



BANGLADESH NATIONAL PRODUCTIVITY MASTER PLAN FY2021–FY2030

ASIAN PRODUCTIVITY ORGANIZATION

Bangladesh National Productivity Master Plan FY2021–FY2030

Published in Japan
by the Asian Productivity Organization
1-24-1 Hongo, Bunkyo-ku
Tokyo 113-0033, Japan
www.apo-tokyo.org

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FOREWORD

আ. স. পত্র নং-

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MESSAGE

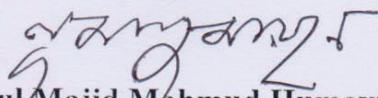
I am happy to note that the National Productivity Organization (NPO) of Bangladesh under the Ministry of Industries is formulating **National Productivity Master Plan 2021-2030** in line with the celebration of the golden jubilee of the independence of Bangladesh, which coincides, with the 100th Birth Anniversary of the greatest 'Bangali' ever, the Father of the Nation, Bangabandhu Sheikh Mujibur Rahman.

Bangladesh has attained unprecedented success in her socio-economic spheres during the last ten years as the Awami League-led government took various initiatives in this regard. The World Bank's evaluation of Bangladesh as a 'Lower-Middle Income' country and the United Nations' evaluation as a 'Developing' state have added two distinctive feathers to the crown of our success. Bangladesh has emerged as a new example of development in the world community by her journey along with an unhindered path of progress and in continuation of this, we have started a new expedition towards reaching our goal to be a developed nation.

To achieve the desired goal of becoming a developed nation, the level of productivity promotion is indispensable. The National Productivity Organization (NPO) of Bangladesh is working actively under the guidance of Hon'ble Prime Minister Her Excellency Sheikh Hasina with a view to improve productivity in all the sectors including industry. As a national body responsible for improving productivity, NPO, is playing a catalytic role in the advancement of our economy through its multidimensional efforts of productivity improvement, including creating awareness among the concerned stakeholders about the benefits of productivity promotion, creating trained up productivity-oriented human resources, rendering practical training, organizing national and international workshops, conducting research and so on.

I am sure that the professionals working in the NPO, Bangladesh and other organizations will come forward to form a national consensus in favor of productivity movement and thus I hope, would create a strong platform to implement the National Productivity Master Plan 2021-2030.

I appreciate the officers and staffs of the NPO for their arduous effort in preparing such a Master Plan and wish its successful implementation.


(Nurul Majid Mahmud Humayun MP)

Dated: 17 June, 2019

FOREWORD

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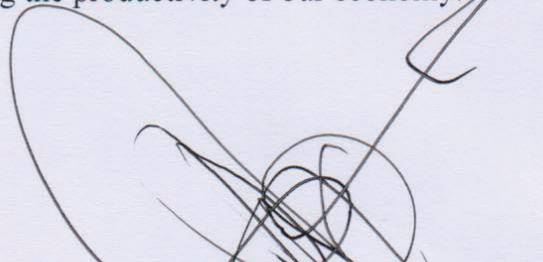
Message

It's my pleasure that for the first time the Asian Productivity Organization (APO) and the National Productivity Organisation (NPO), Bangladesh have jointly developed the National Productivity Master Plan 2021-2030.

Productivity plays a very crucial role in the process of economic advancement. Bangladesh under the visionary leadership of Prime Minister Sheikh Hasina has graduated to Lower Middle Income Country from Least Develop Country. The Productivity of every sector in our economy is increasing significantly as the government is providing necessary supports and patronization in this regard. Our vision is to transform Bangladesh into a prosperous and developed land by 2041. For achieving this, Bangladesh needs to enhance its level of productivity enormously. In line with this vision, the National Productivity Master Plan has been formulated under the Specific National Program (SNP) of the APO in collaboration with the National Productivity Organisation (NPO), Bangladesh. Our productivity achieved growth by 3.8% per annum between 1995 and 2016. I am sanguine that we would be able to reach an average annual productivity growth of 5.6% during the period 2021–2030 with the implementation of National Productivity Master Plan 2021-2030.

I believe that the National Productivity Master Plan 2021–2030 will serve as an inclusive plan for the country to go on board on a productivity-driven growth strategy and will help us to build a developed country within 2041. I think it is a very significant contribution made by APO toward the development of Bangladesh. I give my heartfelt thanks to APO and NPO, Bangladesh for taking this great initiative for boosting the productivity of our economy.

Joi Bangla, Joi Bangabandhu
May Bangladesh live forever.



Kamal Ahmed Mojumder MP

FOREWORD

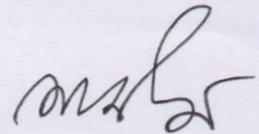
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National Productivity Organisation (NPO), Ministry of Industries has taken initiative to publish National Productivity Master Plan FY2021 – FY2030 with the help of Asian Productivity Organisation (APO) to achieve higher-productivity growth in various sectors for the first time in Bangladesh.

Bangladesh on the road of middle-income Journey. Bangladesh will officially graduate from the LDC category in 2024. Achieving the status of Developed Countries by 2041 is the next big vision in the long-term development canvas of Bangladesh while also focusing on achieving the UN mandated Sustainable Development Goals (SDGs) by 2030. Therefore, promotion from the LDC status is not the final destination, but rather another milestone towards the Vision 2041. To achieve the milestone Bangladesh needs to increase productivity level in every sector. But, NPO had no holistic plan for accelerate productivity at enterprise as well as national level. I believe that this Master Plan will serve as an effective tool for the country to accelerate productivity and help us to be a developed country within 2041.

I also believe that the Bangladesh National Productivity Master Plan FY2021 – FY2030 is intended to serve as a comprehensive plan to execute the high-productivity growth strategy. With a 10-year timeframe, it will guide the implementation of programs to raise Bangladesh's productivity performance substantially.

I must appreciate with gratitude if any suggestions or recommendations come from any corner for the improvement of this publication



Md. Abdul Halim

FOREWORD

Productivity per se, as a concept to evaluate the quality and continuity of economic progress, may no longer be an adequate reference in the context of a complex, rapidly changing, interconnected external environment. In addition to the support of knowledge capital and technology, productivity must embrace continuous innovation and accommodate agility, while ensuring future relevance by adding a sustainability dimension to it. This is true for any entity, regardless of its size and nature and including the overall economy, on the journey to becoming more productive.

Agility in responding to changes and taking advantage of opportunities presented by those changes should also be an integral part of the equation for achieving productivity and prosperity. Productivity without agility would yield limited economic progress since it is only related to the notion of “doing the right things right” without considering risks and potential stemming from the turbulent, uncertain, complex environment. This will have even broader ramifications for economic progress with the inclusion of innovation in the productivity concept. Agility augments and accelerates the push productivity gives to economic growth, strengthening the connection between productivity and innovation.

The present Bangladesh National Productivity Master Plan 2021–2030 was developed with the primary goal of sustaining the economy’s productivity growth based on a productivity–innovation–agility nexus. The deployment of a holistic approach in strengthening the institutional requirements and setting up soft and hard infrastructures for productivity- and innovation-led growth should be viewed as an effort to lay a firm foundation for the nexus to be functional. This is accurate, since the desired growth outcomes stemming from the interdependence among productivity, innovation, and agility can only be achieved if there is a strong base for structural transformation into a higher-productivity economy. This attempt often requires the implementation of productivity-enhancing structural reforms. Unfortunately, there is no single reform trajectory to inject more productivity into an economy. This validates the need for a holistic approach.

We are grateful for the financial support provided by the Ministry of Foreign Affairs of Japan through its Special Cash Grant Scheme for APO Member Countries for the development of this master plan.

The APO is pleased to present the Bangladesh National Productivity Master Plan 2021–2030 to the Government of the People’s Republic of Bangladesh.



Dr. Santhi Kanoktanaporn
Secretary-General
Asian Productivity Organization

EXECUTIVE SUMMARY

From a low-income country at the time of its independence in 1971, Bangladesh progressed to become a lower-middle-income country in 2015. This progression was made possible by the average gross domestic product (GDP) growth of 4.38% per annum, which expanded the economy by 7.2 times and raised the per capita income by 2.9 times. Although this growth was lower than the 4.56% and 4.44% for the lower- and upper-middle-income countries, respectively, it accelerated in the last three decades. In the 2010–17 period, a high average of 6.6% per annum was achieved, making Bangladesh one of the fastest growing economies in the world. This growth has trickled down to the population, reducing the incidence of poverty to 24.3%, half of the 48.9% in 2000.

For the last ten years, the development of the country has been guided by the government's Vision 2021. This vision articulates where Bangladesh aims to be in 2021, the year that marks the 50th anniversary of the country's independence. Two key goals are: eradication of poverty, and Bangladesh being an upper-middle-income country by 2021. To provide directions to realize Vision 2021, the government has produced detailed five-year plans. The latest is the 7th Five-Year Plan FY2016 – FY2020. Beyond 2021, the government has set its sights on Bangladesh becoming a developed country by 2041.

Both the goals of becoming an upper-middle-income country by 2021 and a developed country by 2041 are stretch targets, considering that Bangladesh's current per capita income is far below the minimum required for progression into the categories of higher-income countries. To accomplish the goals, a high GDP growth rate is required. The 7th Five-Year Plan FY2016 – FY2020 has set the target of 7.4% average annual growth over the period of the plan. This high growth rate of at least 7% per annum will have to be sustained for the goals to be achieved. This, in turn, requires that a high-productivity growth strategy be pursued, as the labor force growth rate is projected to be only 1.41% per annum for the period 2018–30.

A concerted high-productivity growth strategy is particularly critical as the country's productivity performance has not been sterling. Although Bangladesh's productivity growth of 3.8% per annum was higher than the 2.5% average for the 20 APO member economies (APO20) from 1995 to 2016, this was due to the fact that the country had started from a very low productivity level. Despite this growth, Bangladesh's productivity level was only 33% that of APO20 in 2016. This placed Bangladesh in the third lowest position, just above Cambodia and Nepal. Furthermore, the 3.8%

growth was lower than that achieved by the South Asian countries of India and Sri Lanka, thus widening the productivity gap over time.

The Bangladesh National Productivity Master Plan FY2021–FY2030 is intended to serve as a comprehensive plan to execute the high-productivity growth strategy. With a 10-year timeframe, it will guide the implementation of programs to raise Bangladesh’s productivity performance substantially. The strategy is underpinned by a holistic approach to managing all the drivers affecting national productivity, augmented by the country’s agility to act upon future trends that impact them and quickly seizing the opportunities for growth.

Table A shows the vision for the high-productivity growth strategy. The vision is termed Productivity 2031 to connote the desired state in 2031, the year that marks the 60th anniversary of Bangladesh’s independence. It comprises a quantitative target and certain qualitative goals. The overarching target is an average annual productivity growth of 5.6% for the period 2021–31. This is a stretch target in comparison with the 3.8% per annum growth achieved during 1995–2016. Nevertheless, it is not an unrealistic growth target in comparison with the achievements made by Sri Lanka and India.

Besides the overarching target, there are five qualitative goals in the Productivity 2031 vision. These goals are characteristics that can be expected of the Bangladesh economy as the proximate factors and enablers are addressed effectively by the high-productivity growth strategy. They are, in effect, the desired characteristics of the proximate factors and enablers.

The first goal is to have a broad base of productive enterprises, led by a vanguard of innovative and agile enterprises. These enterprises are able to make efficient and effective use of resources, seize opportunities, and generate high value added. This is a sea change compared with the current situation of high numbers of low-productivity SMEs and large enterprises, both private-owned and state-owned, which constrict the economy’s productivity growth. The goal is to be achieved through two strategic thrusts: raise small and medium enterprises (SMEs) to a higher plane to break out of the low-productivity-low-growth vicious cycle; and scale up the core of innovative and agile large enterprises to drive the economy’s productivity.

The second goal is to have leading-edge sectors producing high-value-added goods and services. This contrasts with the current situation of low-productivity sectors producing low-value-added goods and services, dragged down in particular by subsistence agriculture, labor-intensive readymade garment (RMG) manufacturing and traditional services. The goal is to be achieved through four strategic thrusts. The first thrust is to promote productivity in all the sectors without compromising sustainable development. The second thrust is to modernize and diversify agriculture

TABLE A

PRODUCTIVITY 2031 VISION

Overarching target: Average annual productivity growth of 5.6% for the period 2021–31

Goals	Strategic thrusts	Strategies in 7th Five-Year Plan FY2016 – FY2020	UN Sustainable Development Goals 2030
Broad base of productive enterprises, led by a vanguard of innovative and agile enterprises	<ol style="list-style-type: none"> 1. Raise SMEs to a higher plane to break out of low-productivity-low-growth vicious cycle 2. Scale up the core of innovative and agile large enterprises to drive the economy's productivity 	<ul style="list-style-type: none"> • Strategy for agriculture and water resources • Strategy for manufacturing sector development with export-led growth • Strategy for boosting the services sector 	
Leading-edge sectors producing high-value-added goods and services	<ol style="list-style-type: none"> 3. Promote productivity in all the sectors without compromising sustainable development 4. Modernize and diversify agriculture beyond rice and crop production 5. Strengthen and enlarge the industrial base beyond readymade garment manufacturing 6. Transform traditional services and accelerate the growth of modern and exportable services 	<ul style="list-style-type: none"> • Strategy for agriculture and water resources • Strategy for manufacturing sector development with export-led growth • Strategy for boosting the services sector • Power and energy development strategy • Sustainable development: environment and climate change • Strategy for local government and rural development 	<ul style="list-style-type: none"> • Industry, innovation, and infrastructure • Responsible consumption and production • Climatic action • Life below water • Life on land
Complex economic structure characterized by deep capabilities and production of sophisticated products	<ol style="list-style-type: none"> 7. Drive growth of new high-value-added industries in top end of the product space, and expand and strengthen capabilities of existing core industries 	<ul style="list-style-type: none"> • Strategies for promoting pro-poor and inclusive growth 	
Robust business enablers propelling development and growth of enterprises and sectors	<ol style="list-style-type: none"> 8. Plug gaps in the skills development system and step up skilling and reskilling of the workforce 9. Intensify technology development and diffuse its applications widely in every sector 10. Remove all obstacles faced by businesses and improve every aspect of the business environment 	<ul style="list-style-type: none"> • Education development strategy • Digital Bangladesh and information communications technology (ICT) • Strategies for promoting pro-poor and inclusive growth • Education • Strengthening public administration, public institutions, and governance 	
Advanced macro enablers underpinning sustained productivity growth of the economy	<ol style="list-style-type: none"> 11. Collaborate with relevant institutions to improve macro enablers continually 	<ul style="list-style-type: none"> • Strengthening public administration, public institutions, and governance • Power and energy development strategy • Transport and communication development strategy • Medium term macroeconomic framework • Public investment program and its financing • Education sector development strategy • Health, nutrition, and population development strategy • Poverty and inequality reduction strategy 	<ul style="list-style-type: none"> • No poverty • Zero hunger • Good health and well being • Quality education • Gender equality • Clean water and sanitation • Affordable and clean energy • Decent work and economic growth • Industry, innovation, and infrastructure • Reduced inequalities • Sustainable cities and communities • Peace, justice, and strong institutions • Partnerships for the goals

beyond rice and crop production. This includes diversification into other cereal crops such as maize and wheat, and non-cereal crops such as vegetables and oilseeds; and fisheries and livestock. The third thrust is to strengthen and enlarge the industrial base beyond RMG manufacturing. This includes light industries such as agroprocessing, pharmaceuticals, and electronics; manufacturing of capital goods such as machinery and other capital equipment, transport equipment and accessories (including shipbuilding), and industrial supplies; and the construction and energy industries. The fourth thrust is to transform traditional services and accelerate the growth of modern and exportable services. These include ICT, financial services, professional services, tourism, and high-skill factor (labor) services.

The third goal is to have a complex economic structure characterized by deep capabilities and production of sophisticated products. This reflects a transformation from the current simple economic structure built upon a narrow economic base (rice production, RMG manufacturing, and unskilled factor or labor services exports) to one that is driven by high-value-added industries and internationally competitive products. The goal is to be achieved through the strategic thrust of driving the growth of new high-value-added industries in the top end of the product space and expanding and strengthening the capabilities of existing core industries.

The fourth goal is to have robust business enablers propelling the development and growth of enterprises and sectors. Instead of the current situation where skills, technology, and the business environment are poor and constrain business operation and growth, the business enablers will be productivity boosters. This goal is to be achieved through three strategic thrusts: plug gaps in the skills development system and step up skilling and reskilling of the workforce; intensify technology development and diffuse its applications widely in every sector; and remove all obstacles faced by businesses and improve every aspect of the business environment.

The fifth goal is to have advanced macro enablers underpinning sustained productivity growth of the economy. Compared with the current situation where the institutional environment, infrastructure, macroeconomic stability, and state of education and health are weak and reduce attractiveness of the country for businesses, the macro enablers will be productivity enhancers. This goal is to be achieved through the strategic thrust of collaborating with relevant institutions to improve the macro enablers continually.

Altogether, there are 11 strategic thrusts to achieve the vision. These strategic thrusts are shown in Table A, together with the strategies in the 7th Five-Year Plan FY2016 – FY2020 that they support (ideally, a comparison should be made with the 8th Five-Year Plan FY2021 – FY2025 but this has not been developed yet). In addition, the United Nations (UN) Sustainable Development Goals for 2030 are included to underline how the strategic thrusts contribute to the attainment of the goals.

The 11 strategic thrusts must be managed in an integrated manner to realize the Productivity 2031 vision. For this purpose, a national Productivity Movement should be launched as it will provide the platform to unify all initiatives and activities taken in conjunction with the strategic thrusts. At the same time, the Productivity Movement can be used to rally everyone to work towards Productivity 2031. To execute the 11 thrusts systematically, detailed action plans should be formulated, launched to generate publicity, and implemented and monitored by the relevant agencies. At the same time, there should be continuous promotion of the Productivity Movement to sustain interest in the national productivity drive. The current annual National Productivity Day serves as a good platform to create awareness of the productivity drive. Beyond this, the awareness should be sustained by a year-long action plan of programs and communication of each program when it is launched.

To execute the Productivity Movement effectively, the productivity ecosystem needs to be robust. The ecosystem comprises the key institutions and engagement partners, both of which should work together to reach out to the three main target groups of workforce, enterprises, and sectors.

The key institutions are those that are responsible for formulating the plans and policies and implementing the programs of the Productivity Movement. Leading the key institutions are the productivity drivers. At the apex is the National Productivity Council (NPC), which provides the strategic directions for the Productivity Movement. It is supported by the National Productivity Executive Committee (NPEC), which executes the decisions and recommendations of the NPC. The NPEC also supervises the activities of the National Productivity Organisation (NPO), the body responsible for implementing the directions and decisions taken by the NPC and the NPEC. The roles of these three productivity drivers should now be expanded to execute the high-productivity growth strategy in the Master Plan.

Besides the government ministries, the other key institutions are SME Foundation (SMEF), Bangladesh Small and Cottage Industries Corporation (BSCIC), Bangladesh Council of Scientific & Industrial Research (BCSIR), Bangladesh Standards and Testing Institution (BSTI), National Skills Development Authority (NSDA), and the public sector. In implementing the Master Plan, the NPO should work closely with these key institutions. To perform their roles effectively, all these institutions should be reformed so that they are well-gearred to help drive the Productivity Movement. They should also be equipped with the necessary knowledge, resources, and capabilities on productivity.

To achieve maximum reach and impact, the NPO and the other key institutions should work with the key engagement partners in executing the high-productivity growth strategy. These partners can act as channels and multipliers to reach out to the target groups throughout the country.

The key engagement partners in Bangladesh are the business and professional associations, media, trade unions, and local government organizations. The NPO should work out a comprehensive engagement plan to involve them. Like the key productivity institutions, the engagement partners should undergo reforms and be equipped with the capabilities to perform their roles well.

An effective and timely execution of the high-productivity growth strategy through the Productivity Movement, supported by a robust productivity ecosystem of institutions and partners, should lead to the achievement of Productivity 2031. This will contribute significantly to the realization of Bangladesh's goals of becoming an upper-middle-income country by 2021 and a developed country by 2041. The critical success factor is top-level commitment from the government for the sustained implementation of the Bangladesh National Productivity Master Plan FY2021–FY2030.

INTRODUCTION

The Bangladesh National Productivity Master Plan FY2021–FY2030 is a comprehensive national plan for a high-productivity growth strategy for the country. It will guide the implementation of activities systematically and holistically to support the growth driver of “increasing productivity” identified in the 7th Five-Year Development Plan FY2016 – FY2020 as well as the subsequent two five-year plans.

The timeframe for the Master Plan is FY2021–FY2030, making it a 10-year plan. This is aligned with the combined timeframe of the 8th Five-Year Plan FY2021 – FY2025 and the 9th Five-Year Plan FY2026 – FY2030. The start date of FY2021 for the plan will give sufficient time for the government to deliberate upon the recommendations of the Master Plan and carry out further consultations before finalizing it. It will also enable the submission of request for additional funding to execute the plan during the budget cycle leading up to FY2021 (Bangladesh’s financial year is 1 July–30 June).

The development of the Master Plan was led by two consultants appointed by the Asian Productivity Organization (APO). Spanning the period 6 April–21 June 2019, it comprised two stages. In the first stage, a diagnostics exercise identified the key productivity-related issues and challenges facing Bangladesh and made preliminary recommendations to address them. Conducted from 6 April to 17 May 2019, the diagnostics exercise was based on research and analysis of documents including plans, policy documents, and studies; meetings and consultations with stakeholders; benchmarking against international best practices; and experiences from the development of similar master plans for other countries. In the second stage, the Master Plan was drafted from 19 May to 21 June 2019, based on findings from the diagnostics exercise and feedback from policymakers in Bangladesh.

Two frameworks, constructed by the consultants, were used in the development of the Master Plan tailored for Bangladesh. The first is the IMPACT™ framework, which provides a holistic approach to the management of productivity at the national level. The framework brought into focus factors that would normally have been excluded in a narrow view of productivity, and hence enabled fresh insights to be drawn for Bangladesh’s productivity drive. The second is the Prime.Pack™ framework, which provides an integrated approach for the execution of

IMPACT™ through the Productivity Movement. The focus in the two stages was on synthesizing the wealth of information obtained from the various primary and secondary sources and an in-depth analysis of the key issues.

The Bangladesh National Productivity Master Plan FY2021–FY2030 is the outcome of the two-stage process. The details of the plan are presented in the next six parts. Part 2, (‘Critical Importance of a High-productivity Growth Strategy for Bangladesh’), underlines the critical importance of a high-productivity growth strategy for Bangladesh. Part 3 (‘Bangladesh’s Productivity Performance’) analyzes Bangladesh’s productivity performance to date and benchmarks it against the relevant comparators. The vision for Bangladesh’s high-productivity strategy is presented in Part 4 (‘Visioning the Future: Productivity 2031’), and the strategic thrusts to achieve the vision are given in Part 5 (‘Charting Directions for the Future’). Part 6 (‘Institutionalizing the Productivity Movement’) describes how the Productivity Movement can be institutionalized; and Part 7 (‘Strengthening the Productivity Ecosystem: Institutions and Partners’) outlines how various parts of the productivity ecosystem, comprising the key institutions and engagement partners, should be strengthened. Part 8 (‘Conclusion’) concludes the Master Plan. The implementation structure, summarizing the strategic thrusts, supporting strategies, and the institutions in charge, is given in the Annexure.

CRITICAL IMPORTANCE OF A HIGH-PRODUCTIVITY GROWTH STRATEGY FOR BANGLADESH

Geography, Administrative Divisions, and Demography of Bangladesh

Bangladesh gained independence on 26 March 1971 and became officially known as the People's Republic of Bangladesh.

Bangladesh is located on a low-lying delta, formed by a dense network of the distributaries of the Ganges, the Brahmaputra, and the Meghna rivers, between the Himalayas and the Bay of Bengal. A network of more than 230 major rivers and their tributaries criss-crosses the country. The only exceptions to the low-lying land are the Chittagong Hills in the southeast, the Low Hills of Sylhet in the northeast, and highlands in the north and northwest. The total land area of the country is 147,570 sq km, of which about 17% are forested.

