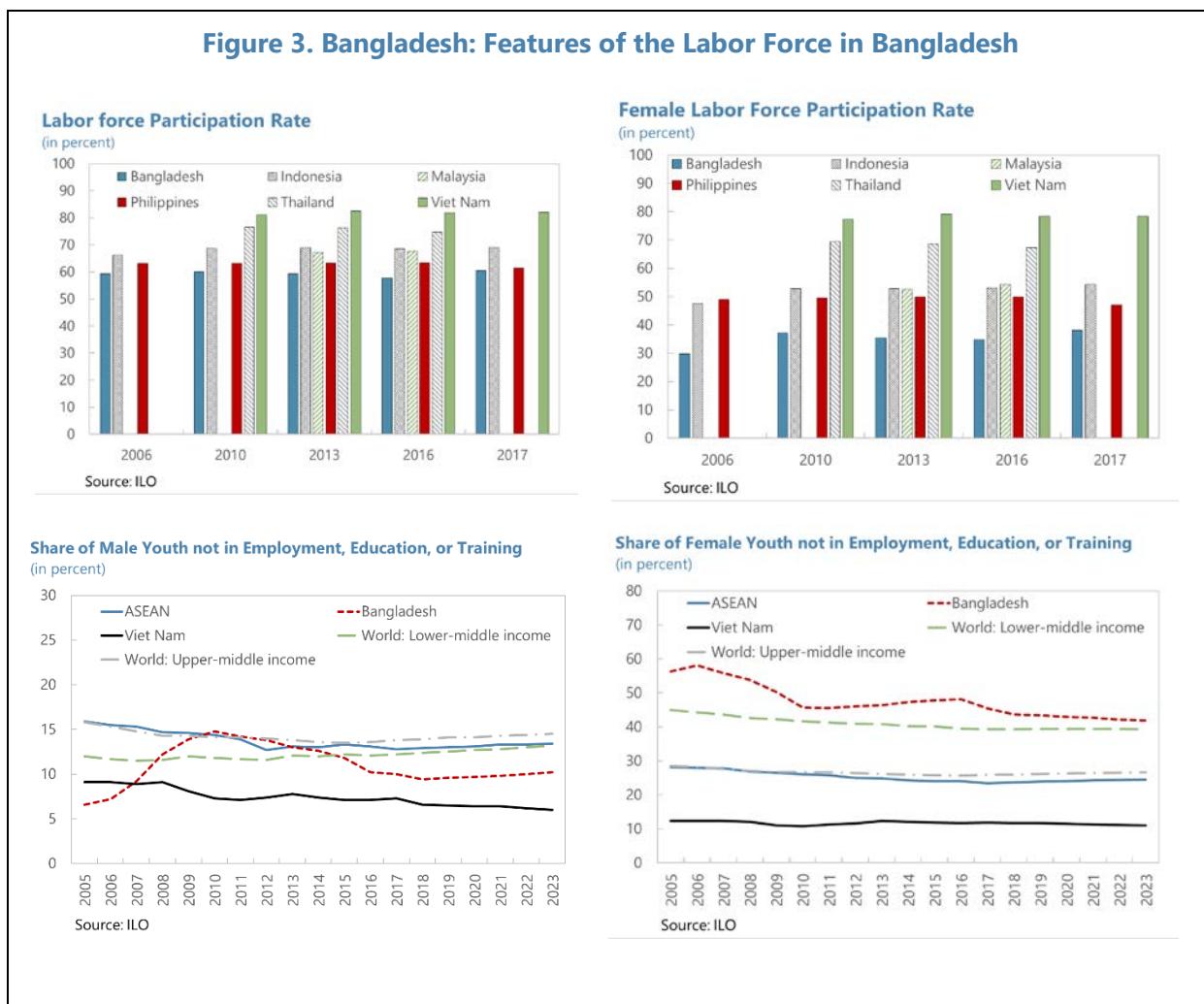
**6. Further improvements to the business environment would facilitate diversification.** Over the past year, reforms spearheaded by the Bangladesh Investment Development Authority have, to some extent, improved the business environment. Under the One Stop Service virtual platform, procedures such as company registration, online payment of registration fees, obtention of a tax identification number, and online VAT registration have all been merged into a single process. The time required to obtain a construction permit, electricity, and the average time to complete administrative requirements for export and import permissions have all been cut. Some progress has also been made regarding the protection of minority investors. Significant reform priorities are still in the pipeline that should enhance the effectiveness of the judicial system. In addition, a monitoring system should be in place to ensure that commercial disputes are settled within 500 calendar days.

**Figure 2: The Product Space and Exports in Bangladesh and Vietnam, 2016****Bangladesh: concentration in apparel which has limited links to other products****Vietnam: exports in areas that are more linked to other products**

Source: Atlas of Economic Complexity.

Note: The product space represents linkages between goods based on Atlas data. Populated circles are for exports with revealed comparative advantage. The size of circles is proportional to the country's export of the products. Products are based on 4-digit SITC codes.

**7. Developing complex industries will also require investment in human capital.** Data suggest significant scope for improving the employment of youth and especially females (Figure 3). The unemployment rate for youth in Bangladesh was 12.8 percent in 2017, around three times that for the total population. 26 percent of youth were not employed, or being educated, or trained in 2018. This is especially pronounced for females, 44 percent in 2018 compared with around 9 percent for males. Female unemployment, 6.8 percent in 2017, is twice male unemployment. Female labor force participation has increased only moderately between 2006 and 2017 and remains among the lowest in peer countries. New sectors will not develop without a labor force that can support production. Bangladesh has the people to fill the jobs, and they will need targeted training and education for the sectors that are going to develop. Ultimately, enhanced human capital and a more diverse export sector will lead to higher welfare.



## References

- Hausmann, Ricardo, César A. Hidalgo, Sebastián Bustos, Michele Coscia, Sarah Chung, Juan Jimenez, Alexander Simoes, and Muhammed A. Yıldırım, 2014. "The Atlas of Economic Complexity: Mapping Paths to Prosperity," MIT Press Books.
- International Monetary Fund, 2014. "Sustaining Long-Run Growth and Macroeconomic Stability in Low-Income Countries—The Role of Structural Transformation and Diversification." IMF Policy Paper.
- \_\_\_\_\_, 2019, "Is South Asia Ready for Take Off? A Sustainable and Inclusive Growth Agenda" Background Paper in Regional Economic Outlook: Asia Pacific.