The estimated population of Bangladesh is 168.1 million, making it the eighth most populous country in the world. Its population density of 1,139 people per sq km is the tenth highest in the world. The capital and largest city is Dhaka, which has a population of 14.4 million. About 37% of the population live in the urban areas, compared with just 8% in 1971, reflecting a high rural-urban migration rate as the largely urban-based industry and services sectors grew.

A vast majority of 98% of the population are ethnic Bengalis, while the remaining 2% are made up of Biharis and other ethnic tribes. In terms of religious composition, 89.1% of the population are Muslims, 10% Hindus, and 0.9% other religions (including Buddhists and Christians).

Bangladesh has a fairly young population, with 34% aged 15 years or less and just 5% aged 65 years or more.

Bangladesh's Economic Performance to Date and the Way Forward

Bangladesh's economy has grown rapidly over the years. From a low-income country at the time of its independence, Bangladesh progressed to become a lower-middle-income country on 1 July 2015, with gross national income (GNI) per capita of USD1,190 (Atlas method, current USD, based on World Bank classification), above the threshold of USD1,046.

Measured in terms of constant 2010 USD, Bangladesh's gross domestic product (GDP) increased 7.2 times in the last 46 years since it gained independence, from USD25 billion in 1971 to USD180 billion in 2017, i.e., at an average growth of 4.38% per annum. Nevertheless, this was still lower than the 4.56% average for the lower-middle-income countries and the 4.44% average for the upper-middle-income countries during the same period. Economic growth took off only after the restoration of democracy in 1991, which led to political calm and economic progress as industrialization gained a foothold in the country. GDP growth posted 4.6% per annum in the 1990s

and 5.8% in the 2000s, compared with 3.7% in the 1970s and 3.8% in the 1980s. This continued to increase to 6.6% per annum in the period 2010–17. In short, GDP growth has accelerated in the last three decades, especially since 2010, and Bangladesh is now considered one of the fastest growing economies in the world. In 2019, Bangladesh is expected to perform favorably: among the top three countries according to the International Monetary Fund (IMF) and the United Nations (UN); among the top five countries according to the World Bank; and the top country in the Asia-Pacific according to the Asian Development Bank (ADB).

The economic growth over the years enabled Bangladesh's GDP per capita in constant 2010 USD to increase by 2.9 times (from USD375.8 in 1971 to USD1,093.1 in 2017), i.e., at an average growth of 2.35% per annum. According to the Bangladesh Bureau of Statistics (BBS), the incidence of poverty in 2016 was 24.3%, half that of 48.9% in 2000 (based on upper poverty line). The reduction in extreme poverty was even more significant: from 35.2% in 2000 to 12.9% in 2016 (based on lower poverty line). This reflects the country's impressive progress in poverty reduction. For both measures of poverty, the percentages were higher in the rural areas. In 2016, poverty incidence and extreme poverty were 26.4% and 21.2%, respectively in the rural areas, compared with 18.9% and 7.7%, respectively in the urban areas.

Unlike many other developing countries, exports and foreign direct investment (FDI) have not played a significant role in the economy's growth. From 1971 to 1994, export of goods and services as a percentage of GDP was less than 10%. In 1995, at 10.9%, it crossed the 10% mark for the first time. It then grew to reach 20.2% in 2012 before it declined. In 2017, it was 15.0%. This was much lower than the 24.0% average for lower-middle-income countries and the 24.9% average for upper-middle-income countries. The situation for FDI is similar. According to World Bank data, the average FDI/GDP percentage for 1972–2017 was only 0.4% with a maximum of 1.7% in 2013. It was almost absent in the 1970s and was even negative in some years in the 1980s because of weak macroeconomic conditions, predominance of public sector enterprises, small domestic market, early phase of industrialization, and political instability. From the early 1990s, Bangladesh began to pursue a liberalized FDI policy. This resulted in a rise of FDI inflow in the mid-1990s, mainly in the energy and power sectors and the export-oriented readymade garment (RMG) sector (primarily in the form of international sourcing by international firms); and in 2000s, in telecommunication, banking, and RMG and textile sectors. Nevertheless, FDI/GDP percentage in 2017 was only 0.9%, much lower than the 2.0% average for lower-middle-income countries and the 1.8% average for upper-middle-income countries. This is attributable to the lack of a sufficiently favorable investment climate in the country. In other words, the macro enabling conditions are weak.

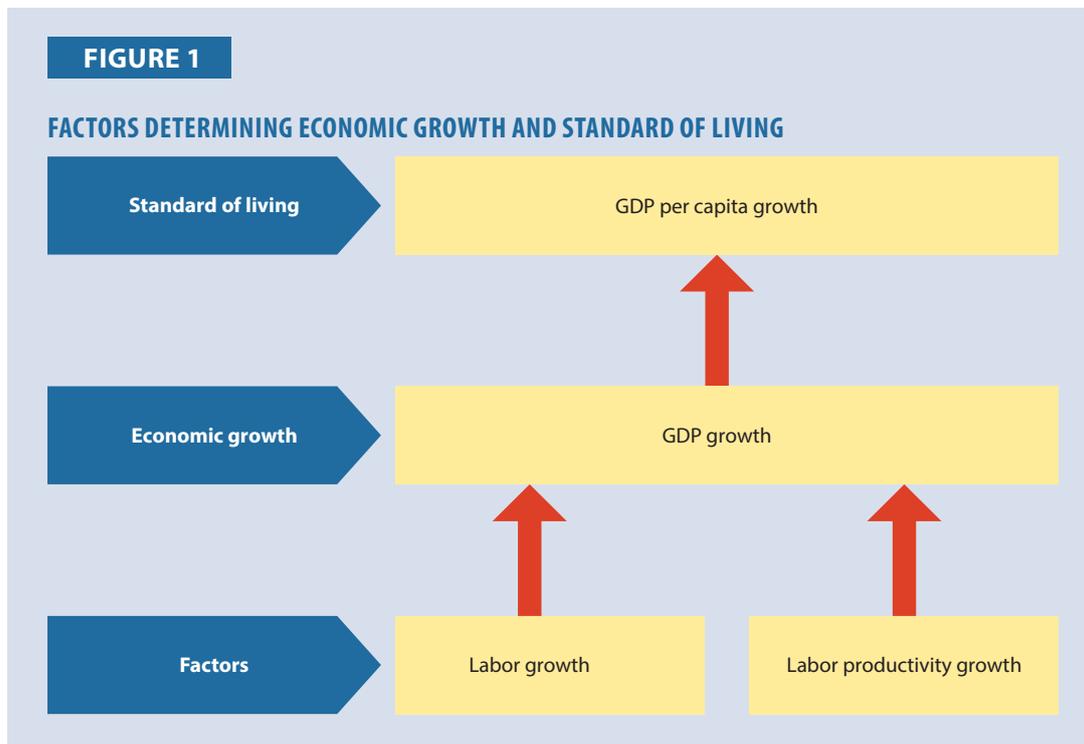
For the last ten years, the development of the country has been guided by the government's Vision 2021. Based on the election manifesto of the Awami League Party before winning the National Elections of 2008, Vision 2021 articulates where Bangladesh aims to be in 2021, the year that marks the 50th anniversary of the country's independence. Two key goals are: eradication of poverty, and Bangladesh being an upper-middle-income country by 2021. To provide directions for Vision 2021 to be realized, the government produced the "Perspective Plan of Bangladesh (2010–2021): Making Vision 2021 a Reality" in 2012. The specific strategies and the task of implementation were spelt out in two five-year plans: 6th Five-Year Plan FY2011 – FY2015, and the current 7th Five-Year Plan FY2016 – FY2020. One of the pivotal underlying themes for the economic growth strategy in the latest plan is to "break out of the sphere of 6% growth and raise the annual average growth rate to 7.4%" (based on past performance and future outlook). The importance of productivity as an important growth driver is recognized and described briefly.

In 2017, Bangladesh’s GNI per capita reached USD1,470. This was still far below the threshold of USD3,896 for an upper-middle-income country which Bangladesh aspires to be by 2021. As 2021 is just a couple of years away, the government has already started the process of planning for Vision 2041 with the aspiration of being a developed country. Classified as a least developed country by the UN since 1975, Bangladesh met the eligibility requirements for a developing country in March 2018. Its graduation depends on meeting the eligibility criteria scores for GNI per capita (USD1,230 or above), the Human Assets Index (66 or above), and the Economic Vulnerability Index (32 or below). According to the UN, Bangladesh’s scores on these parameters were USD1,274, 73.2, and 25.2, respectively. The graduation process has thus begun for Bangladesh, which could receive the official status of a developing country by 2024 if the scores are sustained for two consecutive periods of three years each, i.e., 2018–21 and 2021–24. From there, the road to becoming a developed country is a long one, with one criterion being GNI per capita exceeding USD12,066 (threshold for a high-income country), which is much higher than Bangladesh’s GNI per capita of USD1,470 in 2017.

Both the goals of becoming an upper-middle-income country by 2021 and a developed country by 2041 are stretch targets, considering that the current achievement level for GNI per capita is far below the minimum required for progression into the categories of higher-income countries. To achieve the goals, a high GDP growth is required. The 7th Five-Year Plan FY2016 – FY2020 has set the target of 7.4% annual average growth for the period of the plan. This high growth rate, averaging a minimum of 7% per annum, will have to be sustained for the goals to be achieved. This, in turn, requires that a high-productivity growth strategy be pursued.

Why Bangladesh Needs a High-productivity Growth Strategy

Figure 1 shows the two factors determining economic growth (measured by GDP growth) and standard of living (measured by GDP per capita growth). The two factors are labor growth and labor productivity growth.



Typically, the contribution from labor is relatively high in the early stages of a country's development. This is possible because the hitherto unemployed or underemployed unskilled labor is mobilized to fuel the labor-intensive industries that are set up. This can continue for some time, especially in a country with an abundant supply of unskilled labor. At some point, however, the contribution declines due to the diminishing supply of labor.

This growth pattern has characterized Bangladesh's experience as well. According to available World Bank data, Bangladesh's labor force grew by 2.43% a year during 1995–2018, less than 3.19% during 1990–95, and much lower than 6.46% during 1974–89. Because of the slowing growth of the labor force over the years, its contribution to GDP growth also fell. According to the APO Productivity Databook 2018, the contribution of labor growth to GDP growth was highest in three five-year periods: 34% during 1975–80, 41% during 1980–85, and 36% during 1990–95. Thereafter, the contribution has been below 20%, and dipped to just 7% during 2010–16.

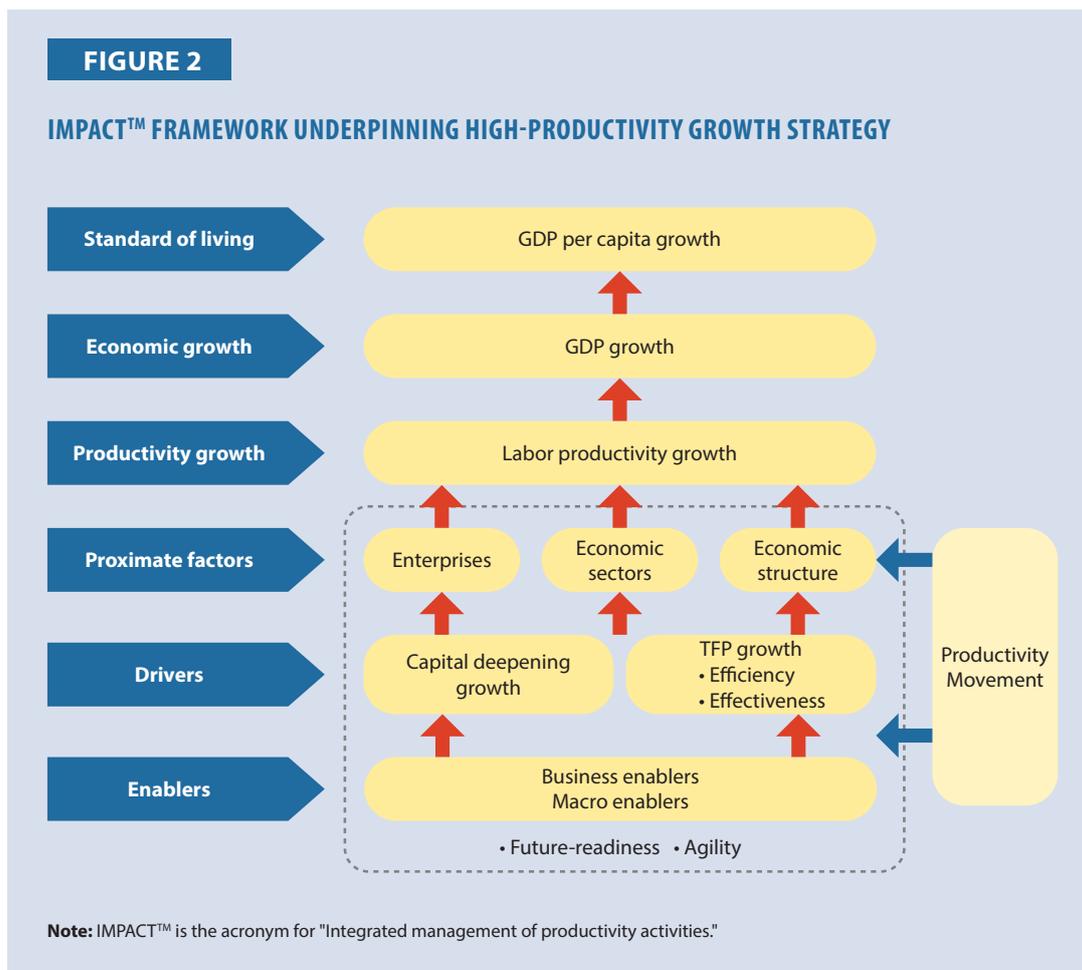
The decline in the contribution of labor force growth to GDP growth is exacerbated by the low labor force participation rate (LFPR). Bangladesh is now experiencing a demographic dividend, i.e., a period with a proportionally large working age population resulting from the rapid fall in birth rates since the 1970s. In 2016–17, working-age population as a percentage of total population was a high 67.6%, amounting to a large base of 109.0 million people. This demographic dividend window is expected to last till 2040, which means that there is great potential for using people productively, with concomitant investment in human resources, to generate economic growth. However, the LFPR was a low 58.2%, resulting in a labor force of 63.5 million, 31.7% of whom were considered to be young (15–29 years). The low overall LFPR is mainly due to the very low LFPR for females of only 36.3%, which is much lower than the 80.5% LFPR for males. A breakdown of the LFPR by age groups shows 48.5% for the 15–29 years age group, 68.4% for the 30–64 years age group, and 40.0% for those aged 65 years and above. The LFPRs for all age groups are low, even for the 30–64 years age group that has the highest percentage. Of the total labor force in 2016–17, 60.8 million were employed, i.e., the unemployment rate was 4.25%.

For the future, the ILO has projected that Bangladesh's labor force will increase by only 1.41% per annum for the period 2018–30. With this low growth of the labor force, Bangladesh's GDP growth in future will have to depend on high productivity growth. A concerted high-productivity growth strategy is thus critical.

IMPACT™ Framework Underpinning High-productivity Growth Strategy

Figure 2 shows the IMPACT™ framework that underpins the high-productivity growth strategy. Commonly measured in terms of labor productivity (all references to productivity and statistics cited in this Master Plan are with respect to labor productivity unless otherwise specified), a country's productivity growth depends on the rates of growth of capital deepening and total factor productivity (TFP), both of which are underpinned by certain enablers.

The extent of capital deepening reflects the amount of capital resources available for use in the production process. It is large when investment in capital is high or when the rate of increase in capital investment exceeds that of labor. Capital deepening, in the form of a shift from labor- to capital-intensive activities, is a common way of increasing productivity as a country develops. However, there is a limit to this because of diminishing returns to increasing capital investment over time.



In the long term, TFP, a summary measure of the efficiency and effectiveness of the use of labor and capital resources, is the key determinant of productivity growth. Efficiency is the typical narrow focus of productivity. It is about doing things right, i.e., ensuring that the production of products (comprising goods and services) is done right through high-quality people and processes. Effectiveness broadens the scope of productivity. It is about doing the right things, i.e., ensuring that the right products are made and sold to the market and that resources are channeled into their production. This means that some industries are given priority attention at any point in time, and the definition of “right products” changes over time. Economic restructuring is thus necessary to ensure the continual production of the right products. Product improvement, new product creation, and new business models, all of which are underpinned by innovation or technical progress, facilitate the restructuring process. The key to innovation, and hence high TFP growth in the long run, is agility, i.e., the ability to foresee future social, technological, economic, environmental, and political trends, and to quickly adapt and seize opportunities to create new products and services as well as new business models.

Capital deepening and TFP growth in a country take place at three levels: enterprise level, depending on the strategy and operations adopted by enterprises; sector level, depending on the industry dynamics affecting enterprises in a particular sector; and economy level, depending on the structure of the economy and hence allocation of resources among sectors. These three levels are the three proximate factors affecting national productivity growth, i.e., how fast GDP per worker increases over time.

Specific enablers underpin capital deepening and TFP growth in the economy, and these are critical for the success of national productivity improvement efforts. There are two broad categories of enablers: business enablers and macro enablers. Business enablers comprise workforce, technology, and business environment. Macro enablers comprise institutional environment, infrastructure, macroeconomic stability, and education and health. Of the two, business enablers are of more direct concern in the management of national productivity, although macro enablers cannot be ignored.

In the World Economic Forum's Global Competitiveness Report (GCR), the role of enablers is encapsulated in the Global Competitiveness Index (GCI). This is a summary measure of the competitiveness of an economy, defined as "the set of institutions, policies and factors that determine the level of productivity of a country." The role of enablers also features prominently in the Global Innovation Index (GII) of Cornell University, INSEAD, and the World Intellectual Property Organization. Enablers are defined as "aspects of the environment conducive to innovation within an economy." An Innovation Input Sub-index is used to determine the strength of enablers in a country.

A high-productivity growth strategy must adopt a holistic approach to productivity management that addresses all the drivers, i.e., proximate factors and enablers, affecting the country's productivity. In short, it should adopt a broad scope of productivity that goes far beyond the conventional narrow view of productivity (which focuses on enterprise-level efficiency but is only part of one of the three proximate factors affecting productivity growth). It is only by adopting this broad scope that capital deepening and TFP, driven by innovation, can be enhanced to raise the country's productivity. What is critical for the country is to be future-ready, i.e., possessing the ability to foresee future trends that impact all the drivers of national productivity, and having the agility to seize and create opportunities.

Prime.Pack™ Framework to Execute the Productivity Movement

The holistic approach to productivity management should be implemented through a national Productivity Movement, supported by a strong ecosystem of institutions and partners. Figure 3 shows the framework that should be used to execute the Productivity Movement.

Prime.Pack™ is the acronym for the six levers that are critical in executing the Productivity Movement well. *Positioning* provides clear understanding to everyone of what is to be achieved and why it is important and ensures alignment in moving to the common objective. *Roadmap* spells out the strategies to achieve the goals and targets of the Productivity Movement. *Identity* makes it crystal clear what the Productivity Movement is about and how it can benefit everyone. *Mechanism* comprises the key institutions that drive the country's Productivity Movement. *Engagement* concerns the strategies taken together with the relevant partners to reach out to the target groups in the Productivity Movement. *People and culture*, the kernel of the framework, is about capabilities and the productivity culture. All these six levers must be managed systematically as an integrated whole to execute the Productivity Movement successfully.

Vision, Goals, and Strategic Thrusts Identified from Application of the Two Frameworks

The IMPACT™ framework and the Prime.Pack™ framework underpin the structure of the Master Plan. Hence, they provide a systematic basis for identifying the vision, goals, and strategic thrusts



that are important for Bangladesh’s high-productivity growth strategy. In implementing the Master Plan consistently, Bangladesh should be able to increase its national productivity substantially to support economic growth and raise the standard of living.

BANGLADESH'S PRODUCTIVITY PERFORMANCE

Comparators for Benchmarking: APO20 and South Asian APO Member Economies

To provide a sound basis for planning for the future, it is necessary to first analyze and benchmark Bangladesh's productivity performance to date. The aim is not to extrapolate Bangladesh's productivity growth based on past performance but to have a firm understanding of the current state of the country and how it stands in relation to others. This involves taking stock of how Bangladesh's productivity has performed over time and how it compares with the relevant comparators. The comparators fall under two categories. The first category is the group of 20 APO member economies (APO20), of which Bangladesh is a member. The second category comprises the other four South Asian APO member economies: India, Pakistan, and Sri Lanka which are lower-middle-income countries like Bangladesh; and Nepal, which is a low-income country.

Bangladesh's Productivity Growth: Increasing but Lagging India and Sri Lanka in South Asia

Figure 4 shows Bangladesh's productivity growth performance in the last two decades, with 2016 being the end year based on latest available data from the APO Productivity Databook 2018. From 1995 to 2016, the country's labor productivity grew by 3.8% per annum, higher than the 2.5% for APO20.

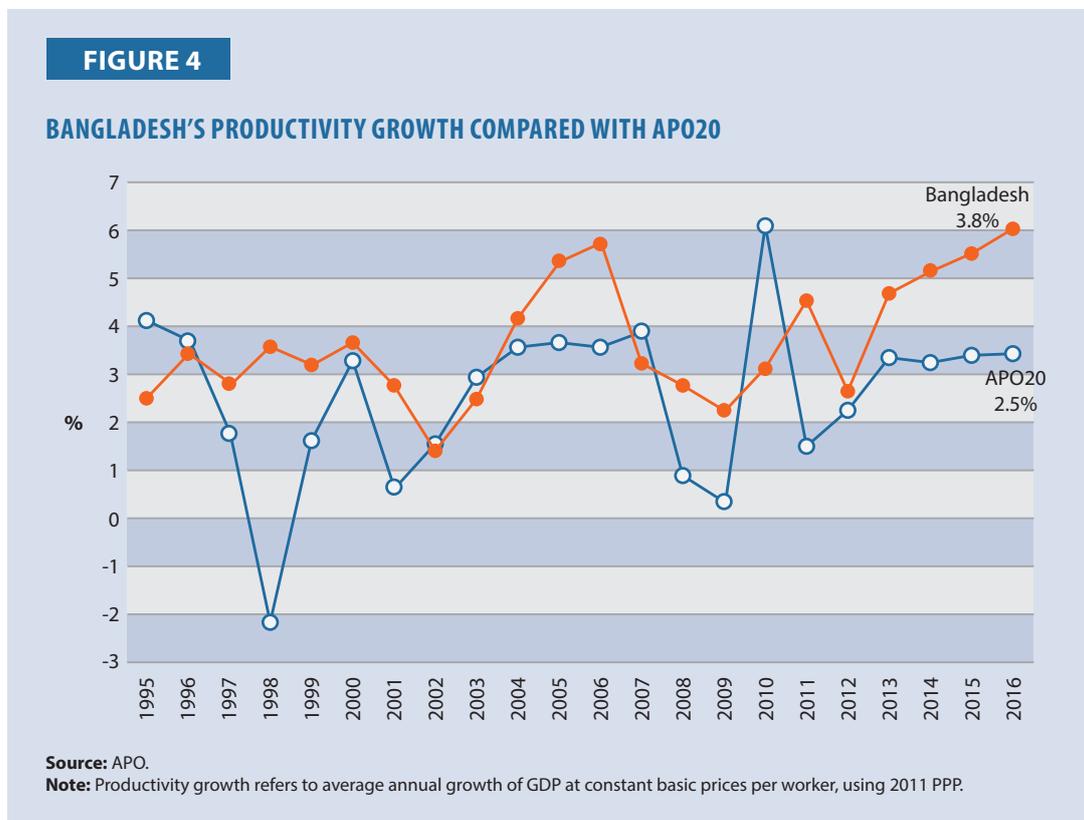
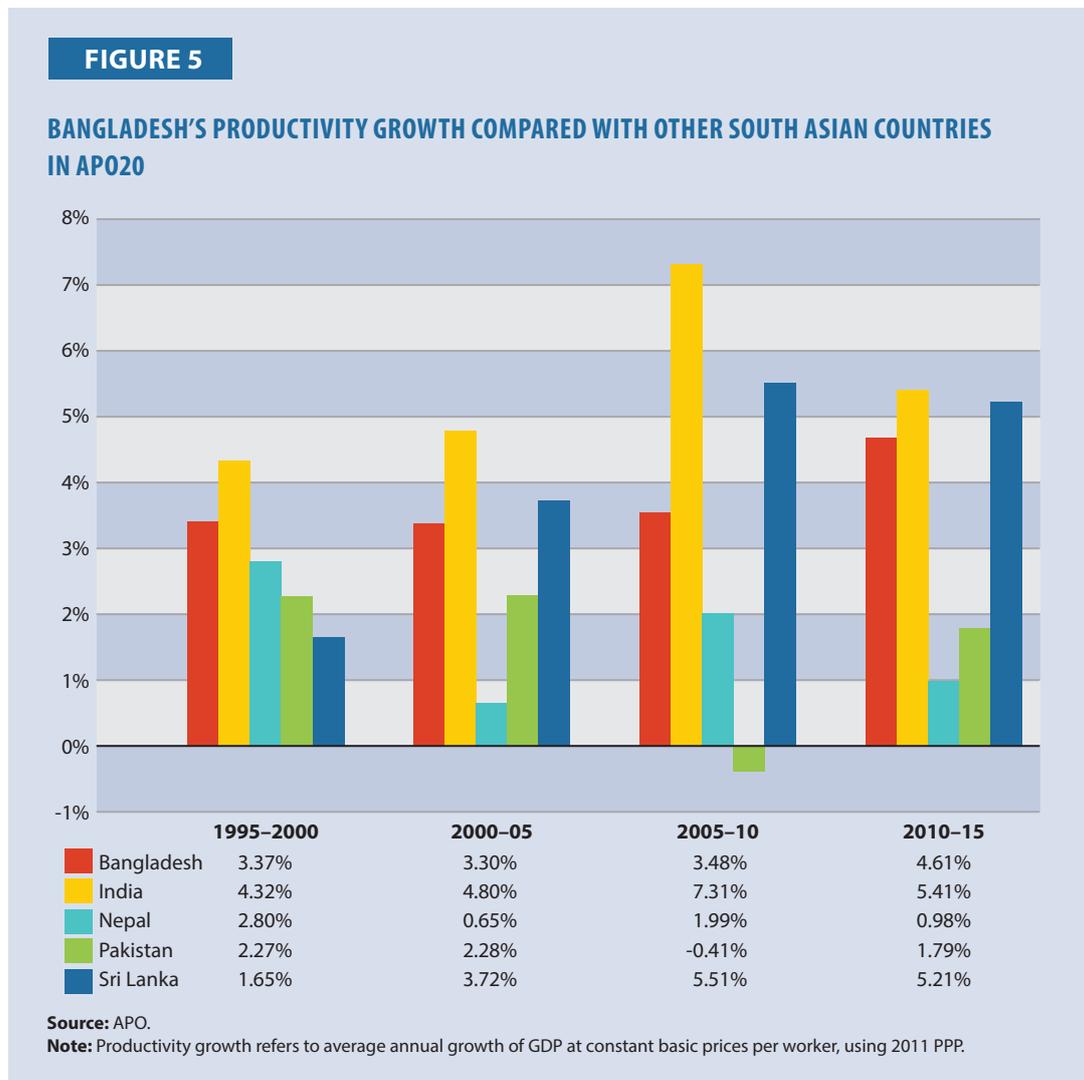


Figure 5 shows a breakdown of Bangladesh's productivity growth for five-year periods between 1995 and 2016 in comparison with India, Nepal, Pakistan, and Sri Lanka. The growth increased steadily from one five-year period to another. During 1995–2000, Bangladesh's productivity growth was 3.37%, second only to India when compared with the other South Asian countries in APO20. The growth rate was maintained during the periods 2000–05 and 2005–10 and increased to 4.61% during 2010–15. However, this was lower than the growth rate of India and that of Sri Lanka, which overtook Bangladesh from 2000–05 onwards.



Bangladesh's Productivity Level: Third Lowest in APO20

Figure 6 shows the productivity level achieved by Bangladesh. As a result of the productivity growth of 3.8% per annum, Bangladesh's productivity level more than doubled over the last two decades, from USD3,940 in 1995 to USD8,630 in 2016.

Figure 7 compares Bangladesh's productivity level performance with that of APO20 and other South Asian economies in the APO. In 1995, Bangladesh's productivity level of USD3,940 was not far behind India's USD5,180. However, the productivity gap widened over the years because of India's higher growth. In 2016, Bangladesh's productivity level was around half of India's.

FIGURE 6

INCREASING TREND OF BANGLADESH'S PRODUCTIVITY LEVEL

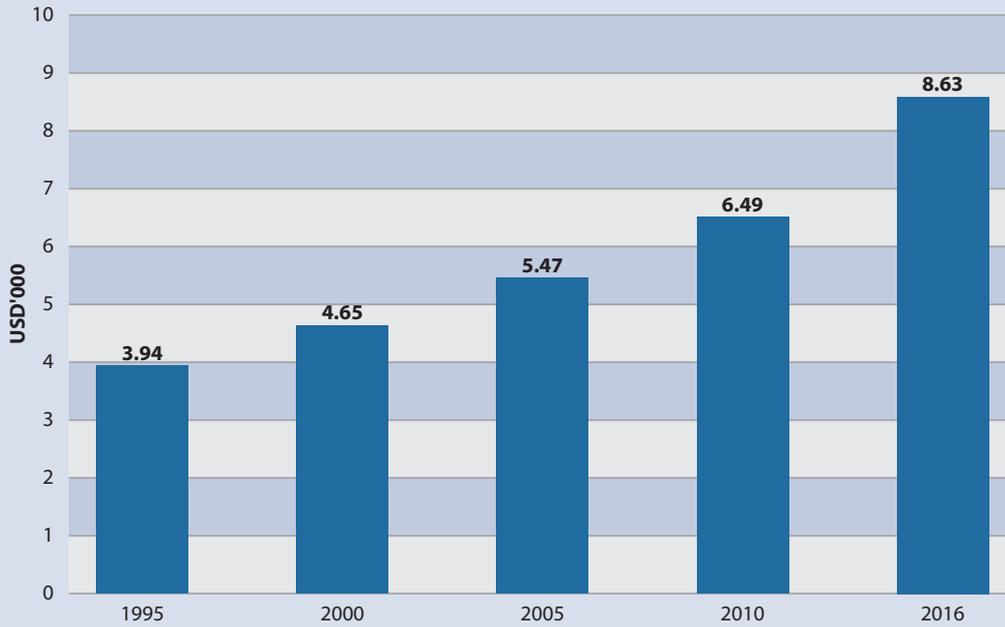
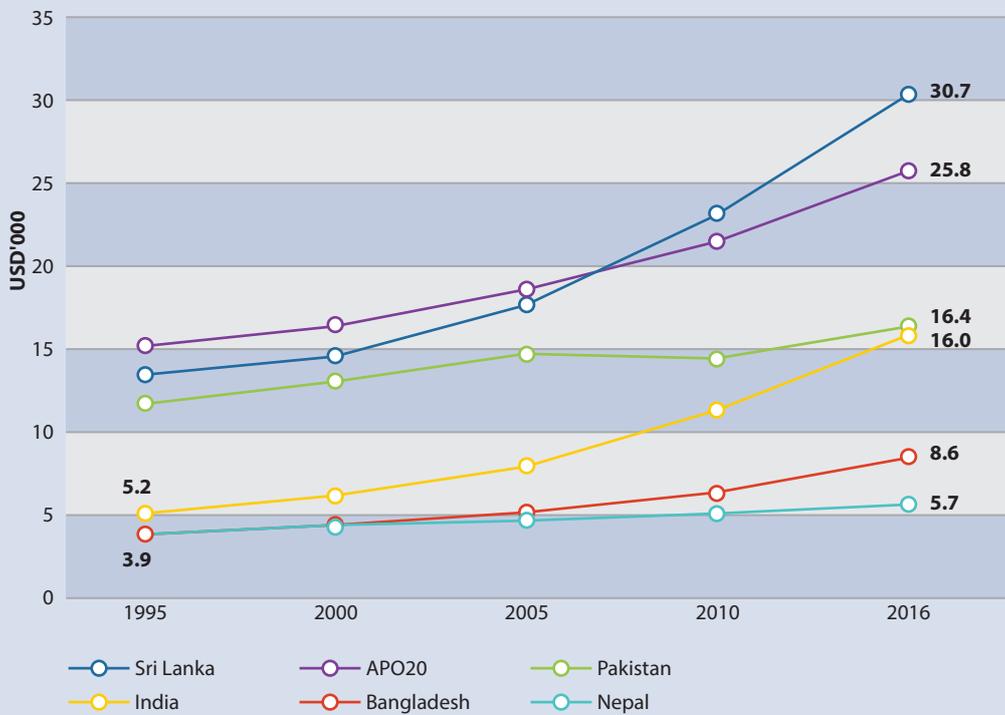


FIGURE 7

BANGLADESH'S PRODUCTIVITY LEVEL COMPARED WITH APO20 AND OTHER SOUTH ECONOMIES IN THE APO



Source: APO.

Note: Productivity level = GDP at constant basic prices per worker, using 2011 PPP, reference year 2016.

Similarly, Sri Lanka grew faster, thus widening the gap over Bangladesh. Compared with APO20, Bangladesh's productivity level was only 33% of the average, placing it at the third lowest position. Only Cambodia and Nepal were below Bangladesh.

The conclusion is that although Bangladesh's productivity grew steadily in the last two decades, its overall productivity performance has been below par. For productivity to play a greater role in driving economic growth, its growth has to increase significantly. This will also enable Bangladesh to catch up with the rest of APO20 (with the exceptions of Cambodia and Nepal).

Sources of Bangladesh's Productivity Growth: Growing Importance of TFP

Table 1 shows the sources of Bangladesh's productivity growth from 1990 to 2016.

TABLE 1

SOURCES OF BANGLADESH'S PRODUCTIVITY GROWTH

Period	Labor productivity growth (%)	Percentage point contribution			
		Capital deepening			TFP
		Total	IT	Non-IT	
1990–95	1.3	1.2	0.1	1.1	0.1
1995–2000	3.1	3	0.1	2.9	0.1
2000–05	3.1	3.5	0.1	3.4	-0.4
2005–10	3.6	3.5	0.2	3.3	0.1
2010–16	5.1	4.1	0.2	3.9	1

Source: APO.

Notes: 1. Labor productivity growth refers to average annual growth rate of constant-price GDP per hour worked.

2. IT = information technology

For the period 1990–2016, labor productivity growth was determined very much by changes in non-IT capital deepening growth as industrialization and infrastructural investments were stepped up. The percentage point contribution from TFP was basically flat until the period 2010–16. Gross capital formation as a percentage of GDP averaged 25.5% during 1995–2017, with a minimum of 19.1% in 1995 and a maximum of 30.5% in 2017. This was higher than the 27.2% for lower-middle-income countries and similar to the 30.7% for upper-middle-income countries in 2017.

In future, greater attention should be given to TFP, which began to contribute more to labor productivity growth since 2010, even though capital deepening will continue to be important.

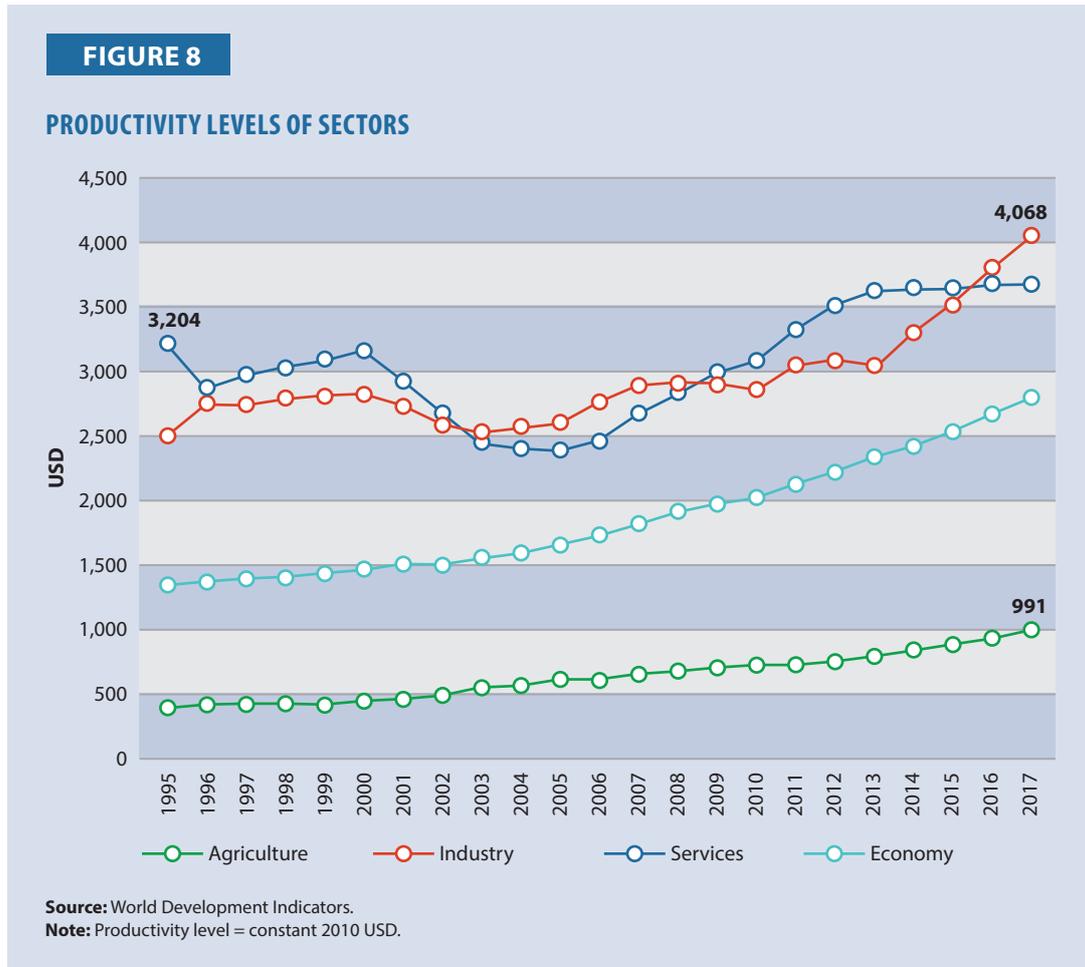
Productivity of Bangladesh's Economic Sectors: Lagging Agriculture Sector

Figure 8 shows the productivity performance of the three major sectors, namely, agriculture, industry, and services, in the last two decades.

Historically, the economy's productivity level has been buttressed by the services and industry sectors. In 1995, the productivity level of the services sector was the highest, at USD3,204. However, it then fluctuated greatly for the next two decades with an average increase of 1.1 times

(115%). In contrast, the growth of the industry sector’s productivity level was more consistent with an average increase of 1.6 times (163%). Consequently, its productivity level exceeded that of the services sector in 2016 and reached USD4,068 in 2017.

The productivity level of the agriculture sector grew at an even faster pace. It increased by 2.5 times (251%) during 1995–2017, i.e., an average annual growth of 4.3% compared with 0.6% for the services sector and 2.3% for the industry sector. Nevertheless, at USD991 in 2017, it was still much lower than the productivity levels of the other two sectors.



Global Competitiveness Index: Bangladesh’s Poor Performance

Table 2 shows how Bangladesh performed in the GCI in 2018. Out of the 140 countries, Bangladesh was placed at a distant 103, with a score of 52.1 out of 100. Looking at the 12 pillars of competitiveness, Bangladesh was ranked above 100 for nine of them.

Figure 9 provides a comparison of the GCI scores of the APO member economies in 2018, grouped according to income levels. Broadly, there is a strong correlation between GCI performance and the income level of a country (with the clear exception of Islamic Republic of Iran, which will have to improve the competitiveness of its economy to sustain its income level). As emphasized in the GCR 2018 report, “All economies must invest in broader measures of competitiveness today to sustain growth and income in the future. The results demonstrate a strong correlation between

competitiveness and income level.” This underlines the need for Bangladesh to consistently address the factors affecting the competitiveness of its economy, so that it can progress to become an upper-middle-income economy.

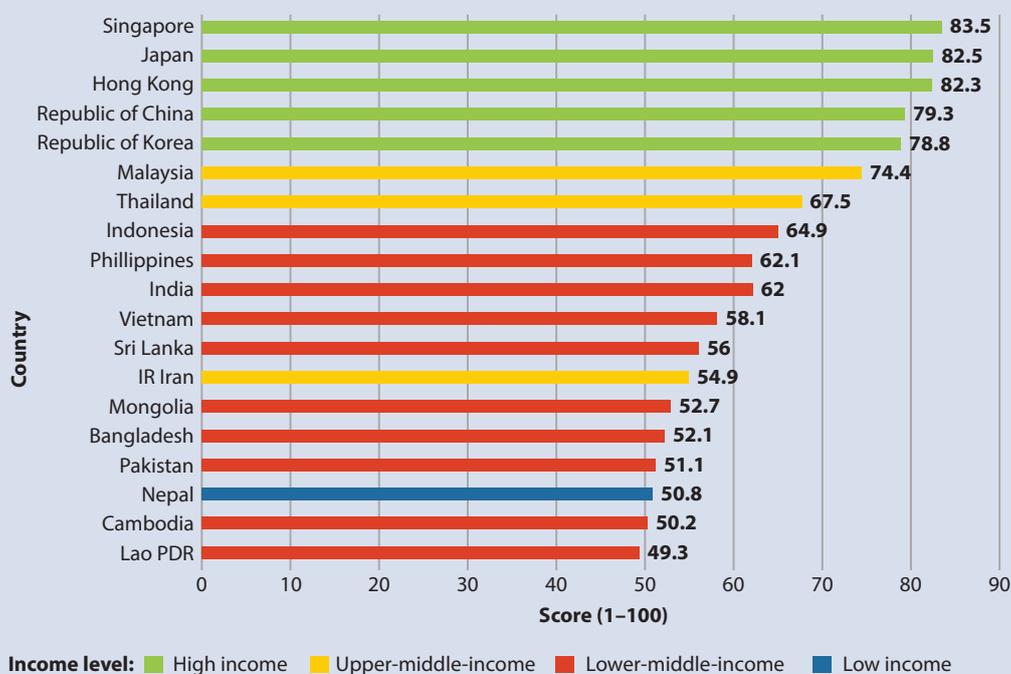
TABLE 2

BANGLADESH'S PERFORMANCE IN THE GCI IN 2018

	Score 0–100 (best)	Rank out of 140	
Overall	52.1	103	
Pillar			
1	Institutions	46.5	108
2	Infrastructure	53.4	109
3	ICT adoption	39.8	102
4	Macroeconomic stability	72.6	88
5	Health	71.2	96
6	Skills	44.0	116
7	Product market	47.8	123
8	Labor market	50.9	115
9	Financial system	51.8	103
10	Market size	66.5	36
11	Business dynamism	50.0	120
12	Innovation capability	30.6	102

FIGURE 9

CORRELATION BETWEEN GCI PERFORMANCE AND INCOME LEVEL IN APO20 IN 2018



Notes: 1. The countries are listed based on their scores in the GCI in descending order.
2. Fiji did not participate in the GCI assessment.

VISIONING THE FUTURE: PRODUCTIVITY 2031

Implication of Poor Productivity Performance for Future Economic Growth

The productivity benchmarking study reveals that although Bangladesh's productivity has grown over the years, it is still far below that of the comparator South Asian countries of Sri Lanka, India, and Pakistan. Within APO20, Bangladesh's productivity level is the third lowest, just above Cambodia and Nepal. A huge leap is thus required for Bangladesh to raise its productivity level significantly. In fact, the country's productivity level needs to almost double to reach the current productivity levels of Pakistan and India; and to increase by 3.5 times to match Sri Lanka's current level.

Another observation from the productivity benchmarking study is that the state of competitiveness of the Bangladesh economy is weak, with an overall score of 52.1 out of the maximum of 100 and an overall ranking of 103 out of 140 in 2018. Bangladesh was ranked below 100 for only three of the 12 pillars of competitiveness (market size, macroeconomic stability, and health). Within APO20, its GCI performance was the fifth lowest.

The conclusion that can be drawn is that Bangladesh's strong economic growth in recent years has not been supported by sturdy fundamentals. The high growth rates of 7% per annum or more experienced since 2010 cannot be sustained in future unless the fundamentals of productivity performance and competitiveness of the economy can be improved substantially. On a positive note, there is great potential for improvement. First, Bangladesh is progressing from a low base compared with the other South Asian countries. Second, the political climate in Bangladesh has stabilized with the restoration of democracy in 1990. Third, the economy's productivity growth has been on an upward trajectory in recent years.

Productivity 2031: Vision for Bangladesh as a High-productivity Country

The high-productivity growth strategy in the Bangladesh National Productivity Master Plan FY2021–FY2030 is intended to boost the country's productivity performance. The vision to be achieved by this strategy is termed Productivity 2031 to underline the end state of the plan (end of FY2030) and to emphasize its alignment with the 9th Five-Year Plan FY2026 – FY2030. The year 2031 also coincides with the 60th anniversary of Bangladesh's independence, and is at the halfway mark from 2021 towards the government's vision for Bangladesh to be a developed country by 2041. Productivity 2031 can thus be used as a vision to inspire and rally everyone to work towards transforming Bangladesh into a high-productivity country. This will then boost economic growth, drive the economy to become a developed country, and raise the standard of living substantially by 2041.

Productivity 2031 comprises an overarching quantitative target, together with the associated targets for the three sectors, and five qualitative goals. The details are shown in Table 3.

TABLE 3

PRODUCTIVITY 2031

Overarching target	Average annual productivity growth of 5.6% for the period 2021–31 <ul style="list-style-type: none"> • Agriculture: 5.4% • Industry: 6.2% • Services: 6.2% 		
Goals	Productivity drivers	Current state	Goals
	Enterprises	High numbers of low-productivity SMEs and large enterprises	Broad base of productive enterprises, led by a vanguard of innovative and agile enterprises
	Economic sectors	Low-productivity sectors producing low-value-added goods and services	Leading-edge sectors producing high-value-added goods and services
	Economic structure	Simple economic structure with narrow economic base	Complex economic structure characterized by deep capabilities and production of sophisticated products
	Enablers	Poor business enablers constraining business operation and growth Weak macro enablers reducing attractiveness of country for businesses	Robust business enablers propelling development and growth of enterprises and sectors Advanced macro enablers underpinning sustained productivity growth of the economy

Overarching Target for the High-productivity Growth Strategy: Ambitious but Achievable

The GDP growth target of 7.4% per annum was set in the 7th Five-Year Plan FY2016 – FY2020. This is no doubt a challenging target. As stated in the Plan:

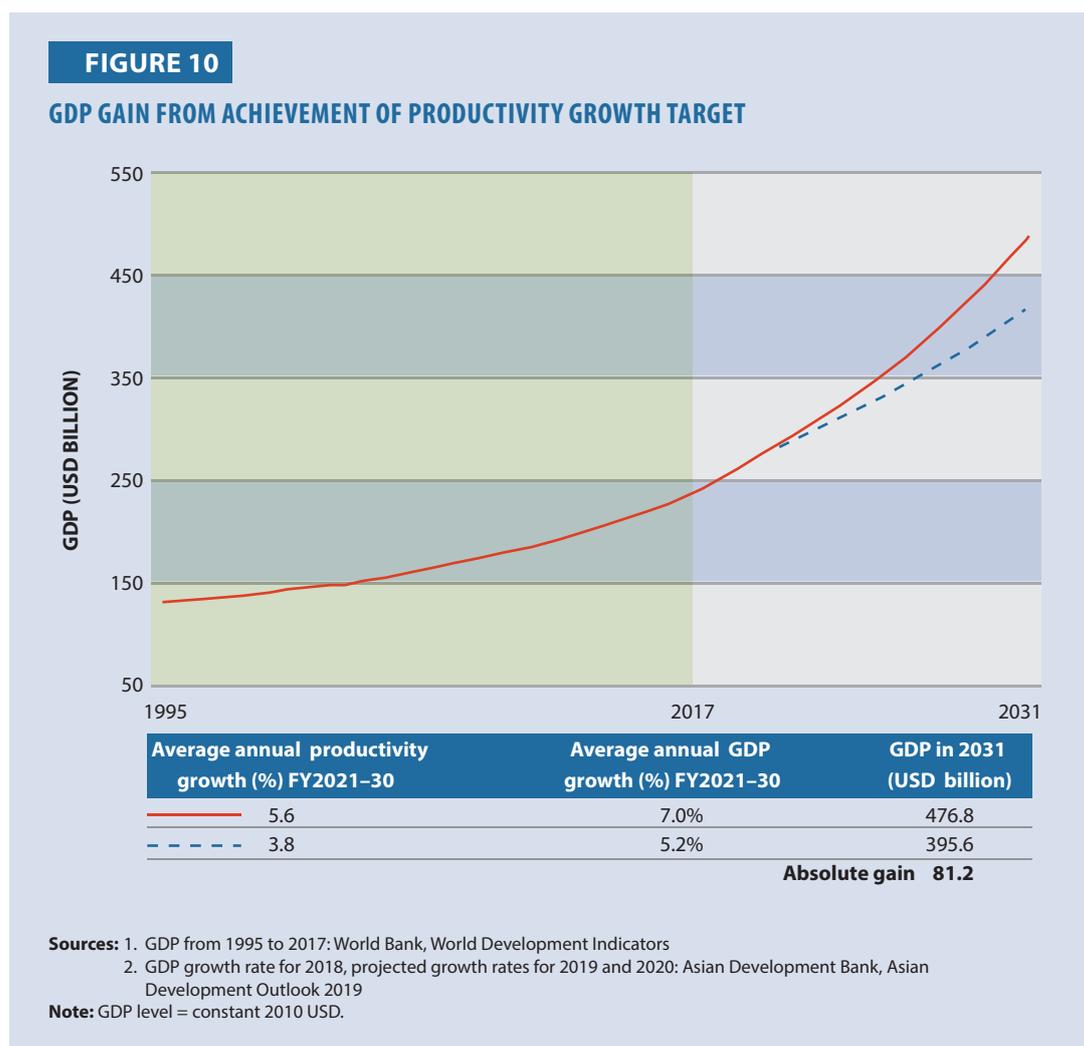
“The 7th Plan aims to achieve an average growth rate of 7.4% of GDP from the average level of growth at 6.3% recorded under the 6th Plan. The experience of the 6th Plan clearly shows that the task is challenging and will certainly require adoption of bold strategies to break away from the 6% plus growth rates recorded almost every year by Bangladesh since FY02.”

There is no official target set for the country’s economic growth beyond FY2020, though a minimum of 7% growth a year seems to be the expectation for the near future. This growth will have to come from a combination of labor growth and productivity growth. Labor growth, however, is expected to be slow. According to ILO’s projection, Bangladesh’s labor force will grow by an average of only 1.41% a year during the period 2018–30. With this low labor growth and assuming a target of 7% GDP growth every year, productivity will have to grow by an average of about 5.6% per annum.

The overarching target in the Bangladesh National Productivity Master Plan can therefore be set at an average annual productivity growth of 5.6% for the period 2021–31. This is the quantitative part of the vision for the high-productivity growth strategy in the Master Plan. It is a stretch target, considering that Bangladesh’s average annual productivity growth during 1995–2016 was only 3.8%; and the highest productivity growth achieved during any of the five-year periods was 4.6% a year (for the period 2010–15). Nevertheless, it is not an unrealistic growth target in comparison with the achievements of Sri Lanka (5.2% per annum during 2010–15 and 5.5% per annum during 2005–10) and India (5.5% per annum during 2010–15 and 7.3% per annum during 2005–10).

Figure 10 shows the vast difference that will be made to the GDP with an annual productivity growth of 5.6% compared with 3.8%. Achieving the target of 5.6% growth a year will provide an absolute GDP gain of USD81.2 billion in 2031, or 21% more compared with a situation where the productivity growth was to stagnate at 3.8%.

To achieve the target of 5.6% average annual productivity growth for the economy, the productivity of the agriculture sector must grow by 5.4% a year, and the productivity of the industry and services sectors each by 6.2% a year. These are the targets that can be set for the three sectors. All these are much higher than the historical record for 2000–17: 3.8% for agriculture, 1.6% for industry, and 0.7% for services. Nevertheless, they are stretch targets to drive performance.



Goals for the High-productivity Growth Strategy: Expected Characteristics of a Highly Productive Bangladesh Economy

Besides the quantitative target, the vision for the high-productivity growth strategy encompasses five qualitative goals, as shown in Table 3. These goals are characteristics that can be expected of the Bangladesh economy as the proximate factors and enablers are addressed effectively by the high-productivity growth strategy. They are, in effect, the desired characteristics of the proximate factors and enablers, compared with their current state shown in Table 3.

The first goal is to have a broad base of productive enterprises, led by a vanguard of innovative and agile enterprises. These enterprises are able to make efficient and effective use of resources, seize opportunities, and generate high value added. This is a sea change compared with the current situation of high numbers of low-productivity SMEs and large enterprises, both private-owned and state-owned, which constrict the economy's productivity growth.

The second goal is to have leading-edge sectors producing high-value-added goods and services. This contrasts with the current situation of low-productivity sectors producing low-value-added goods and services, dragged down in particular by subsistence agriculture and labor-intensive RMG manufacturing and traditional services.

The third goal is to have a complex economic structure characterized by deep capabilities and production of sophisticated products. This reflects a transformation from the current simple economic structure built on a narrow economic base (rice production, RMG manufacturing, and unskilled factor or labor services exports) to one that is driven by high-value-added industries and internationally competitive products.

The fourth goal is to have robust business enablers propelling the development and growth of enterprises and sectors. Instead of the current situation where skills, technology, and the business environment are poor and constrain business operation and growth, the business enablers will be productivity boosters.

The fifth goal is to have advanced macro enablers underpinning sustained productivity growth of the economy. Compared with the current situation where the institutional environment, infrastructure, macroeconomic stability, and the state of education and health are weak and reduce attractiveness of the country for businesses, the macro enablers will be productivity enhancers.

Each of the goals makes a significant contribution to strengthening parts of the economy to raise productivity. Together, they synergize each other and boost the capacities and capabilities of all parts of the economy to sustain high productivity growth.

CHARTING DIRECTIONS FOR THE FUTURE

Strategic Thrusts to Achieve Goals: Holistic Approach to Raise Productivity

To achieve the Productivity 2031 vision, a holistic approach must be taken to manage the proximate factors and enablers affecting productivity since the goals correspond to these factors and enablers. Table 4 lists the 11 strategic thrusts to achieve the vision under this holistic approach. It also shows how the strategic thrusts support the strategies in the 7th Five-Year Plan FY2016 – FY2020. In addition, the UN Sustainable Development Goals for 2030 are included to underline how the strategic thrusts contribute to the attainment of the goals.

TABLE 4

STRATEGIC THRUSTS TO ACHIEVE PRODUCTIVITY 2031 VISION

Overarching target: Average annual productivity growth of 5.6% for the period 2021–31

Goals	Strategic thrusts	Strategies in 7th Five-Year Plan FY2016 – FY2020	UN Sustainable Development Goals 2030
Broad base of productive enterprises, led by a vanguard of innovative and agile enterprises	<ol style="list-style-type: none"> 1. Raise SMEs to a higher plane to break out of low-productivity-low-growth vicious cycle 2. Scale up the core of innovative and agile large enterprises to drive the economy's productivity 	<ul style="list-style-type: none"> • Strategy for agriculture and water resources • Strategy for manufacturing sector development with export-led growth • Strategy for boosting the services sector 	
Leading-edge sectors producing high-value-added goods and services	<ol style="list-style-type: none"> 3. Promote productivity in all the sectors without compromising sustainable development 4. Modernize and diversify agriculture beyond rice and crop production 5. Strengthen and enlarge the industrial base beyond readymade garment manufacturing 6. Transform traditional services and accelerate the growth of modern and exportable services 	<ul style="list-style-type: none"> • Strategy for agriculture and water resources • Strategy for manufacturing sector development with export-led growth • Strategy for boosting the services sector • Power and energy development strategy • Sustainable development: environment and climate change • Strategy for local government and rural development 	<ul style="list-style-type: none"> • Industry, innovation, and infrastructure • Responsible consumption and production • Climatic action • Life below water • Life on land

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Goals	Strategic thrusts	Strategies in 7th Five-Year Plan FY2016 – FY2020	UN Sustainable Development Goals 2030
Complex economic structure characterized by deep capabilities and production of sophisticated products	7. Drive growth of new high-value-added industries in top end of the product space, and expand and strengthen capabilities of existing core industries	<ul style="list-style-type: none"> Strategies for promoting pro-poor and inclusive growth 	
Robust business enablers propelling development and growth of enterprises and sectors	8. Plug gaps in the skills development system and step up skilling and reskilling of the workforce 9. Intensify technology development and diffuse its applications widely in every sector 10. Remove all obstacles faced by businesses and improve every aspect of the business environment	<ul style="list-style-type: none"> Education development strategy Digital Bangladesh and information communications technology (ICT) Strategies for promoting pro-poor and inclusive growth Education Strengthening public administration, public institutions, and governance 	
Advanced macro enablers underpinning sustained productivity growth of the economy	11. Collaborate with relevant institutions to improve macro enablers continually	<ul style="list-style-type: none"> Strengthening public administration, public institutions, and governance Power and energy development strategy Transport and communication development strategy Medium-term macroeconomic framework Public investment program and its financing Education sector development strategy Health, nutrition, and population development strategy Poverty and inequality reduction strategy 	<ul style="list-style-type: none"> No poverty Zero hunger Good health and well being Quality education Gender equality Clean water and sanitation Affordable and clean energy Decent work and economic growth Industry, innovation, and infrastructure Reduced inequalities Sustainable cities and communities Peace, justice, and strong institutions Partnerships for the goals

Strategic Thrust 1: Raise SMEs to a Higher Plane to Break out of Low-productivity-low-growth Vicious Cycle

Table 5 provides an overview of the enterprises in the industry and services sectors. The vast majority of establishments (88.5%) are in the services sector. In terms of size, small and medium-sized enterprises (SMEs) (defined here to include cottage and micro enterprises) dominate,

comprising 99.9% of the establishments and 85.9% of employment. About 88% of them are found in the services sector. Large enterprises make up only 0.1% of total establishments but contribute 14.1% to total employment.

For the industry sector, most (96%) of the establishments are found in manufacturing, which is also dominated by SMEs. Manufacturing accounts for 98% of employment within the sector. Even though large enterprises make up only 0.4% of the establishments, they account for 41% of employment in the manufacturing industry.

Within the services sector, about half of the establishments (52%) and employment (49%) are in wholesale and retail, followed by transportation and storage (19% of establishments and 11% of employment). All industries in the sector have close to 100% SMEs.

TABLE 5
OVERVIEW OF ENTERPRISES IN THE INDUSTRY AND SERVICES SECTORS

	No. of establishments						Employment			
	Total	%	SMEs	%	Large	%	Total	%	SMEs	Large
Industry	902,583	100%	899,290	99.6%	3,293	0.4%	7,365,760	100%	59.9%	40.1%
Mining and quarrying	20,227	2.2%	20,208	99.9%	19	0.1%	64,444	0.9%	94.4%	5.6%
Manufacturing	868,244	96.2%	865,121	99.6%	3,123	0.4%	7,183,446	97.5%	59.4%	40.6%
Electricity	3,656	0.4%	3,576	97.8%	80	2.2%	56,647	0.8%	54.1%	45.9%
Water supply, sewerage	2,673	0.3%	2,660	99.5%	13	0.5%	14,671	0.2%	71.0%	29.0%
Construction	7,783	0.9%	7,725	99.3%	58	0.7%	46,552	0.6%	86.4%	13.6%
Services	6,915,982	100%	6,914,025	100%	1,957	0.0%	17,135,090	100%	97.0%	3.0%
Wholesale and retail trade	3,589,443	51.9%	3,589,362	100.0%	81	0.0%	8,398,810	49.0%	99.8%	0.2%
Transportation and storage	1,303,807	18.9%	1,303,768	100.0%	39	0.0%	1,884,729	11.0%	99.6%	0.4%
Accommodation and food	519,845	7.5%	519,822	100.0%	23	0.0%	1,214,455	7.1%	99.7%	0.3%
Info and communication	19,354	0.3%	19,310	99.8%	44	0.2%	100,603	0.6%	88.9%	11.1%
Financial and insurance	46,523	0.7%	46,034	98.9%	489	1.1%	477,393	2.8%	91.2%	8.80%
Real estate activities	5,344	0.1%	5,323	99.6%	21	0.4%	43,296	0.3%	96.7%	3.3%
Professional, scientific & technical	45,014	0.7%	44,942	99.8%	72	0.2%	160,032	0.9%	82.9%	17.1%
Administrative and support	47,736	0.7%	47,715	100.0%	21	0.0%	151,653	0.9%	97.6%	2.4%
Public administration and defense	26,036	0.4%	25,369	97.4%	667	2.6%	575,505	3.4%	51.7%	48.3%
Education	189,108	2.7%	188,931	99.9%	177	0.1%	1,483,441	8.7%	97.3%	2.7%
Human health and social work	79,586	1.2%	79,283	99.6%	303	0.4%	418,548	2.4%	81.8%	18.2%
Art, entertainment & recreation	11,919	0.2%	11,916	100.0%	3	0.0%	33,441	0.2%	99.2%	0.8%
Other services	1,032,267	14.9%	1,032,250	100.0%	17	0.0%	2,193,184	12.8%	99.8%	0.2%
Total	7,818,565	100%	7,813,315	99.9%	5,250	0.1%	24,500,850	100%	85.9%	14.1%

Source: Bangladesh Bureau of Statistics, Economic Census 2013.

Note: SMEs cover manufacturing enterprises with less than 250 employees and less than TK300 million of fixed assets, and other enterprises with less than 100 employees and less than TK150 million of fixed assets.

Table 6 shows that cottage/micro establishments form the majority of the SMEs, with 89% of total establishments. Most of the remainder are small enterprises (11%), leaving only a fraction of medium enterprises (0.1%). In the services sector, 88% of the enterprises are cottage/micro in size, while only 12% are small. Industries with high proportions of micro establishments are transportation and storage (97%), accommodation and food (97%), and wholesale and retail (85%). Industries with high proportions of small enterprises are real estate (95%) and financial and insurance (60%). In the industry sector, the distribution of establishments is skewed towards cottage and micro establishments, with 95% of establishments. More than half of the establishments in construction (60%) are small. Electricity has the highest proportion of medium enterprises (4%).

TABLE 6

COMPOSITION OF SMEs IN THE INDUSTRY AND SERVICES SECTORS

	Establishment				Employment			
	Total SMEs	Cottage, micro	Small	Medium	Total SMEs	Cottage, micro	Small	Medium
Industry	899,290	95.3%	4.3%	0.4%	4,409,169	61.2%	27.7%	11.1%
Mining and quarrying	20,208	94.1%	5.7%	0.2%	60,804	80.0%	15.3%	4.7%
Manufacturing	865,121	96.1%	3.6%	0.3%	4,267,086	61.7%	27.3%	11.0%
electricity	3,576	55.9%	40.3%	3.8%	30,619	18.1%	51.7%	30.2%
Water supply, sewerage	2,660	79.2%	20.1%	0.7%	10,419	42.9%	45.7%	11.4%
Construction	7,725	38.1%	60.1%	1.8%	40,241	16.1%	67.8%	16.1%
Services	6,914,025	88.1%	11.9%	0.1%	16,624,825	66.4%	32.3%	1.3%
Wholesale and retail trade	3,589,362	85.2%	14.8%	0.0%	8,384,620	65.9%	33.9%	0.2%
Transportation and storage	1,303,768	97.1%	2.9%	0.0%	1,877,625	92.3%	7.3%	0.4%
Accommodation and food	519,822	96.7%	3.3%	0.0%	1,210,663	90.0%	9.8%	0.2%
Info and communication	19,310	43.6%	56.1%	0.3%	89,485	21.1%	74.4%	4.4%
Financial and insurance	46,034	39.2%	60.0%	0.8%	435,249	11.3%	83.0%	5.7%
Real estate activities	5,323	4.3%	94.9%	0.8%	41,886	1.5%	92.0%	6.5%
Professional, scientific & technical	44,942	79.1%	20.7%	0.2%	132,668	51.5%	43.7%	4.7%
Administrative and support	47,715	77.1%	22.8%	0.1%	147,971	53.9%	44.1%	2.0%
Public administration and defense	25,369	60.6%	36.4%	3.1%	297,336	20.7%	61.4%	17.8%
Education	188,931	60.4%	39.1%	0.5%	1,443,093	33.4%	62.4%	4.2%
Human health & social work	79,283	76.9%	22.5%	0.6%	342,361	37.1%	53.3%	9.6%
Art, entertainment & recreation	11,916	85.9%	13.9%	0.2%	33,173	60.8%	35.5%	3.7%
Other services	1,032,250	93.4%	6.6%	0.0%	2,188,695	80.9%	18.9%	0.2%
Total	7,813,315	88.9%	11.0%	0.1%	21,033,994	65.3%	31.4%	3.4%

Source: Bangladesh Bureau of Statistics, Economic Census 2013.

Table 7 shows the distribution of agricultural holdings in the agriculture sector, based on the latest Census of Agriculture 2008. The classification used is different from that used for the industry and services sectors.

Almost half (47%) of all agricultural holdings are non-farm holdings with cultivated land of less than 0.05 acres. Of the 15 million farm holdings with cultivated land of more than 0.05 acres, the

majority (84%) are small holdings engaging 18 million workers or 79% of total persons engaged. Only a small percentage (2%) are large farm holdings with more than 7.5 acres, engaging the same percentage (2% or 0.5 million) of persons.

TABLE 7
COMPOSITION OF AGRICULTURAL HOLDINGS

	All holdings	No. of non-farm holdings	No. of farm holdings							
			Total		Small		Medium		Large	
					0.05 to 2.49 acres		2.50 to 7.49 acres		7.50 acres and above	
Total	28,695,763	13,512,580	15,183,183	100%	12,812,372	84%	2,136,415	14%	234,396	2%
Rural	25,351,506	10,480,930	14,870,576	100%	12,531,509	84%	2,109,522	14%	229,545	2%
Urban	3,344,257	3,031,650	312,607	100%	280,863	90%	26,893	9%	4,851	1%

Source: Bangladesh Bureau of Statistics, Census of Agriculture 2008.

A clear conclusion from the statistics is the huge base of micro and cottage enterprises, and a significant drop in the number of establishments by size. There is a plunge from micro/cottage (6.9 million) to small (0.8 million); a big drop from small to medium (7,106); and a smaller drop from medium to large (5,250). A similar trend is observed for the agricultural farm holdings: a large drop from small (12.8 million) to medium (2.1 million); and a smaller drop from medium to large (0.2 million). From these statistics, the inference that can be drawn is that there are barriers preventing enterprises from growing, especially from micro enterprises to small enterprises, and from small enterprises to medium enterprises. One of these barriers is that many of them prefer to operate in the informal sector, which is unusually large in Bangladesh. Another barrier is the fact that many simply do not have the desire or incentive to grow as they exist for subsistence rather than for commercial purposes. This is especially so in the agriculture and services sectors.

Although statistics for Bangladesh are not available, the productivity of the SMEs, in particular the micro and cottage enterprises, is typically low compared with the large enterprises. The vast majority of enterprises in the industry and services sectors (86.0%) are economic households (36.1%) and individual/family-owned businesses (49.9%) that operate in the low-value-added end of the industry, e.g., micro retail operators; and a high 71% are found in the rural areas, employing 61% of labor. In the agriculture sector, a huge 91.7% of the agricultural holdings are either non-farm holdings (47.1%) or small farm holdings (44.6%) operating on a subsistence basis. Many of the SMEs lack access to finance and markets; are deficient in knowledge and skills; and have a low level of technology adoption.

The overall situation is one where there are large numbers of unproductive SMEs operating in low-value-added segments of industries including the informal sector; many people are employed in these SMEs; and there is an inability of the enterprises to grow in size and contribute more value added. This drags down the country's productivity. The strategic thrust is therefore to raise SMEs to a higher plane so that they can break out of the trap of a low-productivity-low-growth vicious circle.

A strong SME development agency is required to uplift the large number of SMEs in the country to a higher plane. The SME Foundation (SMEF) that has been set up could be scaled up to serve as such a dedicated agency. It should be strengthened and equipped with the necessary competencies and resources to transform the SME sector effectively. It should also have the authority to collect

data and analyze the needs of the SMEs, formulate and influence policies, and provide programs (e.g., training and networking sessions) and assistance to SMEs (including facilitating access to finance). The agency could be assisted by satellite centers in the different districts, and be armed with various communication channels or platforms (website, call center, social media, etc.) that SMEs could access if they require direct assistance. It should work with the relevant government agencies and private organizations to develop a robust supporting ecosystem for SMEs to grow.

Given the different needs of the huge base of SMEs and with limited resources, the SME development agency should adopt a tiered approach in developing SMEs. For the micro and cottage enterprises, the immediate task is to incentivize and facilitate their registration through local government organizations and digital platforms. For the small and medium enterprises, the priority should be to develop broad-based training programs, e.g., through mobile learning, and carry out outreach programs on basic business requirements and skills development. For a start, the SME development agency could target the existing groups or bodies of enterprises, including industrial estates, special economic zones, trade associations, and interest groups. The more promising SMEs, likely the medium-sized ones, could be identified and groomed for growth through customized assistance such as mentorship programs and participation in overseas trade missions. The APO's Development of Demonstration Companies program is an example of a model that could be used.

Strategic Thrust 2: Scale Up the Core of Innovative and Agile Large Enterprises to Drive the Economy's Productivity

Table 8 shows the distribution of large enterprises in the industry and services sectors.

TABLE 8

DISTRIBUTION OF LARGE ENTERPRISES

	Establishments		Employment	
Industry	3,293	100%	2,956,591	100%
Mining and quarrying	19	0.6%	3,640	0.1%
Manufacturing	3,123	94.8%	2,916,360	98.6%
Electricity	80	2.4%	26,028	0.9%
Water supply, sewerage	13	0.4%	4,252	0.1%
Construction	58	1.8%	6,311	0.2%
Services	1,957	100%	510,265	100%
Wholesale and retail trade	81	4.1%	14,190	2.8%
Transportation and storage	39	2.0%	7,104	1.4%
Accommodation and food	23	1.2%	3,792	0.7%
Info and communication	44	2.2%	11,118	2.2%
Financial and insurance	489	25.0%	42,144	8.3%
Real estate activities	21	1.1%	1,410	0.3%

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	Establishments		Employment	
Professional, scientific & technical	72	3.7%	27,364	5.4%
Administrative and support	21	1.1%	3,682	0.7%
Public administration and defense	667	34.1%	278,169	54.5%
Education	177	9.0%	40,348	7.9%
Human health & social work	303	15.5%	76,187	14.9%
Art, entertainment & recreation	3	0.2%	268	0.1%
Other services	17	0.9%	4,489	0.9%
Total	5,250		3,466,856	

Source: Bangladesh Bureau of Statistics, Economic Census 2013.

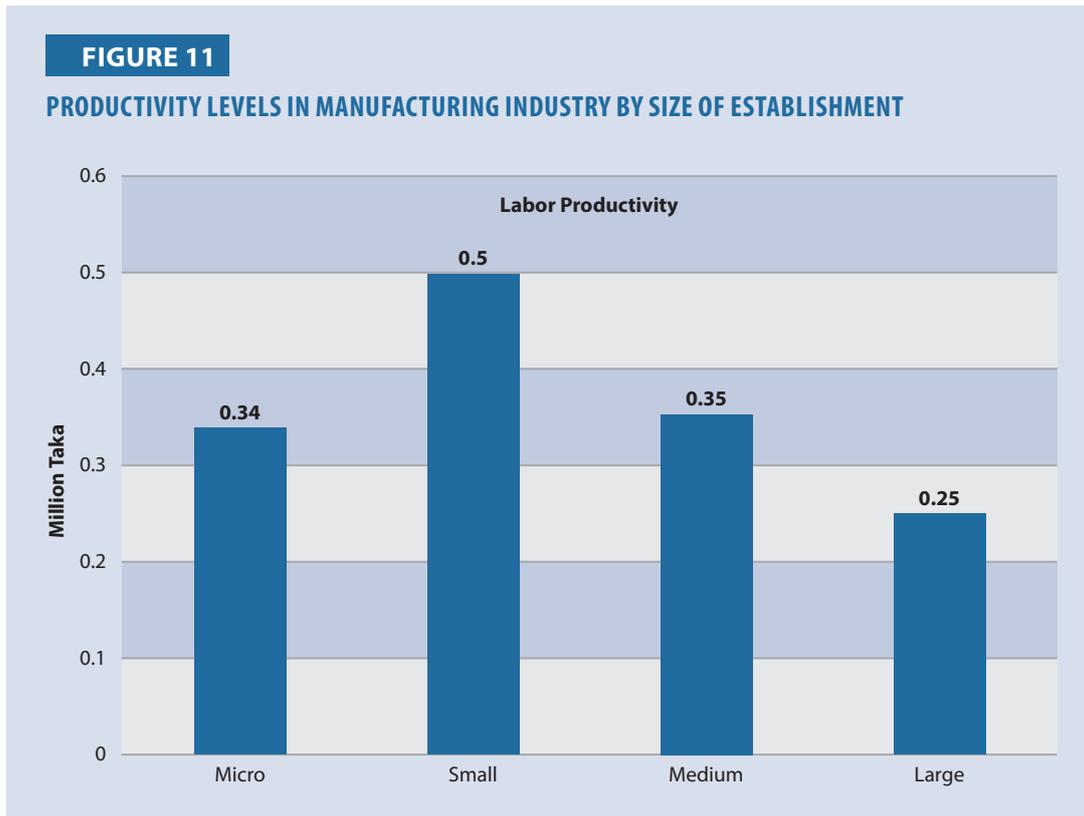
The majority of large establishments (63%) are in the industry sector. Of these large industry establishments, the bulk are in manufacturing (95%), contributing 99% to the employment in the industry sector. According to the Survey of Manufacturing Industries 2012, 76% of large manufacturing establishments are engaged in the manufacture of RMG, followed by 10% in manufacture of textiles and 3% in manufacture of food products.

Within the services sector, 34% of large establishments are in the public administration and defense industry, followed by 25% in the financial and insurance industry, and 16% in the human health and social work industry.

Statistics are not available to compute value added per worker by size of establishment, except for the manufacturing industry. The typical trend is for labor productivity to increase as the size of the enterprise goes up from small to medium and large. The reason is that the bigger enterprises are usually more capital- and technology-intensive, produce goods for exports, enjoy economies of scale, and generate higher value added. They are also those that have greater potential to innovate and be future-ready and agile in seizing opportunities.

Figure 11 shows the productivity levels of the different sizes of enterprises in the manufacturing industry. As the establishments grow from micro to small, labor productivity increases from Tk0.34 million to Tk0.5 million. However, the productivity then dips to Tk0.35 million and Tk0.25 million for the medium and large-sized establishments, respectively. This anomaly can be explained by the dominance of labor-intensive medium and large RMG enterprises employing large numbers of workers but generating low value added.

A specific category of large enterprises is owned by the state. Known as state-owned enterprises (SOEs), they are often used by governments to meet social and other noneconomic strategic objectives, such as job creation and price control for basic commodities and utilities, and to accelerate development in certain areas. Factors such as lack of competition, structural and operational limitations, weak management, and preferential treatment (e.g., subsidies and loans with low interest rates) often lead to poor performance and service delivery by the SOEs. The experience of Bangladesh is similar, with SOEs playing a fairly important role in the economy



historically. In an attempt to check the excesses of SOEs, the Privatization Board, which later became the Privatization Commission, was established in 1993. Since then, a total of 74 SOEs have been privatized. In 2016, the Privatization Commission merged with the Board of Investment to become the Bangladesh Investment Development Authority (BIDA).

As of June 2018, there were 46 SOEs, excluding those in the banking and finance industry (9). The majority of these SOEs are involved in the provision of utilities and infrastructure-related services. The Bangladesh Economic Review 2018 classified them under seven categories: 35% in service and others, 17% in transport and communication, 13% in industry, 13% in utilities, 11% in construction, 7% in trade, and 4% in agriculture and fisheries.

From 2007/08 to 2017/18, the consolidated financial performance of the SOEs as a whole improved from a net loss of Tk99.8 billion to a net profit of Tk92.9 billion. Bangladesh Telecommunication Regulatory Commission earned the highest net profit of Tk61.8 billion, with its income coming from grant of licenses to telecommunication companies and auction of 4G airwaves. This was followed by Bangladesh Petroleum Corporation, with a net profit of Tk40 billion; and Bangladesh Oil, Gas & Mineral Corporation, with a net profit of Tk9.7 billion.

However, several SOEs have suffered significant losses in the last decade. In fact, more than 60% of the SOEs in the industry sector suffered losses in the last five years (2013–18). In 2017/18, Bangladesh Power Development Board incurred the highest net loss of Tk12.5 billion, followed by Bangladesh Chemical Industries Corporation at Tk8.4 billion, and Bangladesh Jute Mills Corporation (BJMC) at Tk4.9 billion. These SOEs are also among those with high amounts of outstanding loans due to the Debt-Service Liability branch in the Ministry of Finance. The loans have been extended to the SOEs at single-digit interest rates with repayment periods of 15 to 20

years. For debt-ridden SOEs that have had difficulties in repaying the loans, the government has stepped in to convert the loans into equity. The overall impact of the underperforming SOEs is a drain on the country's resources.

BJMC is an example of an SOE with difficulties in juggling the expectations to be financially profitable and to meet social objectives. It currently owns 22 jute mills and three non-jute mills and employs 47,000 permanent workers. BJMC's existence as an SOE has been justified on the basis that the corporation plays a leading role in producing and exporting jute products, traditionally a major source of revenue for the country; employs a large number of workers, including many non-permanent workers; and ensures fair prices for jute growers. However, these justifications, which were supportable in the early years of Bangladesh's industrialization, are now being questioned as the private sector has developed much since then.

The challenges that BJMC faces include rising operating costs, old machinery, wages that are not matched to performance, competition from domestic private sector players, and over-reliance on specific products and markets. The jute mills under BJMC are less productive and operate at half the capacities of their private sector counterparts due to the use of old machinery and outdated labor-intensive modes of operation. BJMC also faces higher operating costs due to the adoption of a wage rise recommended by the National Wage and Productivity Commission 2010 for state-owned industries to bring wages in line with those in the public sector. An additional wage rise recommended by the Commission in 2015 is expected to lead to further losses once it is implemented, as this is not the result of or matched by a corresponding increase in labor productivity. Product and market concentrations also mean that BJMC's exports are affected very much by the policies of the importing countries. Jute sacking products by BJMC are exported mainly to India and Sudan. Exports fell after India applied the anti-dumping duties on jute products, e.g., jute yarn and jute sacking bag, from Bangladesh in 2017; and exports to Sudan were adversely affected by the political situation there. The drop in the export demand has led to excess stocks and cashflow problems for BJMC, leading to delays in wage payments to workers. The consequent work stoppages by the workers have resulted in further losses for the jute mills.

Given the extremely low number of large enterprises, including SOEs, in Bangladesh, the potential for greater value-added generation from a higher number of large enterprises remains latent. The strategic thrust is therefore to scale up the core of innovative and agile large enterprises to drive the economy's productivity.

Besides grooming the medium-sized enterprises to grow into large enterprises, targeted assistance should be given to the large enterprises to grow into global enterprises. These enterprises could in turn help to pull up the large base of SMEs through knowledge sharing, business collaborations, and forward and backward linkages. Measures that will facilitate the growth of large enterprises include improvements in capabilities and operations through technology adoption (including Industry 4.0 capabilities), use of modern management techniques, and human resource and leadership development; cluster development, i.e., collaborations with other enterprises and institutions within the sector and along the production value chain; and access to overseas markets, e.g. through business matching, formation of partnerships with other enterprises, government-to-government trade agreements, and promotion of the "Made in Bangladesh" brand.

A specific plan of action for the manufacturing industry is to correct the current anomalous situation of large enterprises with lower productivity than the smaller enterprises. This requires two strategies

to be taken. First, the large RMG enterprises should be transformed from low-value-added, labor-intensive, and low-productivity operations to high-value-added, capital-intensive, and high-productivity operations. Second, more non-RMG large enterprises should be developed.

As regards SOEs, they function most effectively when they seek to optimize the use of resources and maximize profits. To do so, the management of SOEs should be given the required level of autonomy to act in response to or in anticipation of changing market conditions, and in the best interests of stakeholders. Underperforming entities should be closed down, divested or reformed. Employees made redundant could be provided with the necessary assistance, e.g., training, to facilitate their transition into industries that require more manpower.

Productivity improvement should be made an integral part of the structural reforms of the SOEs, so that their performance in terms of value-added generation, productivity growth, and service delivery could improve significantly. The initiatives to drive productivity improvements should include an in-company productivity awareness campaign to cultivate the productivity mindset and a culture of continuous improvement and innovation; training on productivity tools and their applications; adoption of modern machinery, technologies, and management techniques; and establishment of a recognition-and-reward system that is closely linked to organizational and individual productivity performance. The SOEs could then be used as role models for other large enterprises and to drive similar initiatives in the smaller enterprises that are supporting them along the production value chain. They can also play the role of catalysts in improving the productivity of the respective sectors, and in driving sectoral initiatives such as marketing products overseas.

The performance of the SOEs should be monitored closely, e.g., through regular audits and transparent and regular reporting of their financial and non-financial performance. Productivity measurement systems should also be established in the SOEs to complement the existing performance management systems, and the outcomes should be reported in the regular reports to the government and the public. The focus should be on results and public accountability for performance, benchmarked against best practices and performance standards.

Strategic Thrust 3: Promote Productivity in All the Sectors Without Compromising Sustainable Development

Table 9 provides an overview of the three main sectors in the economy, namely, agriculture, industry, and services, in 2017.

TABLE 9

OVERVIEW OF ECONOMIC SECTORS

Sector	GDP		Employment		Value added per worker (taka)
	Million taka	% share	No. (million)	% share	
Agriculture	1,340,511	14.1	24.7	40.6	54,272
Industry	2,948,659	31.1	12.4	20.4	237,795
Services	5,189,805	54.8	23.7	39	218,979
Total	9,478,975	100	60.8	100	155,904

Sources: Bangladesh Bureau of Statistics, 2017 Statistical Yearbook.

Note: 2016–17 GDP at constant market prices, base year 2005–06.

The services sector dominates in terms of share of GDP. This is followed by the industry sector and the agriculture sector. In terms of employment share, agriculture is the highest despite its low share of GDP. The employment share of services is just slightly lower than that of agriculture while the share of industry is much lower.

The industry sector has the highest productivity level (1.5 times the economy's average), with the services sector following closely behind (1.4 times the economy's average). The agriculture sector is far behind, with a productivity level that is just 35% of the economy's average.

The key message that must be emphasized is that productivity is the key driver of growth in each sector. However, initiatives taken to raise productivity must not be at the expense of the environment, as this affects not only human welfare and physical resources but also the rate of productivity growth in the long run. The strategic thrust is therefore to promote productivity in all the sectors without compromising sustainable development.

For the agriculture sector, the key message is that agriculture will continue to be strategically important to the economy even though its contributions to GDP and employment have declined over the years. As it is not possible to increase the amount of land for agriculture substantially, raising productivity is the only way for the sector to increase its output and value added. Over the years, the sector's growth has been driven largely by crop production, particularly rice. Moving ahead, Bangladesh should step up diversification beyond rice in crop production and also diversification to non-crop production. Concurrently, all aspects of the value chains of the industries in the agriculture sector should be scrutinized to improve efficiency, reduce costs, and generate higher value added. Commercialization of agriculture should be given priority attention.

For the industry sector, the key message is that at Bangladesh's current stage of development, the industry sector should play a much larger role in terms of contribution to GDP and employment. The manufacturing industry in particular is critical not just because of its significant contribution to GDP and employment but because of its critical linkages with the rest of the economy. As the growth of the industry has had a slow start, there is much scope for it to grow further and contribute to the economy. Thus far, the growth of the industry, as well as the country's exports, has been driven overwhelmingly by RMG. This makes the economy highly vulnerable. Going forward, the growth of the sector will have to come from greater value-added generation from a larger industry sector, including a more diversified manufacturing industry and the growing construction and energy industries.

For the services sector, the key message is that the sector is an important cornerstone of the economy, with the highest contribution to GDP and a share of employment that is nearly equal to that of agriculture. Following the experiences of the developed countries, services have the potential to play an even more important role in the future. For that to happen, the sector must be more productive. To date, the sector has been dominated by the low-productivity wholesale and retail trade; transport, storage and communication; and community, social and personal services industries. Services exports, driven by factor services (labor) and leading to high amounts of remittances to Bangladesh, have also been important. In future, the growth of the sector will have to come from an expansion in the size of high-productivity modern services industries such as ICT and financial services, as well as the continued growth of services exports, with increasing contribution from non-factor services.

Concurrently, for all the three sectors, the need to balance growth and sustainable development must be emphasized. The geographical location and topography of Bangladesh is marked by a low-

lying delta, formed by a dense network of the distributaries of the Ganges, the Brahmaputra, and the Meghna rivers, between the Himalayas and the Bay of Bengal, with two-thirds of the land being less than five meters above sea level. This makes the country highly vulnerable to the impacts of natural disasters and climate change. Every year, natural calamities such as floods, cyclones, erosion, and droughts cause extensive damage to crops, homes, and household and community assets, and increase health and disease risks. Flooding and inundation occur predominantly during the monsoon season, while water shortages and droughts are experienced mainly in the dry season. Floods affect about 80% of land in Bangladesh. In a normal year, 20–25% of the country are inundated by river spills and drainage congestions. Water salinity level in the country has increased at an alarmingly high rate in the last 30 years as a result of the inland penetration of sea water, thus limiting the cultivation of many crops. Management of water resources is thus critical.

In the Global Climate Risk Index 2019 by Germanwatch, a Berlin-based environment organization, Bangladesh, with 190 extreme events, was ranked seventh in the world among countries that were most affected by extreme weather events in the 20-year period of 1998–2017. The impacts include total losses of USD (PPP) 2,403.8 million or 0.64% of GDP, and 0.433 deaths per 100,000 inhabitants. In similar vein, the Intergovernmental Panel on Climate Change, the UN body set up to make scientific assessments of climate change, has considered Bangladesh as one of the countries that is most vulnerable to climate change. It has projected that floods, tropical cyclones, storm surges, and droughts are likely to be more frequent and severe in the years to come in the South Asian region. It has also predicted that temperature will increase by 1.6°C and precipitation by 8% by 2050, and that the sea level in Bay of Bengal will rise by 0.2 to 0.9 meters by 2100. This will lead to more frequent floods, inundations, siltation, and increase in salinity levels, all of which affect crops, fisheries, and livestock. Besides their severe impact on the agriculture sector, natural disasters and climate change affect other sectors as well. Manufacturing (e.g., textile, agroprocessing, and light engineering) is affected by the reduced availability of raw materials (agricultural inputs such as rice and cotton), energy shortage, decreased water supply, and damaged manufacturing and storage facilities. The services sector is affected by disruptions to communication and transport systems and power supplies, and damage to other physical infrastructures, all of which affect the other sectors as well.

In its 2014 report, titled *Assessing the Costs of Climate Change and Adaptation in South Asia*, ADB predicts that six countries, namely, Bangladesh, Bhutan, India, the Maldives, Nepal, and Sri Lanka, will see an average economic loss of around 1.8% of their collective annual GDP by 2050, rising sharply to 8.8% by 2100 if the world continues on its current fossil fuel-intensive path. In Bangladesh, a rise in extreme floods, cyclones and droughts, heat stress, and shorter growing seasons could slash yields of rice, wheat, and potato by over two thirds of current levels. A coastal zone of more than 47,000 sq km will face more storm surges and a projected sea level rise, which will worsen erosion and soil salinity and engulf increasingly large chunks of productive, densely populated areas of land. More extreme weather events will also damage forests, wetlands, and mangrove forests.

Unsustainable practices, such as irresponsible use of agricultural land and pollution from manufacturing industries, increase the country's vulnerability to natural disasters and climate change. From the productivity perspective, they also increase costs and affect long-term value-added generation and productivity growth. In GII 2018, Bangladesh was ranked a low 124 out of 126 countries on environmental performance. A recent assessment of environmental sustainability in Bangladesh was also given in the Human Development Reports 2018 by the United Nations

Development Programme (UNDP). Among the 189 countries assessed, Bangladesh was placed at the bottom third for: a) environmental threats, i.e., high mortality rate attributed to air pollution and unsafe water, sanitation, and hygiene services; b) percentage change of forest area between 1990 and 2015; and c) red list index (measure of conservation status of plant and animal species). It was ranked middle-third for fossil fuel energy consumption and renewable energy consumption (as % of total final energy consumption); and top-third for carbon dioxide emissions. Unsustainable practices in Bangladesh include the imprudent use and exploitation of agroecosystems, wetlands, water resources, and forests; poorly planned or unplanned developments, industrialization, and urbanization; and environment-unfriendly economic activities in cities and towns that result in air and water pollution.

Actions should thus be taken to ensure environmental sustainability through conservation of natural resources and control of unsustainable practices that lead to degradation of the environment, which will increase the vulnerability of the country to natural disasters and climate change. Climate-proof considerations should also be included in all decisions on infrastructural development and other investments. Examples are introduction of drought-, flood-, and saline-tolerant crops; crop and aquaculture diversification; more capture and use of surface water for irrigation; more flood-resistant infrastructure for riverbanks and transport systems; and raised earth beds for seasonal vegetable cultivation.

Bangladesh has demonstrated its seriousness towards climate change through various policies and initiatives and was one of the first countries to develop a climate change strategy and action plan that provides strategic direction. Nevertheless, in its 2016 report on the Country Partnership Strategy for Bangladesh, 2016–20, ADB noted the following:

“A significant segment of the population remains poor and depends on an overexploited natural resource base. The country also faces frequent natural disasters and extreme weather events. Key challenges are to (i) provide food, water, energy and livelihood security; (ii) protect investment, infrastructure, and settlement from disaster-related risks; (iii) reduce overexploitation of scarce natural resources; and (iv) control unplanned urbanization and industrialization. The Intergovernmental Panel on Climate Change has forecast that Bangladesh will be among the countries most affected by climate change. The government recognizes the critical role of environment management in sustaining inclusive growth and has prepared a National Plan on Disaster Management, the Bangladesh Climate Change Strategy and Action Plan, and (with support from the United Nations Environment Programme), the National Sustainable Development Strategy. While regulations and authorities to implement them are in place, actual progress has been slow. The budget allocation for the environmental sector continues to be low, with inadequate institutions.”

The challenge is thus to ensure consistent implementation of the actions required for environmental management, as well as to curb unsustainable practices that damage the environment.

Strategic Thrust 4: Modernize and Diversify Agriculture beyond Rice and Crop Production

The agriculture sector remains an important part of the economy, even though its shares of GDP and employment have declined over the years. It is still the sector with the highest share of total employment (40.6%); and more than three quarters of the population in the rural areas derive their livelihood from the sector. Its performance has a positive effect on poverty reduction, and it

determines the degree of food security and self-sufficiency for the country. As is typical with any economy undergoing transformation, agriculture's role changes from being a direct contributor to economic output to one making a more leveraged contribution to the economy through powerful farm-and-non-farm linkages.

A breakdown of the agriculture sector for 2016–17 is given in Table 10. Crops and horticulture dominates the sector, with fisheries at a distant second. As the employment figures for the four industries are not available, value added per employee cannot be computed.

TABLE 10

OVERVIEW OF AGRICULTURE SECTOR

Industry	Value added			Employment			Value added per employee (taka)
	Million taka	% of GDP	% of sector	No. (million)	% of total	% of sector	
Agriculture sector	1,340,511	14.1	100	24.7	40.6	100	54,272
Crops and horticulture	714,908	7.5	53.3	–	–	–	–
Animal farming (livestock)	145,689	1.5	10.9	–	–	–	–
Forestry	151,128	1.5	11.3	–	–	–	–
Fisheries	328,786	3.5	24.5	–	–	–	–

World Bank data shows that from 1991 to 2003, the value added per worker of the sector ranged between USD400 and USD490 at constant 2010 USD. In 2004, it crossed the USD500 mark to reach USD532.7. Since then, it had been on an upward trend, reaching USD897.8 in 2016. This is due to policy reforms, e.g., liberalization of input and output markets, and technological advancement in the sector. Nevertheless, the productivity level is still far below that of the agriculture sector in the lower-middle-income countries (average of USD2,027.2) and upper-middle-income countries (average of USD4,533); and is only 35% of the economy's average.

Crops, particularly rice, still dominates the sector despite a drop of between 8 and 10 percentage points in its share of sectoral value added since the 1980s. Today, it contributes about 53% to the sector's value added. The livestock and fisheries industries are strategically important because they generate jobs, contribute to poverty reduction, provide a buffer to volatility in the sector's growth, and augment food and nutritional security. However, they are small compared with the crops industry. The forestry industry is also strategically important. However, the government's aim is more to expand the forest resources of the country to maintain ecological balance and sustainable economic growth, rather than to exploit them directly for economic gains.

The strategic thrust for the sector is therefore to modernize and diversify agriculture beyond rice and crop production. Modernization entails adopting measures such as mechanization, management techniques, technologies, skills upgrading, and commercialization, as well as tackling all challenges affecting agricultural value chains, to improve productivity. Diversification requires investments into more areas of growth, which will increase the generation of value added for the sector.

Crop Production

In the crops and horticulture industry, crops account for 99.5% of the value added, with horticulture accounting for the remaining 0.5%. Within the crops industry, there has been a gradual but slow

change in the production structure. As shown in Table 11, cereals dominate crop production, with rice overshadowing all the rest with 55.8% of the value added of crop production, though this has dropped from 60.2% in 2011–12 and 73.5% in 1990. The other major crops, albeit still far behind rice, are vegetables (with potatoes comprising 78% of vegetables output), fruits, spices, oilseeds, and beverages.

TABLE 11
COMPOSITION OF CROP PRODUCTION

No.	Crop	Output (million taka)	% of output	Value added (million taka)	% of value added
A.	Cereals	551,888	61	426,631	61.2
1	Rice	502,746	55.6	388,990	55.8
2	Maize	31,370	3.5	25,100	3.6
3	Wheat	17,751	1.9	12,525	1.8
4	Other cereals	21	–	17	–
B.	Other crops	352,833	39	269,949	38.8
1	Vegetables	113,322	12.5	67,980	9.8
2	Fruits	64,838	7.2	61,290	8.8
3	Spices	55,910	6.2	41,406	5.9
4	Oilseeds	41,198	4.6	31,014	4.4
5	Beverages	31,422	3.5	26,409	3.8
6	Jute	24,413	2.7	22,651	3.2
7	Others	21,730	2.3	19,199	2.9
C.	Total crops	904,721	100	696,579	100

Rice is the staple food of the population. About 75% of the total cropped area are for rice, which is grown all over the country. What is glaring is that in the three agriculture censuses of 1983–84, 1996, and 2008, the percentage of total crop area taken up by rice had remained a large 70–75%. This is partly due to higher rice prices and partly due to the introduction of newer and better rice varieties, both of which have reduced any incentive for diversification out of rice. Over the last 40 years, Bangladesh has experienced a ‘green’ revolution in rice production, with a tripling of production from approximately 10 million metric tons in the mid-1970s to almost 34 million tons in 2016–17. Productivity, measured in terms of rice yield (million metric tons/hectare), has also increased substantially. This is largely due to the cultivation of high-yield varieties (HYVs) under irrigation with use of chemical fertilizers. This has enabled Bangladesh to increase food availability to meet the demands of a rapidly growing population.

Rice is grown in three seasons. Aman rice, grown during July–August to December–January, is part rain-fed (during early part of growth) and part dry-season crop (during flowering and harvest time). This is followed by Boro, grown at present under irrigated conditions during the largely dry period from February–March to April–May. Aus is grown in rainfed conditions, between the Boro and Aman seasons but may overlap with both. Over the years, there has been increasing reliance on irrigated Boro cultivation, using fertilizer-intensive HYVs. Boro rice now accounts for 54.0% of total rice production, followed by Aman (40.4%) and Aus (5.6%). However, the scope for further expansion of Boro is limited except for specific pockets. Moreover, the cost of production for Boro HYV rice is rather high because of intensively used costly inputs such as irrigation and fertilizer.

Further increase in rice output over the long run is therefore likely to come from Aman but there are uncertainties that surround the harvest in any given year due to its susceptibility to natural hazards.

Crop production in general is saddled with various structural issues. On the supply side, the availability of agricultural land for crops has been declining. As shown in Table 12, between 1990–91 and 2010–11, the net cropped area decreased by 4.1% (from 20,198 to 19,368 thousand acres), although it went up slightly from 2010–11 to 2015–16. Good quality agricultural land has been lost due to urbanization, building of new infrastructures such as roads, and implementation of other development projects.

TABLE 12

DECLINE IN AVAILABILITY OF AGRICULTURAL LAND FOR CROPS

Item	1990–91		2000–01		2010–11		2015–16	
	'000 acres	%						
Forest	4,693	12.8	6,490	17.7	6,368	17.4	6,368	17.5
Not available for cultivation	7,958	21.7	8,427	23	9,238	25.2	8,910	24.4
Cultivable waste area	1,442	3.9	794	2.2	542	1.5	551	1.5
Current fallow area	2,379	6.5	987	2.6	1,153	3.1	1,009	2.8
Net cropped area	20,198	55.1	19,970	54.5	19,368	52.8	19,636	53.8
Total land	36,670	100	36,668	100	36,669	100	36,474	100

Besides the fact that crops are susceptible to diseases caused by bacteria, viruses, and fungi, and are vulnerable to natural disasters and climate change, crop production is affected by certain issues that reduce their value-added generation and productivity growth. Studies have found that there are yield gaps of as much as 30% between the potential yields in the research stations and actual farmers' yields for various varieties of crops. Causes of the yield gaps include decreasing soil productivity, inefficient water and fertilizer use, inadequate supply of quality seeds, imbalanced use of fertilizer, low productivity of farmers, and higher input price.

Degradation of natural resources is a serious problem. This is caused by erosion, accretion, and soil fertility decline. Water erosion accounts for about 40% of land degradation. River-bank erosion and siltation of channels are chronic concerns. During the last three decades, the Jamuna, Ganges, and Padma rivers have eroded about 180,000 ha of floodplain. This amount excludes the annual erosion along the other major rivers and also in the Meghna estuary where the amount of erosion is very high. River-bank erosion is expected to increase further with the rise of water flow in the rivers due to higher global temperatures and the consequent ice melting in the Himalayas.

Land accretion is also a problem. The average sediment load that passes through Bangladesh to the sea is huge (1–3 billion tons a year). A part of this is deposited on the flood plains, accreting new land (called char lands) within and adjacent to the estuary of the major rivers. These lands account for about 6% of the total land area of the country. However, land use in these areas is transitory. Char lands often have lower economic productivity due to high sand content in the soil base. They are also prone to erosion and floods.

Decline of soil fertility is also a concern. Although 30 agro-ecological zones and 88 sub-zones have been identified (by adding successive layers of information on the physical environment, including

soil characteristics), individual farmers have fragmented the land into small pieces. This has led to vast differences in the management of each piece of land and hence wide variations in fertility levels even between adjacent plots of land. Unbalanced use of fertilizers, intensification of crop cultivation without appropriate techniques for sustainable natural resources management, and the growing of mono-culture rice without rotation have all led to organic matter depletion and nutrient deficiencies of the soil. The situation is worsened by water logging followed by degradation of the soil's physical and chemical properties as well as soil salinity and acidity. Most of the soils are in urgent need of replenishment with organic matter and fertilizers if productivity is to be enhanced. Although there has been an increase in the use of fertilizers, there exists a gap between the actual and recommended doses for crops.

Fragmentation of farms and sharecropping is another issue. Agriculture, particularly crop cultivation, takes place in millions of small farms, operating no more than 2.5 acres of land each. In fact, the cultivable land holdings average only 0.7 acres each. Such small farms account for 84% of farms and 60% of all operated land. These are typically the farms that make inefficient use of resources and do not adopt modern technologies and practices. Large farmers, with holdings of 7.5 acres or above, account for only 2% of farms and 10% of land area. It is estimated that 10% of farmers own 50% of the land. About 60% of farmers are landless and depend on sharecropping of land owned by others. Sharecropping has an adverse effect on soil productivity, as most sharecroppers do not use the proper doses of fertilizers, appropriate crop rotation, or organic manure. This is due to the seasonal or annual contract arrangement of sharecropping.

Both labor and physical capital are in short supply. There is a shortage of farm labor, especially during peak harvest seasons. This is partly due to the low LFPR of women in the sector, and partly due to the migration of young people who have no interest in agriculture, to the industry and services sectors. The level of farm mechanization is low, mainly due to the small size of the farm holdings. Other reasons include inadequate knowledge about the appropriate machines, lack of suitable and affordable machines for farm operations, lack of skills to operate farm machines, and poor buying capacity of farmers.

The demand for irrigation facilities outstrips supply. Rice is the largest irrigation user with about 80% of the total irrigated area. The other major irrigated crops are wheat and vegetables (including potatoes). Between the agriculture censuses of 1983–84 and 2008, the percentage of farms with access to irrigation increased from 43.3% to 68.6%, which means that almost a third of the farms were still excluded. Groundwater is the source for more than 75% of the irrigated area. However, given the declining groundwater tables and water quality issues in Bangladesh, it will be extremely difficult to exploit groundwater resources sustainably.

Ensuring a sufficient supply of quality seeds and controlling marketing of adulterated seeds is another challenge. The supply of HYV seeds has not kept up with demand, and the average quality seed replacement rate is only about 20% of national requirement. At the same time, the supply of agricultural credit is unable to meet the increasing demand arising from HYV seeds as well as new technologies. The volume of institutional credit is conspicuously low, as borrowing from institutional sources is difficult because of the bureaucratic procedures. The non-institutional sources are dominated by mohajans and dadanders, who charge interest on loan at exorbitant rates.

The agricultural product markets are characterized by weak value chains, market linkages, and clusters. These include poor electricity and water infrastructures; poor roads and communication

systems; lack of storage, processing, and packaging facilities; lack of organized markets for selling farm produce; and unfair practices of middlemen. In some localities such as the coastal areas, the limitations of infrastructure make access to markets extremely difficult. Furthermore, the limited extent of agribusiness and agroprocessing activities severely impedes the country's post-production potential. Consequently, there is large post-harvest loss, estimated to be 12% for paddy and 30% for vegetables and fruits; and there are wastages and long lead times in the farm-to-market value chain.

Food quality and safety issues are also major causes of concern. There is widespread contamination through poor handling practices, and deliberate adulteration for purposes of fraud (extension of shelf life, passing off cheaper ingredients as expensive ones, etc.). Not only does this impact the health of the population, it also affects the exportability of the agricultural produce. The challenge is to create a satisfactory food control system backed by inspections and improved practices among food producers and handlers, as well as greater awareness among consumers about the importance of food quality and safety.

As there is little scope for increasing agricultural land for crops, the possibility of generating higher value added from crops rests on three broad measures. The first measure is to tackle all the challenges affecting the crop value chain, preventing crop intensification and causing yield gaps, right from the planting of the crop to the sale of the produce to the end consumer. This includes maintaining soil quality through sustainable farming practices and application of appropriate fertilizers; developing and increasing supply of HYV seeds for various crops at affordable prices; widening the reach of irrigation; promoting farm mechanization and good agricultural practices; improving access to agricultural credit; strengthening the technology transfer linkage between research institutes and farms; improving post-harvest management to reduce losses; linking farm produce to markets; ensuring compliance with sanitary and phyto-sanitary standards to facilitate export; and strengthening resilience to natural disasters and climate change.

The second measure is to facilitate large-scale commercial farming, including agroprocessing and agribusiness. This will optimize the use of resources, reap economies of scale, and sell the farm produce efficiently and profitably to large markets. It will spur agricultural growth, which would otherwise be dragged down by the dominance of small and marginal farms, fragmented and scattered holdings, and prevalence of sharecropping tenancy arrangements.

The third measure is to step up diversification to other crops beyond rice cultivation. These include other cereal crops particularly maize and wheat, and non-cereal crops such as vegetables, fruits, spices, oilseeds, and beverages. In all cases, the focus should be on large-scale commercial farming, including agroprocessing and agribusiness. To support all these measures, agriculture research needs to be stepped up; and to reach out widely to farmers throughout the country, extension services should be scaled up.

Beyond crop production, the pace of diversification to fisheries and livestock should be stepped up. For this to happen, there should be appropriate interventions and presence of a balanced incentive structure between crops and non-crops, just as these are necessary to promote diversification of crops beyond rice.

Fisheries

As Bangladesh is in the floodplains of the Ganges, the Brahmaputra, and the Meghna rivers and their tributaries and distributaries, it is endowed with large and varied fishery resources. It is home

to about 320 different species of fish. With this rich biodiversity, the country has significant potential and comparative advantages in the fisheries industry. Fish also provides an important traditional source of protein in the Bangladeshi diet.

The fisheries industry consists of inland open water (capture) fisheries (27.0% of total production of 3.88 million metric tons in 2015–16), inland closed water (culture) fisheries or aquaculture (56.8%), and marine fisheries (16.2%). Before 2000, most fish came from capture fisheries but this has since been overtaken by culture fisheries. Overall, artisanal fisheries (traditional small-scale fisheries involving fishing households, using small amounts of capital and energy, fishing close to the shore, and supplying mainly for local consumption) account for 90% of the catch.

The fisheries industry faces several challenges that affect their potential for further growth. First, fish stocks, for both inland and marine fisheries, are falling. This is caused by overfishing and harmful fishing practices due to lack of legislation and enforcement of extant rules, and exacerbated by the use of destructive gear in mechanized fishing boats; and the negative environmental impact of land degradation causing siltation, pollution of water bodies from urban and industrial areas, and climate change. Second, the unavailability of public icing and cold-storage facilities at landing sites, in addition to lack of clean water and reliable electricity, leads to a high proportion of discarded catch and poor hygiene practices. Third, the absence of good-quality, well-connected roads from landing sites to wholesale markets, as well as lack of market information, leads to a complex network of intermediaries between artisanal fishers and final consumers. This puts the fishers at the lowest end of the fisheries value chain with low profit and discourages long-term sustainable fisheries management. Fourth, due to the unhygienic practices, long distribution chain, and lack of quality control, exporters are often not able to meet international food quality and safety standards.

According to the UN Food and Agriculture Organization statistics 2016, Bangladesh is the twelfth-largest capture producer in the world and the fifth-largest aquaculture producer. However, it is not even among the top 50 largest fish exporters. For the fisheries industry to grow further, all the challenges faced by the sector should be addressed as an integrated whole. Fisheries research and extension services should be stepped up to provide assistance for fish farming. A critical measure that must be taken is to scrutinize the entire fisheries value chain to improve efficiency and yield and generation of higher value added at each stage, as well as to ensure compliance with international food quality and safety standards. As an example, recent improvements in roads and communications networks in urban areas have seen more fishers participating directly in the secondary market, leading to shorter distribution chains that augur well for the industry.

The potential for growing aquaculture even further should be explored, particularly to diversify the composition of fisheries exports beyond the currently dominant frozen shrimp and prawn. There is also the potential for growing marine fisheries. Bangladesh has a coastline of about 714 km and an exclusive economic zone of 164,000 sq km. This offers great potential for higher marine fisheries production.

Livestock

Animal farming, or livestock, provides another important source of protein in the Bangladeshi diet, as well as draught power and fertilizers used in farm operations. Livestock products, namely, leather and leather products, hides, and skins, are also important exportable items for the country. Livestock has specific advantages over crops and fisheries because its operations require less land and are not significantly affected by seasonality.

However, livestock has remained a small industry in agriculture. In fact, its share of agriculture value added declined from about 15% in the early 1980s to 10.9% in 2016–17. Statistics for the long-term period of 1949 to 2008 (last agriculture census) show that the average annual growth of livestock has been modest: 1.0% for bovines (cattle and buffaloes), 5.2% for sheep and goats, and 7.4% for poultry (fowls and ducks). More recent data for 2009–10 and 2015–16 show an even slower average annual growth: 0.6% for bovines, 1.7% for sheep and goats, and 2.9% for poultry, which is the most widely-held livestock species among small farmers, especially the poor and landless households. Nevertheless, milk, meat, and egg production has grown over the years.

Several interrelated factors constrain the development of the livestock industry. These include shortage of skilled labor, knowhow, and capital to run the operations efficiently and as commercial businesses; lack of quality livestock breed; scarcity and high price of feeds and fodder; susceptibility to diseases; inadequate access to inputs such as equipment and chemicals; irregular power supply; limited collection and processing facilities; inadequate institutional credit; lack of organized marketing system resulting in exploitation by middlemen; insufficient control of quality of livestock products; and inadequate extension services for veterinary care and technical advice.

To sustain the growth of the livestock industry, concurrent measures need to be stepped up on several fronts, including availability of skilled labor, capital, technology, and quality inputs; disease control; access to institutional credit; quality control and certification of livestock product; increased value added at different stages of marketing of livestock products; access to markets; and expansion of commercial production. Research on livestock, veterinary services, and extension services to help the farmers should be stepped up. The extent to which these areas can be improved will have a significant bearing on the productivity and growth of the livestock industry.

Strategic Thrust 5: Strengthen and Enlarge the Industrial Base Beyond Readymade Garment Manufacturing

The industry sector contributes 31.1% to GDP and 20.4% to total employment and has the highest productivity level among the three sectors, at 1.5 times the economy's average. A breakdown of the sector is shown in Table 13.

Manufacturing, comprising largely RMG factories, dominates with 67.1% of the sector's value added and 71.0% of its employment. Mining and quarrying; and electricity, gas, and water supply are by far the two most productive industries but are small. The dominant manufacturing industry's productivity is about 95% of the economy's average; while construction productivity is about 83% of the economy's average.

Besides manufacturing, there is scope for further growth of construction and energy (within the electricity, gas, and water supply industry). However, the scope for growing mining and quarrying is limited because Bangladesh lacks extensive metallic mineral reserves. The industry produces mainly coal, natural gas, petroleum, salt, and limestone. Coal and natural gas are significant and are covered under the energy sector.

The strategic thrust is therefore to strengthen and enlarge the industrial base beyond RMG manufacturing. Strengthening the industrial base requires that all aspects of operations in the sector be upgraded, thus shifting from low-value-added, labor-intensive operations to high-value-added, capital-intensive operations. Growing the industrial base necessitates substantial investments in

non-RMG manufacturing. Because of the slow start to industrialization in the 1970s and 1980s, Bangladesh has not reaped the benefits of industrialization to the extent that many other lower-middle-income countries have done so. Based on the experience of these countries, as well as the upper-middle-income countries, there is further scope for industrial deepening and broadening in the country by accelerating the pace of industrialization. All the factors that affect the pace of growth of the industries in the sector should be scrutinized and addressed. Steps should also be taken to make the country more attractive to FDI, including the development of more export processing zones (EPZs).

TABLE 13

OVERVIEW OF INDUSTRY SECTOR

Industry	Value added			Employment			Value added per employee (taka)
	Million taka	% of GDP	% of sector	No. (million)	% of total	% of sector	
Industry sector	2,948,659	31.1	100	12.4	20.4	100	237,795
Mining and quarrying	163,302	1.7	5.5	0.12	0.2	0.8	1,360,850
Manufacturing	1,977,653	20.9	67.1	8.76	14.4	71	225,759
Electricity, gas, and water supply	138,196	1.5	4.7	0.12	0.2	0.8	1,151,633
Construction	669,508	7.1	22.7	3.4	5.6	27.4	196,914

Source: Bangladesh Bureau of Statistics, 2017 Statistical Yearbook.
Note: 2016-2017 GDP at constant market prices, base year 2005-2006.

Manufacturing Industry

The importance of the manufacturing industry goes beyond its GDP and employment shares. Globally, manufacturing has been the leader in raising productivity and catalyzing change in the rest of the economy. This is particularly the case with heavy manufacturing which produces intermediate products for use by other industries, as opposed to light manufacturing which produces products for end users. Examples are oil, mining, shipbuilding, steel, chemicals, and machinery manufacturing. These heavy industries deal in large products that involve complex manufacturing processes. They are characterized by high capital intensity, technology, automation, mechanization, and innovation, all of which can have a considerable multiplier effect on the productivity of the rest of the economy. Besides the direct impact, they have strong backward and forward linkages with the agriculture and services sectors.

As is typical of other developing countries, the manufacturing industry in Bangladesh has grown in terms of its share of GDP. The takeoff was slow, stagnating below 6% share of GDP from 1960 to 1972. In 1973, the share breached the 7% mark when it reached 8.5%. It then moved upward to reach 15.6% in 1984 but fell for the next five years to close at 12.9% in 1989. From the early 1990s, it moved upward again to reach 17.3% in 2017. Throughout the 1970s, the performance of manufacturing was constrained by the import-substitution policy, poor-performing nationalized enterprises, and inadequate private investment. With trade liberalization measures in the 1980s and a shift from the import substitution policy to export orientation, growth began to take off.

Table 14 shows a breakdown of the manufacturing industry. Textile and wearing apparel dominates manufacturing production. The bulk of this comes from RMG. In far second position is non-metallic mineral products, followed by manufacturing of motor vehicles, and food and beverage manufacturing.

TABLE 14

BREAKDOWN OF MANUFACTURING INDUSTRY

Commodity category	Value added (million taka)	% of total
A Textile and wearing apparel	836,512	41.7
Manufacturing of textile	92,118	4.6
Manufacturing of knitted & crochet fabric	195,456	9.7
Wearing apparels except fur apparel (RMG)	548,938	27.4
B Non-metallic mineral products	211,034	10.5
C Manufacturing of motor vehicles	177,918	8.9
D Food and beverage manufacturing	172,836	8.6
E Manufacturing of furniture	113,941	5.7
F Iron & steel basic industry	81,055	4
G Chemical products except basic chemicals	78,078	3.9
H Manufacturing of other transport equipment	35,296	1.8
Others	298,758	14.9
Total	2,005,428	100

Source: Bangladesh Bureau of Statistics, 2017 Statistical Yearbook.

Note: 2016–17 GDP at constant market prices, base year 2005–06.

The dominance of RMG is underlined by its pole position in Bangladesh's exports, as shown in Table 15. Compared with RMG, leather and leather goods are in a far second position. For many decades until 1981, jute and jute goods were Bangladesh's traditional exports with up to 70% share. In contrast, RMG started barely with USD1 million in exports in 1978. By 1990, RMG exports, benefiting from the Multi-Fibre Arrangement (MFA) of 1974 and government policies to ensure their competitiveness, had overtaken jute; and by the close of the 1990s, a new export concentration emerged when RMG exports reached a share of 77%. This continued to increase until it reached US\$30.6 billion or 83.5% of the export share in 2017–18 despite the phasing out of the Agreement on Textiles and Clothing (successor of MFA in 1995) in 2005. Today, Bangladesh is the world's second largest exporter of RMG with 6.5% of the global market share, behind China, which has the lion's share of 34.4%.

TABLE 15

DOMINANCE OF RMG MANUFACTURING AS REFLECTED IN EXPORTS

No.	Commodity	Export receipt	
		USD million	%
1	Readymade garments (RMG)	30,614.76	83.46
2	Leather and leather goods	1,085.51	2.96
3	Jute and jute goods	1,025.55	2.8
4	Home textile	878.68	2.4
5	Agricultural products	673.7	1.83
6	Frozen and live fish	508.43	1.39
7	Non-leather footwear	244.09	0.67
8	Pharmaceuticals	103.46	0.28

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No.	Commodity	Export receipt	
		USD million	%
9	Specialized textiles	110.04	0.3
10	Plastic products	98.48	0.27
11	Others	1,325.47	3.64
	Total	36,668.17	100

Source: Export Promotion Bureau.

RMG manufacturing has grown considerably since it started as a small-scale operation in the late 1970s. From 1984–85 to 2017–18, RMG manufacturing grew significantly: from 384 to 4,560 garment factories, and from 0.12 million to 4.0 million employed workers. The growth of RMG manufacturing has hinged on low-wage labor producing low-value, low-priced basic garments, with concentration in T-shirts, shirts, sweaters, shorts, jeans, and ladies and children’s apparels. These are exported mainly to the European Union (EU), facilitated in the early years by the MFA, and to the United States of America (USA). Both of these markets constitute about 80% of the RMG exports today, even though this has declined as a result of diversification to non-traditional markets. There is thus high product and market concentration. Bangladesh’s RMG exports enjoy three major advantages. The first is competitive prices compared with other countries. The second is the capacity for production, with its nearly 5,000 factories and four-million workforce. The third is the ability to meet large orders at satisfactory quality levels, especially for the value- and entry-level mid-market products.

Nevertheless, there are certain challenges faced by RMG manufacturing that may constrain its further growth. Foremost among the challenges is the infrastructure (transport and utilities). An efficient transport system is a key element of trade logistics costs and is a major determinant of export competitiveness. The quality of the transport infrastructure is critical as it affects the lead time for garments. Congested roads, limited inland transport alternatives, and lack of a deep-sea harbor add inefficiencies to the garment lead time, which is a concern to international buyers. Most of the RMG products are transported to Chittagong port through the Dhaka–Chittagong highway. However, the transport time is unduly long due to traffic congestion. The Chittagong port, which handles nearly 85% of the country’s trade merchandise, is operating beyond its capacity and suffers from inefficiencies such as manual processing, limited crane capacity, poor management, and labor unrest. The lead time for handling sea freight is long due to the lack of a deep-sea harbor needed for entry of the mother vessel. Alternative modes of transportation such as railways and the Dhaka–Chittagong airports provide much lower carrying and handling facilities. Besides the transport system, power supply is an issue. Insufficient power supply and frequent power interruptions disrupt operations, which affect the ability to meet export orders. Factory owners are forced to use alternative sources of energy such as generators and independent power plants, which increase the costs of production.

Social compliance in relation to the working environment and safety standards also increases the cost of production. Such compliance has been a fundamental requirement for many of the Western buyers following the Tazreen factory fire in 2012 and the Rana Plaza building collapse in 2013. Two global agreements, the Accord on Fire and Building Safety in Bangladesh (Accord) and Alliance for Bangladesh Worker Safety (Alliance), were signed with key stakeholders in 2013 to improve factory conditions. Bangladesh’s Labor Act was also amended in July 2013 to put greater

emphasis on occupational safety and health and to provide for mandatory insurance for businesses with more than 100 workers. All these have led to RMG manufacturers incurring huge expenditures for undertaking fire and building safety remediation, construction of or relocation to purpose-built factories, and compliance with environmental and labor standards. Yet, unless they are able to comply with all these labor, social, and environmental standards, they will not get orders from the international buyers.

Besides increasing production costs, RMG manufacturing in Bangladesh is plagued with low productivity. In fact, its productivity is the lowest among the major garment-producing nations. A major reason is the lack of incentives to invest in productivity improvement initiatives due to the availability of cheap labor. There is therefore insufficient investment in new machinery and technologies, and the outdated machines in use frequently experience breakdowns and downtimes.

The second reason is the absence of strong backward linkages, resulting in 60% of raw materials being imported because of the underdeveloped textile industry. The high dependence on imported natural and manmade fibers, especially for woven garments, creates sourcing risks and longer lead times. While the average sourcing lead time for woven garments in Bangladesh is seven days, it goes up to 15 days when sourced from India and up to 30 days when sourced from China. The third reason is that the forward linkages are weak. This is due to poor infrastructure and no single port of call, e.g., all products need to be shipped via Singapore, rather than a shorter route to Colombo, for exports to the EU and the USA. These result in a long lead time of six months between the design of a batch of RMG product and its placement in the store, which is double the length of time required for fast fashion. The fourth reason is the shortage of skilled workers and low motivation among the workers. The shortage of skilled workers, including middle management, is exacerbated by a lack of skills development opportunities and facilities. Out of the four million workers in the industry, 80% are women, most of whom are illiterate, unskilled, and from the rural areas. The majority of the workers receive training only at a basic level on the job in the factories. Most of the factories do not have in-house training facilities. For those that do have the facilities, the existing training is poor in quality due to lack of professional qualified trainers, weak training programs, and lack of follow-up. Compounding the problem of lack of skills are low motivation and limited employee loyalty due to the absence of performance-based incentives. The consequences are lack of collective responsibility and high labor turnover. In addition, there are frequent work stoppages due to issues such as companies not paying their workers on time and suffering from mounting arrears.

As RMG manufacturing will continue to be important to the economy, it should receive high attention. With an increase in wages and other production costs in Bangladesh and with greater competition from other countries with cheap labor, such as Cambodia, Vietnam, Myanmar, and African countries like Ethiopia, there will be pressure on Bangladesh's RMG manufacturers as global brands search for alternative countries with cheap labor. The way forward is to move towards meeting the demand of international buyers sourcing for more fashionable and sophisticated products as well as the increasing demand of mid-market buyers sourcing for standard products. To realize the growth potential, RMG manufacturers need to take continuous measures to upgrade all aspects of their operations and enhance performance on productivity and quality; build long-term partnerships with the major international buyers; improve labor-management relations; meet labor and environmental compliance requirements; and diversify markets beyond the EU and the USA. There is much scope for improvement in all these areas in the local RMG enterprises as they lag far behind the foreign RMG enterprises in Bangladesh. An

example of a local RMG enterprise that has grown successfully into a conglomerate with more than 21,000 employees is Envoy Group.

More strategically, there should be progression from the traditional low-value, high-volume “cut-make-trim” production model that has characterized RMG manufacturing in Bangladesh, where the focus is solely on production to the buyer’s specifications. This low-value-added production segment sits between the high-value-added pre-production segments of research and development (R&D), design, and purchasing, and the post-production segments of distribution, marketing, and services in the buyer-driven globalized apparel value chain. Consequently, Bangladesh captures only a small fraction of the entire value added generated. Capabilities should be built up in the country to move into the pre-production and post-production stages as well. Another progression is shifting from the global value chain of basic low-priced garments, including fast fashion garments, to that of fashionable high-value garments demanded by branded fashion retailers, where the value added at every segment of the value chain is higher. Even then, Bangladesh should build up the capabilities to move beyond the production segment of the value chain. To achieve these two modes of progression, RMG manufacturers need to undertake critical activities such as investing in R&D and developing local designing and pattern-making capabilities; upgrading the skills of the workforce; adopting appropriate technologies to cope with fast-changing trends in the apparel market and fashion industry and customer expectations of higher-quality products; and strengthening both backward and forward linkages.

Beyond the individual RMG enterprise, several broad measures need to be taken. First, the transport and energy infrastructures need to be improved. Second, the supply of skilled labor and opportunities for training and skills upgrading for all levels of the workforce need to be enhanced. Third, the government should facilitate the development of a strong cluster of supporting and related institutions, as well as a robust backward-linkage textile industry, to strengthen the competitive advantage of RMG manufacturing. Fourth, there should be more collaborative research with academic and research institutes on various issues related to RMG manufacturing, such as sustainable technological solutions for energy and water efficiencies; innovation of new fabrics and designs; appropriate technologies; and branding and product diversification. Fifth, the government should continue to improve all aspects of the trade regime to facilitate exports and ensure export competitiveness. Sixth, ‘Made in Bangladesh’ can be made a strong national branding campaign for RMG as well as other products.

Besides RMG manufacturing, the composition of manufacturing production and exports should be diversified, especially towards products with higher value added, to sustain growth and employment creation and reduce economic vulnerability. Light industries such as agroprocessing (including food and beverage, and fish and processed fish), leather and leather goods, jute and jute products, pharmaceuticals, electronics, furniture, and plastic products have the potential to grow and diversify beyond the traditional low segments of the value chains (e.g., diversifying from production and export of jute fiber and yarn to the high-end segments of home furnishing and lifestyle products using jute fiber). These industries face common issues that should be addressed. These include narrow product and market concentration, e.g., production of jute bags for export to India; and lack of R&D and technologies, capabilities in product development that meets market demand, skilled manpower, and marketing and branding expertise. They are also hampered by inadequate support from government policies such as financial incentives, export facilitation, and alignment of research done by institutes with industry needs; uncertainties regarding government policies such as tax regime for next five years; and lack of timely implementation of actions even after approval has been given (e.g., effluent treatment plants for garment production and leather tanning).

The manufacture of intermediate or capital goods, which currently constitute a miniscule 1.1% of exports compared with 98.9% for consumer goods, should also be given more emphasis, especially since these high-technology products generate high value added and have strong multiplier effects on the rest of the economy. These goods include machinery and other capital equipment, transport equipment and accessories (including shipbuilding), and industrial supplies. Latching onto the global value chains of multinational corporations will be an effective way to spur growth in these industries. This requires the identification of segments of the value chains where Bangladesh has a comparative advantage. Priority should be given to improving the business environment; enhancing the productivity and competitiveness of enterprises; upgrading the transport, energy, and communication infrastructures; building the requisite skills; improving the trade regime and facilitating market access; and providing appropriate incentives to stimulate more private investment, especially FDI, in these industries.

Construction Industry

The construction industry has grown significantly since the early 1990s as a result of the accelerating rate of urbanization and surge in demand for various types of infrastructure, such as roads, bridges and factories, and houses. It is now the biggest industry in the sector after manufacturing, with 22.7% share of the sector's value added and 27.4% of employment. Its productivity level is 83% of the sector's average. Besides its direct contributions to value added and employment, the construction industry has significant backward and forward linkages with the rest of the economy.

There are about 4,000 construction firms in the country. According to the Bangladesh Association of Construction Industry, a platform of contractors and engineers, about 100 construction companies have the capacity to execute large projects even in a foreign country. Other than these few companies, the industry is characterized by small firms with labor-intensive construction processes. Mechanization of construction works is still largely at the basic level, such as using machines to crush bricks and pre mixing of cement in the factories. The construction companies often give the responsibility of hiring workers to subcontractors. The nature of employment in the construction industry is largely informal; workers are employed daily without any recruitment letter or contract, and there is no practice of giving wage slips or maintaining record books. There is no proper training through a structured program. Safety measures are not up to standard due to noncompliance with the safety guidelines in the National Building Code, and building owners do not feel compelled to comply as there are no regular government inspections. There is also lack of education and training on safety measures for construction workers. Accidents on construction sites are therefore prevalent. Construction delays are common, and are caused by factors such as lack of experienced construction managers, shortage of funds by owners, lack of proper management, improper planning and scheduling, and lack of skilled workers.

A study by the Queensland University of Technology in 2010 provides an indication of how Bangladesh compares with others in terms of construction labor productivity measured by real value added per worker in PPP-converted international dollars. With a productivity level at 71% of the average for lower-middle-income countries, Bangladesh was ranked 58 out of the 79 countries covered in the study. Compared with the comparator APO20 upper-middle-income countries and lower-middle-income countries included in the study, Bangladesh was in the middle position, behind Malaysia (ranked 50), Indonesia (52), and Thailand (57); and ahead of IR Iran (61), Mongolia (69), Pakistan (73), and the Philippines (75).

Construction can potentially be a strong engine of growth in the industry sector, just like manufacturing. A threat to a thriving construction industry is interruption to the continuous supply

of cheap domestic energy and inexpensive raw materials. To counter this, there should be a continual search for alternative sources of supply. Besides this, the construction industry needs to undergo a transformation from one that is based on low skills and low technology to one that is highly skilled, and capital- and technology-intensive. Only then can it contribute more to the value-added generation of the sector and the economy. The best practices of other countries, particularly the high-income countries where the productivity is much higher, can be adopted, and more investments should go into promoting technology adoption in the industry. The supply of skilled construction workers should also be increased through proper training.

Energy Industry

The energy industry is a subset of the electricity, gas and water supply industry. This is a highly capital-intensive industry, employing only 0.8% of the industry sector's total employment but contributing 4.7% of the value added. Consequently, its productivity level is very high, at 4.8 times the sector's average. However, the small size of the industry limits its impact on the sector and the economy.

The energy industry comprises all the industries involved in the production and sale of energy, including fuel extraction, manufacturing, refining, and distribution. The industry is considered critical, as the current inadequate and unreliable power supply has been identified as a major constraint for private investments and economic growth. There is thus much scope for growing the industry to contribute to the economy.

Bangladesh has two primary fuels, namely, natural gas and coal. However, it has depended more on natural gas for the generation of its power supply. The importance of natural gas is borne out by two statistics: 60% of electricity are generated from natural gas; and natural gas supplies 75% of commercial energy. However, natural gas is in limited supply and the reserve is expected to be depleted completely by 2023 based on the current demand. The silver lining is that the country is likely to have substantial unexplored gas resources. In contrast, Bangladesh is endowed with bituminous coal deposit, which is largely untapped.

The government has already embarked upon an energy-sector development strategy that seeks to substantially increase power and other energy supplies to the economy. This entails substantial investments to maintain the production level of existing gas fields and to explore new fields; improve performance of gas distribution companies to reduce distribution loss; diversify the sources of energy away from excessive reliance on gas to coal, hydro, solar, and other renewable sources; engage in energy trading activities with Bangladesh's neighbors; and make better use of installed capacities. As the investments needed are huge and beyond the government's resources, the government should seek finance from the private sector by attracting FDI and domestic investments into the sector.

Strategic Thrust 6: Transform Traditional Services and Accelerate the Growth of Modern and Exportable Services

The services sector is important to the economy as it is the largest sector in terms of GDP share (54.8%) and is just behind the agriculture sector in terms of employment share (39.0%). The current 54.8% share of GDP is much higher than the 36.7% share in 1970. Available data from 1980 shows that it has always been above the average for the lower-middle-income countries. The 39.0% share of employment is also much higher than the 16.9% share in 1991 and is comparable to that of the

lower-middle-income countries. With the decline in agricultural employment over the years, the services sector has absorbed most of the surplus workers, mainly in unskilled jobs and in the informal sector, in comparison with the industry sector.

Table 16 provides an overview of the industries in the services sector. In terms of share of value added, the largest three industries are wholesale and retail trade; transport, storage & communication; and community, social & personal services. Together, they contribute 32.7% to the sector's value added. The top three industries for share of employment are the same. Together, they employ 74.8% of the sector's workforce.

In terms of productivity level, the services sector's productivity is 1.4 times the economy's average, slightly lower than that of the industry sector. Across the nine industries in the sector, the productivity levels vary widely, ranging from a low of Tk58,791 for accommodation and food services to a high of Tk808,182 for real estate and business services. In general, the traditional services industries are less productive than the modern services industries.

TABLE 16

OVERVIEW OF SERVICES SECTOR

Industry	Value added			Employment			Value added per employee (taka)
	Million taka	% of GDP	% of sector	No. (million)	% of total	% of sector	
Services sector	5,189,805	54.8	100	23.7	39	100	218,979
Wholesale and retail trade	1,274,166	13.4	24.6	8.63	14.2	36.4	147,644
Accommodation and food services	68,198	0.7	1.3	1.16	1.9	4.9	58,791
Transport, storage & communication	1,024,633	10.8	19.7	5.41	8.9	22.8	189,396
Financial and insurance services	314,127	3.3	6.1	0.43	0.7	1.8	730,528
Real estate & business services	589,973	6.2	11.4	0.73	1.2	3.1	808,182
Public administration and defense	336,152	3.5	6.5	0.97	1.6	4.1	346,548
Education	225,465	2.4	4.3	2.19	3.6	9.2	102,952
Health services	168,040	1.8	3.2	0.49	0.8	2.1	342,939
Community, social & personal services	806,529	8.5	15.5	3.71	6.1	15.6	217,393

Source: Bangladesh Bureau of Statistics, 2017 Statistical Yearbook.

Notes: (1) 2016–17 GDP at constant market prices, base year 2005–06.

(2) Value added for services sector is at constant market prices. Value added for the nine industries is at constant producer's prices. Constant market prices = constant producer's prices + import duty (which is 382,522 and not shown in the above table). The figure of 5,189,805 is therefore 382,522 more than the summation of the value added of the nine industries.

There are two other reasons for the importance of the services sector. First, services export, mainly in the form of export of factor services (labor), features prominently in the economy. A distinguishing

characteristic of the economy is the large number of Bangladeshis working overseas and the resulting huge amount of remittances into the country. According to statistics from the Bureau of Manpower, Employment and Training, the number of Bangladeshis working overseas in 2017 totaled 1,008,518. The distribution by categories shows: professionals 0.4%, skilled 43.1%, semi-skilled 15.4%, less skilled 39.8%, and others 1.3%.

Second, services are not only consumed as final products but are also used significantly as inputs in agricultural and industrial production. Using the input-output table of Bangladesh 2006/07, the 2016 Services Policy Review by the United Nations Conference on Trade and Development (UNCTAD) found that 35% of total services produced in the economy were used as inputs in the agriculture sector (9.1%) and the industry sector (25.9 %). Wholesale and retail trade (51.1% in agriculture and 52.0% in industry) and land transport (25.6% in agriculture and 33.1% in industry) dominated the services used. Services are thus crucial for the agriculture and industry sectors, and productivity improvements in services will enhance the performance of these two sectors considerably.

The strategic thrust is therefore to transform traditional services and accelerate the growth of modern and exportable services. Over time, the modern services industries should grow in size and overtake the traditional services industries in terms of contributions to the sector's value added and employment. At the same time, services exports, both factor services and other services, should grow and contribute more to the economy in terms of higher remittances and other forms of factor incomes from abroad.

Traditional Services

The services sector is skewed heavily towards the less productive traditional services industries. The largest of these industries are wholesale and retail trade; transport, storage & communication (with the exception of communication, which has high productivity); and community, social & personal services. The growth of wholesale and retail trade has been facilitated by the ease of entry into the industry because of the flexible employment market and the low capital requirement. These same factors have facilitated the growth of community, social & personal services, which has expanded as a consequence of the growth of the economy and the large remittances from abroad. The growth of the transport, storage & communication industry has been buttressed mainly by land transport, especially after the deregulation of the industry in 1998 which led to large investments by the private sector.

A key reason for the low productivity of these industries is their largely low-value-added, labor-intensive operations, depending on lowly educated and unskilled workers employed on an informal basis. The Labor Force Survey 2016–2017 shows that a large 77% of the workers in the services sector are in informal employment, reaching as high as 92.5% in transport & storage. In terms of educational level, 45.2% of the workers in the sector have at most primary education (22.6% each for primary and none), and 33.3% have at most secondary education. Workers in the traditional services industries fall largely in these two educational categories. Much of the employment growth in the traditional services is due to the absorption of workers from the agriculture sector into low-value-added jobs in the informal sector.

As shown in Table 17, the productivity of traditional services is much lower than that of modern services. On average, modern services are 4.7 times more productive than traditional services. The productivity of the information and communication industry in particular is extremely high.

If modern services were excluded, the productivity of the services sector would fall by 17.3%. The drop would be even greater if there were finer data available to extract some other modern services from the industry classification. The conclusion is that the productivity of the services sector can be boosted tremendously if the current small modern services industries are able to grow in size.

TABLE 17**PRODUCTIVITY OF TRADITIONAL SERVICES COMPARED WITH MODERN SERVICES**

Traditional services		Modern services	
Industry	Value added per employee (taka)	Industry	Value added per employee (taka)
Wholesale and retail trade	147,644	Information and communication	1,321,383
Transport and storage	150,437	Financial and insurance services	730,528
Public administration and defense	346,548	Real estate & business services	808,182
Education	102,952		
Health services	342,939		
Community, social & personal services	217,393		
Total	181,031		852,201
Services total	218,979		

Upgrading traditional services is critical so that they do not continue to drag down the productivity of the services sector and the economy. Highly productive traditional services will also provide a boost to the agriculture and industry sectors which they serve.

A multi-pronged approach is required. At the sector level, the strategies taken should include regulating the growth of businesses and employment in the various industries. The goal should be to formalize the businesses and employment of workers, so that they can come under the ambit of government assistance. Instead of allowing the mushrooming of all kinds of businesses, the government could undertake detailed planning in the districts to determine the key businesses that will receive the most support for growth. An outcome will be the consolidation of businesses.

At the industry level, the government should work out detailed plans to upgrade the productivity of each of the traditional services industries. A cluster approach, addressing the geographic concentration of interconnected businesses, suppliers, service providers, government agencies, and other associated institutions, should be taken. The aims should be to modernize their modes of operation and shift the industry from operating in the low end of the production value chain to the high end with high value added. Both generic-services skills training and job-specific functional skills training are necessary to ensure that the workers are competent.

The ultimate aim should be to reduce the size of traditional services. More resources can then be released for the growth of high-productivity modern services industries.

Export of Services

As shown in Table 18, services export is dominated by remittances from the export of factor services (labor), with a small portion coming from other services income. Overseas employment

has played an important role in the economy. It provides jobs for a burgeoning labor force and the remittances sent home build up foreign exchange reserves, help to balance the external account, and boost household incomes. The consequent public and private expenditures from the remittances then create multiplier effects in terms of generating value added in the enterprises and sectors catering to the induced expenditures. In 2017–18, remittances totaled USD14.98 billion, almost 1.7 times that in 2009–10. This constituted 77.3% of the total services export, and was the largest source of foreign exchange earnings (26.8%) after RMG (54.7%).

TABLE 18
SERVICES EXPORT

No.	Services export category	2009–10		2017–18	
		USD million	%	USD million	%
A.	Remittance from factor services (labor)	9,007.50	80.1	14,980.00	77.3
B.	Other services income	2,233.60	19.9	4,392.10	22.7
1	Manufacturing services on physical inputs owned by others	0	0	77.6	0.4
2	Maintenance and repair service	0	0	5.6	0
3	Transportation	150.6	1.3	558.2	2.9
4	Travel	79.1	0.7	341.9	1.8
5	Construction services	5.6	0	134.7	0.7
6	Insurance services	6.7	0	1.6	0
7	Financial services (other than insurance)	45	0.4	143.7	0.7
8	Charges for the use of intellectual property	0.3	0	0.3	0
9	Telecommunications, computer and information services	246.5	2.2	524.3	2.7
10	Other business services	495.1	4.4	664.6	3.4
11	Personal, cultural & recreational	1.5	0	14.9	0
12	Government goods and services, n.i.e.	1,203.20	10.7	1,924.70	9.9
C.	Total (A+B)	11,241.10	100	19,372.10	100

In contrast, other services export totaled a much smaller USD4.39 billion, though this was nearly double the amount in 2009–10. This constituted 22.7% of the total services export; or 7.8% of foreign exchange earnings, with the remaining 10.7% coming from other goods export. The largest source of other services export came from government goods and services. Besides this, the four largest services are other business services, transportation, telecommunications and ICT, and travel.

Export of factor services through overseas employment will continue to be important to the economy in view of its significant contribution to foreign exchange earnings and the strong multiplier effect of remittances. Given the importance of overseas employment, improving the education and training of workers who are subsequently employed in higher-paying jobs overseas could substantially increase the level of remittances to Bangladesh.

However, beyond this, there should be greater diversification to other services exports. Adequate investments should be made, especially in infrastructures; and any trade restriction hindering the growth of these exports should be removed. Three particular services are other business services, tourism, and ICT.

Besides government goods and services, other business services is the largest source of income. This covers receipts for services such as research and development; legal, accounting and management consulting services; advertising and market research; waste treatment, agricultural and mining services; and technical, trade-related and other business services. Between 2009–10 and 2017–18, the receipts from these services increased by just 34%. There is thus much scope for further growth. An important prerequisite for this is the upgrading of education and skills, especially for professional services such as accountancy, architecture, and engineering.

Tourism is a subset of the travel category of exports, which covers receipts for tourism and other travel for such purposes as business and personal. Between 2009–10 and 2017–18, the receipts from travel increased by a large 4.3 times. However, the tourism industry is still largely underdeveloped. There is high potential for developing tourism as a major foreign exchange earner since the country is well-endowed with many natural, cultural, and historical attractions.

ICT is the composite service from the telecommunications, computers, and information services category of exports. Between 2009–10 and 2017–18, the receipts from ICT exports increased 2.1 times. Nevertheless, against the large global market for ICT services, the export from Bangladesh is marginal. There is therefore much scope for growing ICT export further.

ICT Industry: Archetype of Modern Services

As a country develops, the modern services industries with high productivity typically grow in importance. These industries are those with high skills and are technology- and knowledge-intensive. Most of them are also relatively capital-intensive. The archetypes are ICT and financial services. Others include the modern parts of transport such as aviation, hospitality services, and the highly skilled business and professional services. In contrast to the low-productivity traditional services which are domestically oriented and operated by informal workers, the high-productivity industries are internationally oriented and employ highly skilled workers at all levels in the formal sector. These modern services industries are small in Bangladesh.

Among the modern services, the ICT industry in Bangladesh has the greatest potential for growth but is still nascent in its development. ICT has been given attention only recently through the Digital Bangladesh initiative in 2010 developed in the context of Vision 2021. Since then, several policies have been formulated, including ICT Policy 2015 (update of ICT Policy 2009), to develop the industry.

Besides ICT manufacturing, the ICT industry comprises ICT services (telecommunication activities; computer programming and consulting; data processing, hosting and web portals; and repair of computers and communication equipment). In addition to their direct contribution to GDP, ICT services impact the economy via IT-enabled services, i.e., services that have been transformed by ICT, enabling them to be undertaken at any distance from the core business and final customer. These services include those often associated with offshoring, including accounting, financial analysis, and call center services. There are also many other ways in which traditional services are now being offered via ICT domestically and internationally, including entertainment, distance learning, online banking, and mobile financial services. All these are still in their infancy in Bangladesh.

Telecommunication services, especially mobile phone subscriptions, have grown and internet connectivity has improved through submarine cables. The launch of the country's first communication

satellite, Bangabandhu-1, on 12 May 2018, has created the potential for increasing connectivity further. However, broadband connections are still far from satisfactory. With regard to IT-enabled services, several infrastructural initiatives have been launched. These include the National Payments Switch to facilitate interbank electronic transactions, hi-tech parks and software technology parks to meet ICT infrastructural requirements, and university-based incubators to bridge the gap between ICT industries and academia in terms of research and innovation. The specific area of IT-enabled services that has made the most progress is e-governance, i.e., bringing government services closer to the people through ICT. Another growing area is the provision of business process outsourcing (BPO) services in low- to mid-skill activities such as data processing, call centers, mail management, and software programming. The distinct advantages that Bangladesh enjoys are low operating costs in terms of labor and real estate, and availability of English-speaking workers.

The Services Policy Review by UNCTAD in 2016 and another study by the Asia Foundation in 2017 found several constraints to the growth of the ICT industry. The first constraint is shortage of well-educated and skilled labor. Although Bangladesh produces about 10,000–15,000 information technology (IT) graduates yearly, their average quality is unsatisfactory. This is due to outdated curricula that do not meet the needs of the industry and inadequate training facilities and trainers. The second constraint is inadequate infrastructure, viz., shortage of power supply and poor broadband connection. Besides power interruptions, the inadequate generation of power results in frequent load-shedding and voltage changes that affect the productivity of software companies. Broadband quality is one of the worst among South Asian countries and other ICT-exporting countries. The third constraint is lack of access to finance as banks are reluctant to provide loan facilities because of the high risks associated with the sector. The fourth constraint is lack of trust in e-commerce, which is one of the reasons hindering its expansion. A reason for this lack of trust relates to weak regulations and laws regarding e-commerce. The fifth constraint is inadequate government support for small ICT enterprises or entrepreneurs who are typically those who add vibrancy to the sector. Issues that they face include lack of finance and inability to gain from government incentives that benefit only the large enterprises. Sixth, there is lack of marketing to create overseas awareness about Bangladesh as a potential software services provider.

The size of the ICT industry can be expanded by addressing all the constraints that it faces in a holistic manner. To ensure a supply of skilled labor that meets the needs of the industry, the scale and scope of ICT training programs should be expanded. The curricula in universities and other institutions should be updated in line with the needs of the market. To remove the infrastructure constraint, the government should increase investment to ensure uninterrupted and quality electricity and low-cost broadband connectivity for the whole country. Measures should also be taken to address the issues of lack of access to finance, lack of trust in e-commerce and inadequate government support for small ICT operations. In addition, coordinated efforts can be taken to market Bangladesh as a potential software services provider.

Concurrently, measures should be taken to boost the growth of IT-enabled services, both locally and overseas. These include providing universal access to IT services, promoting widespread digital literacy, instituting a clear legal framework for intellectual property protection, providing assurance of a secure platform for online transactions and payments, investing in cyber-security measures, encouraging adoption of IT-enabled services in all sectors to boost productivity, developing industry-specific applications, and spurring the further growth of BPO services as well as building up capabilities for skills-intensive knowledge process outsourcing (KPO) activities such as design, R&D, and teleconsultations.

To drive the development of the ICT industry, private sector investments into the ICT infrastructure and IT-enabled services are critical. There should be adequate incentives, including low taxes, to attract such investments, both domestic and foreign. These will complement the large public investments that are required for ICT infrastructures and ICT-related R&D and skills development.

Strategic Thrust 7: Drive Growth of New High-value-added Industries in Top End of Product Space, and Expand and Strengthen Capabilities of Existing Core Industries

As a country develops, typically the composition of the three major sectors and the size of the informal sector change in a direction that leads to higher productivity. This is due to changes in what the economy produces and exports as a result of diversifying and upgrading its product mix.

In terms of sector composition, the agriculture sector dominates in a low-income country. As the country develops and progresses into the middle-income category, the share of the more productive industry sector, particularly manufacturing, increases rapidly. Subsequently, as the country becomes a high-income economy, the share of high-productivity services dominates. A similar trend is observed for the share of total employment by sector. At the same time, in the course of a country's development, the size of the low-productivity informal economy, present to a large extent in all the three sectors in Bangladesh, can be expected to shrink as economic activities and labor are transferred to the formal economy.

Besides changes at the sector level, structural transformation takes place in terms of the types of industries within the sector. Typically, the high-value-added, knowledge-intensive and capital-intensive modern industries replace the low-value-added, labor-intensive traditional industries during the course of development.

Economic development is thus about transformation of the productive structure of the economy towards high-productivity activities and accumulation of the capabilities necessary to undertake this process. The implication is that a slow rate of transformation over time will be a drag on the country's productivity.

Sectoral Shares of GDP and Employment

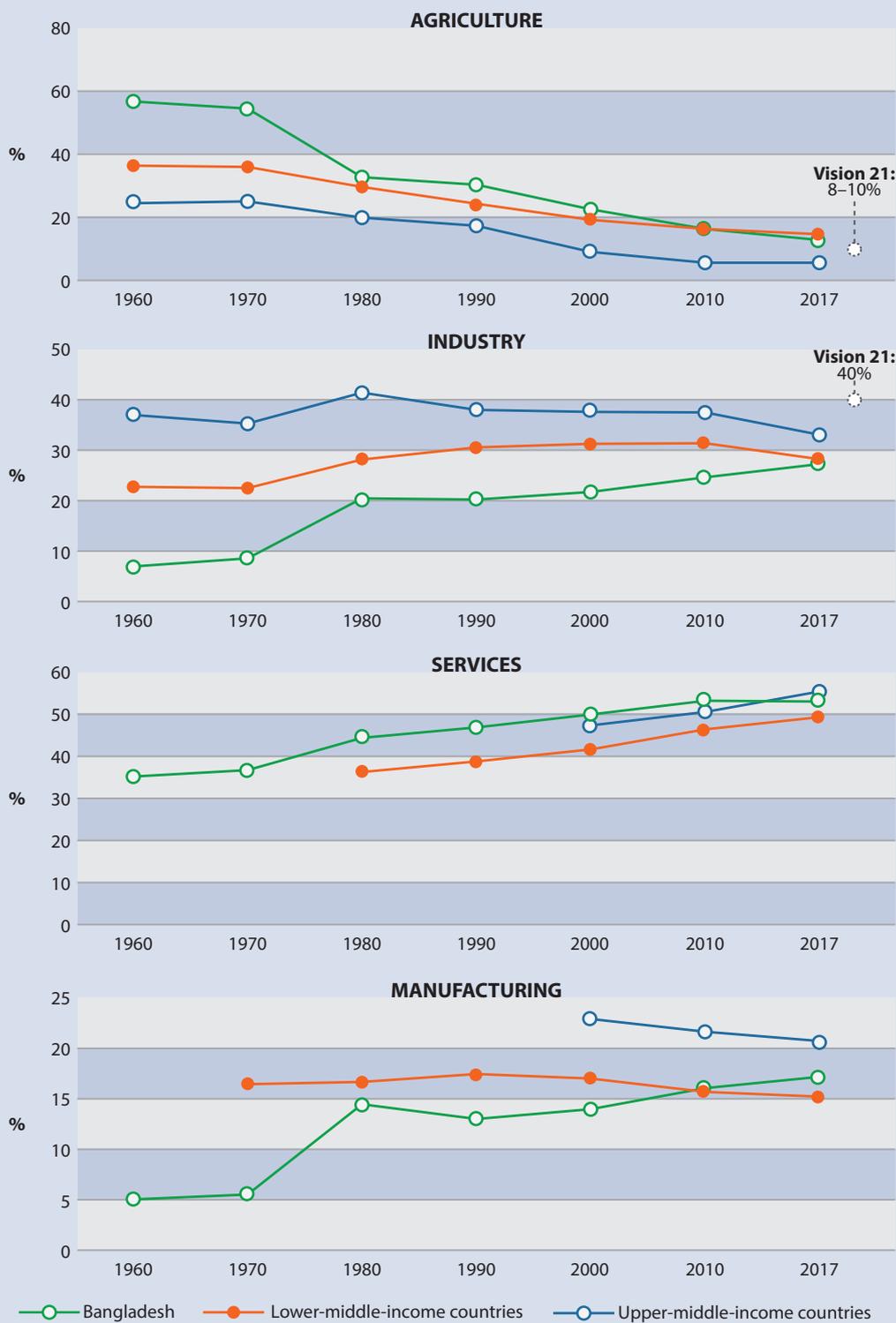
Figure 12 shows how the composition of the three major sectors in Bangladesh has changed in the last 50 years in terms of percentage share of GDP. The economy has transformed in a manner that is typical of a lower-middle-income country, although the start was slow. Compared with upper-middle-income countries, however, the share of agriculture is still much higher, and the shares of industry and manufacturing are lower.

In 1960, the share of the agriculture sector in GDP was much higher in Bangladesh than that in the lower-middle-income countries. It then fell drastically and started converging with that in the lower-middle-income countries after 2000. In 2017, it went lower than that in lower-middle-income countries. However, it is still much higher compared with the upper-middle-income countries.

For the industry sector, the GDP share in Bangladesh was much lower than that in the lower-middle-income countries from 1960 to 1970. Since then, it has risen and narrowed the gap. The reason is that the share in the lower-middle-income countries is already declining after decades of

FIGURE 12

SECTORAL SHARES OF GDP IN BANGLADESH COMPARED WITH LOWER-MIDDLE-INCOME COUNTRIES AND UPPER-MIDDLE-INCOME COUNTRIES



Source: World Bank, World Development Indicators.

Note: % share of GDP is based on GDP at current purchase price. Latest figures are for 2016.

increase whereas the share in Bangladesh is still increasing after a slow start. Nevertheless, it is still lower than that in the upper-middle-income countries. Before 1980, the share of the manufacturing industry in Bangladesh was much lower than that in the lower-middle-income countries. Since then, it has risen and narrowed the gap. Like the industry sector, this is because the share in the lower-middle-income countries is already declining after decades of increase whereas the share of Bangladesh is still increasing after a slow start. However, it is still lower than that in the upper-middle-income countries.

For the services sector, the share in Bangladesh has risen over the years, and has always been higher than that in the lower-middle-income countries. Based on limited data from 2000, the share is comparable to that in the upper-middle-income countries.

Figure 13 shows that the employment composition of the three major sectors has also changed. The economy has transformed in a manner that is typical of the lower-middle-income countries. Compared to the upper-middle-income countries, however, the share of agriculture is still much higher, while the shares of industry and services are lower.

For agriculture, the share in Bangladesh was much higher than that in the lower-middle-income countries from 1991 to 2000. It then fell drastically until it converged with the share in the lower-middle-income countries from 2000. However, it is still much higher compared with the upper-middle-income countries.

For the industry sector, the share in Bangladesh fell from 1991 to 2000, but then rose sharply until there was convergence with the share in the lower-middle-income countries in 2017. Nevertheless, it is still lower than that in the upper-middle-income countries.

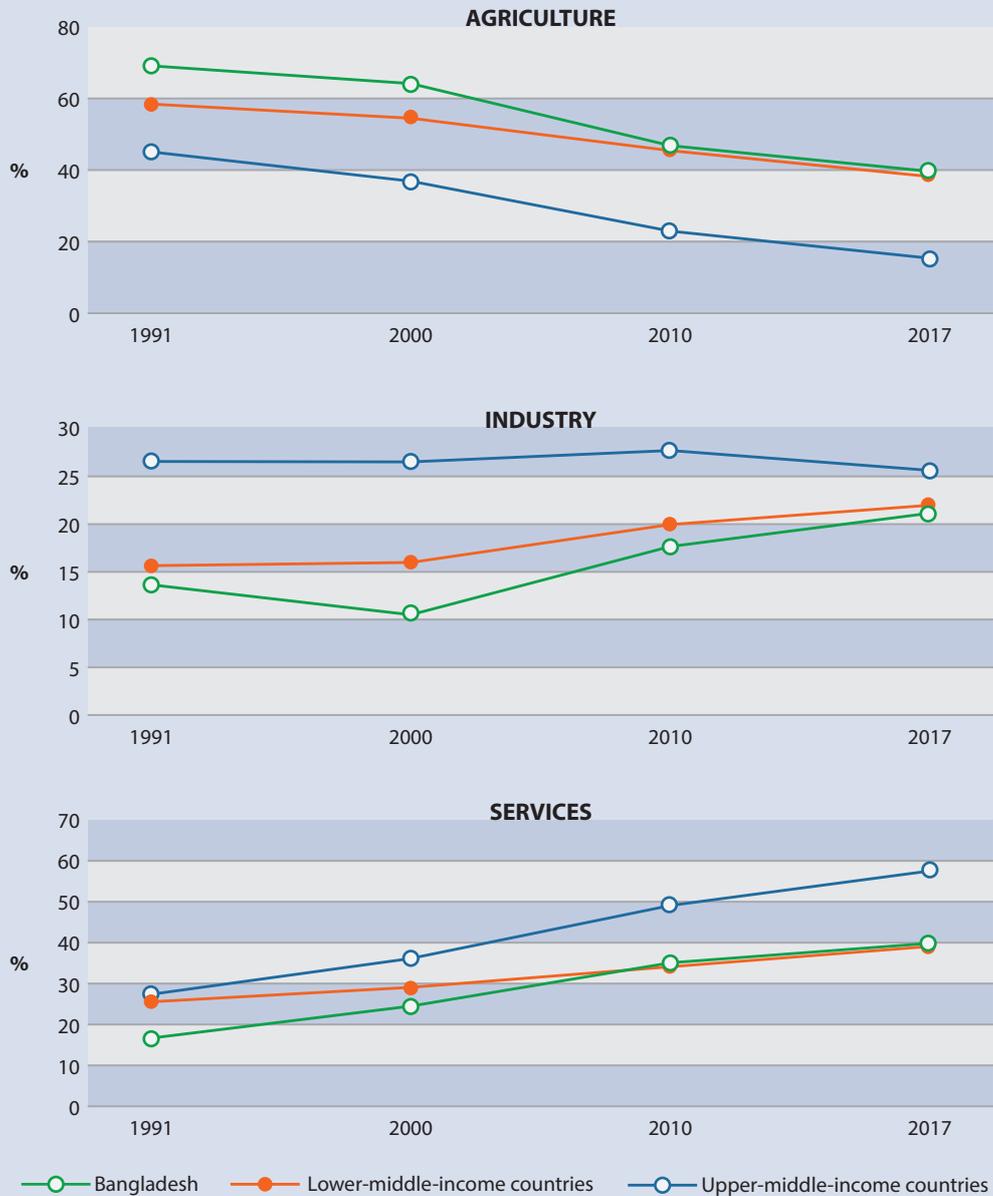
For the services sector, the share in Bangladesh was lower than that in the lower-middle-income countries from 1991 to 2000. Since then, it has risen and converged with the share in the lower-middle-income countries from 2010. However, the share is still much lower than that in the upper-middle-income countries.

Economic Complexity

The degree of economic complexity is another measure of the extent of economic transformation that has taken place in the country. This refers to the knowledge intensity of the economy measured in terms of the knowledge intensity of the products it exports. A country develops by transforming the productive structure and building up the capabilities necessary to undertake this process. A key challenge that most countries face is in upgrading and diversifying their export baskets. Many countries like Bangladesh have been able to exploit their low-wage advantage to attract investments into low-skill, labor-intensive industries. However, the next step of deepening industrial capabilities, upgrading the skills of the labor force, building an innovation and research base, developing capacity in the domestic economy, and moving into high-value-added and more sophisticated products, is often a big hurdle. Countries that are able to clear this hurdle are those with high economic complexity, which has been proven to be a key driver of productivity and economic growth.

The Observatory of Economic Complexity in Massachusetts Institute of Technology (MIT) has done detailed studies on the economic complexity of countries and ranked them based on an Economic Complexity Index. The least complex countries at the bottom of the ranking are those that export very few different types of products, i.e., they have export baskets that are not diversified.

FIGURE 13
SECTORAL SHARES OF EMPLOYMENT IN BANGLADESH COMPARED WITH LOWER- AND UPPER-MIDDLE-INCOME COUNTRIES



Source: World Bank, World Development Indicators.
Note: % share of GDP is based on GDP at current purchase price. Latest figures are for 2016.

Also, the products that they export are produced in many other countries, i.e., the export baskets load heavily on just a few ubiquitous products. In the latest ranking for 2017, Bangladesh was ranked 123 out of 129 countries. It was noted that the top exports of Bangladesh were non-knit men’s suits (USD6.2 billion), knit T-shirts (USD5.89 billion), knit sweaters (USD4.65 billion), non-knit women’s suits (USD4.12 billion), and non-knit men’s shirts (USD2.26 billion). This reflects not just lack of economic complexity but also a narrow economic base and lack of diversification of the economy. In comparison, all the comparator APO20 lower- and upper-middle-

income countries (Fiji not included in the study) fared better than Bangladesh: Malaysia (ranked 25), Thailand (32), the Philippines (43), India (45), IR Iran (66), Indonesia (71), Vietnam (83), Mongolia (93), Pakistan (98), Sri Lanka (101), Lao PDR (115), and Cambodia (119).

In a similar study in 2014, ADB found that Bangladesh's key export products were located at the lowest end of the product space. This is the space where a country has more than 15% of "bad" products, i.e., products with low sophistication (low level of embedded technology) and low connectivity to other products (ease of moving on to other potential products to manufacture and export because of similar capabilities required). An overwhelming 82.7% of the products fell in the low sophistication category, including textile and garments and agro-based products. The remaining 17.3% were in the middle category, and none was located in the high sophistication category.

Informal Economy

The informal economy is a concern as it soaks up valuable resources in unproductive, low-value-added economic activities, as well as diminishes the government's capacity for oversight and tax revenue. Informal employment is also associated with poor working conditions and low earnings and is positively correlated with poverty. As emphasized by the ILO, the informal economy poses a challenge to policymakers who aim to improve the working conditions and legal and social protection of persons employed; increase the productivity of economic activities; develop skills; organize producers and workers; and implement appropriate regulatory frameworks, government reforms, and urban development programs. Thus, in June 2015, the ILO's International Labor Conference adopted the Transition from the Informal to the Formal Economy Recommendation (No. 204), the first international labor standard that focuses on the informal economy in its entirety. That same year, in September, the UN adopted the 2030 Agenda for Sustainable Development, which included transition to formality in the targets for Sustainable Development Goal 8.

Although the informal economy in many lower-middle-income countries is big, it is extremely large in Bangladesh. According to ILO data, the share of informal employment in total employment is an overwhelming 89%, i.e., about 54 million people. This is distributed across three categories: the informal sector (48.9%); the formal sector, i.e., employment without formal contracts (13.5%); and households (26.7%). The 89% figure puts Bangladesh ahead of the South Asian countries of India (88.2%), Pakistan (77.6%), and Sri Lanka (60.6%). A large 93.4% of employment in the rural areas is informal, compared with 77.9% in the urban areas. By sector, a dominant 97.7% of employment in agriculture is informal, compared with 90.5% in industry and 76.7% in services. By gender, 93.5% of women are in informal employment, compared with 87.2% of men.

A 2018 study by the IMF shows that Bangladesh's informal economy as a percentage of GDP in 2015 was 27.6%, placing the country at 84 out of 159 countries (1 being the highest %). From 1991 to 2004, the proportion was above 35%. Thereafter, it dropped to 30–35% from 2005 to 2010; and subsequently it went below 30% from 2011. Nevertheless, the figure of 27.6% is still fairly high compared with some APO20 lower-middle-income countries: 21.8% in Indonesia, 17.9% in India, and 14.8% in Vietnam.

The consequence of the large informal economy is a drag on the country's productivity. A 2010 study by ADB and BBS on the informal sector shows stark differences between the productivity of the formal sector and the informal sector. Overall, the labor productivity of the formal sector was estimated to be six times higher than that of the informal sector. In the industry sector, the difference is an astounding 33 times; in services, it is seven times higher; and in agriculture, 25% higher.

Structural transformation

The strategic thrust is therefore to drive the growth of new high-value-added industries in the top end of the product space and expand and strengthen the capabilities of the existing core industries.

A concerted effort should be made to drive the growth of new high-value-added industries and to channel and reallocate capital and labor resources accordingly. These industries should produce and export goods and services that are of high-value added, sophisticated, and located in the high end of the product space, i.e., a diversified basket of products that are not produced ubiquitously in other countries. There is much potential since the economic transformation process in Bangladesh has started late compared with a typical lower-middle-income country. In the agriculture sector, the potential new industries can be found in non-rice crops, fisheries, and livestock, with special attention on agroprocessing and agribusiness. In the industry sector, there is much scope for growing non-RMG light industries and selected capital goods industries, construction, and energy. In the services sector, there is high potential for growing new industries such as ICT, tourism and professional services.

At the same time, the core industries of rice in the agriculture sector, RMG in the industry sector, and factor (labor) services exports will continue to be important for the economy. Hence, they should be expanded. The aim, however, should be to strengthen their capabilities and shift them to the higher end of the production value chain with high value added. Thus, rice-based agroprocessing, high-end garments, and higher-level skills and occupations for factor services should be given more attention.

The transformation process should also transit informal employment into formal employment. Workers should be shifted from the informal economy to the more highly productive sectors, which can then expand and generate more value added. This means that the pace of transformation must be fast enough so that the growth of formal sector jobs is high enough to absorb new workers into the formal sector labor force. Those in informal employment should be assisted to acquire strong basic literacy and numeracy skills so that they can be gainfully and formally employed in the formal sector. Concurrent actions should be taken in the rural and urban areas and in the three sectors, all of which have large numbers in informal employment.

Structural transformation requires large investments in physical and human capital to support the transition, and then to produce sophisticated products for the export market. Continuous skilling and reskilling of the workforce, especially to meet the needs of the new industries that emerge in the course of restructuring, is critical. Both the business enablers and macro enablers must support and facilitate the entire transformation process.

Strategic Thrust 8: Plug Gaps in the Skills Development System and Step Up Skilling and Reskilling of the Workforce

The quality of the workforce is critical to the growth of enterprises, development of the economic sectors, and restructuring of the economy. It is thus important in meeting not just the current needs of the industry but also its future needs. The two major determinants of the quality of the workforce are educational level and skills.

The overall educational level of the workforce is low. According to the 2016–17 Labor Force Survey, 52.9% of the workforce had at most primary education (22.3% primary and 30.6% none);

42.5% had secondary (35.0%) or higher secondary (7.5%) education; 4.2% had tertiary education; and 0.4% others. The low educational profile of the workforce poses significant problems for meeting current job requirements, upgrading skills, and providing the necessary manpower for modern, knowledge-intensive industries.

Various aspects related to workforce skills are also lacking. This is borne out by assessments from the GCR and GII. GCR 2018 has rated Bangladesh unfavorably, both in terms of score (1–7) and ranking (out of 140), for ease of finding skilled employees (score 3.7, rank 105); skillset of graduates (score 3.4, rank 121); extent of staff training (score 3.3, rank 126); quality of vocational training (score 3.4, rank 122); critical thinking in teaching (score 2.9, rank 107); and digital skills among population (score 3.3, rank 120). In GII 2018, Bangladesh was ranked 116 out of 126 countries for knowledge workers with only 8.7% of workers in knowledge-intensive employment.

Several studies, including those by the World Bank, have found certain aspects of workforce skills lacking. The first aspect concerns foundational cognitive skills, such as basic literacy and numeracy, and basic science knowledge that are typically acquired in basic education, which are not strongly grounded. This poses considerable challenges for effective skills acquisition in higher cognitive and technical skills. The second aspect concerns higher-order cognitive skills such as analytical skill, critical thinking, problem solving, effective communication, and leadership that are typically acquired in secondary and tertiary education; and non-cognitive or soft skills such as socioemotional skills, discipline, teamwork, and responsibility, which are typically acquired at any point through schooling, life experiences, and interactions with others. These skills are highly demanded by employers, but largely missing among employees. The third aspect concerns practical technical skills and knowledge. These are generally lacking in new employees because they have been trained more on theoretical knowledge rather than practical skills, and there is often a mismatch between what is taught and what is needed in the industry. All these have resulted in skills gaps and skills shortages at various levels, including a shortage of competent supervisory and mid-level management personnel. The overall skills shortage is a major constraint to growing and expanding high-value-added sectors and exports.

The quality of both general education and technical and vocational education and training (TVET) is vital for technical skills development, but is lacking. Primary education comes under the jurisdiction of the Ministry of Primary and Mass Education. However, non-registered private schools and some madrassa schools do not come under the purview of the ministry. Secondary education is overseen by the Ministry of Education. However, about 95% of secondary schools, accounting for 96% of student enrolment, are non-government schools, and are not supervised by the ministry. Most of them only receive financing from the Ministry of Education under a public-private partnership model. Tertiary education is also overseen by the Ministry of Education, although private universities are not under its ambit. For all levels of education, in the absence of a ministry's control, the quality and uniformity of the education are questionable, particularly across regions and especially in the poorer ones. Due to the poor quality of education in the primary and secondary schools, the foundational skills of literacy and numeracy are often inadequate, even among those entering post-secondary education.

TVET is undertaken by public agencies, private organizations, non-government organizations (NGOs) and industry-based institutions that provide a range of formal and non-formal training programs to different target groups using different approaches of delivery and assessment. Private providers, i.e., non-public agencies, account for about 95% of all TVET institutions and about

three quarters of all enrolments. The Bangladesh Technical Education Board (BTEB), under the Ministry of Education, was set up in 1969 as the apex body responsible for quality assurance of TVET through accreditation of training providers, curriculum development, and certification. However, it is not the overall manager of TVET provision, since formal TVET is regulated and administered by the relevant ministries, directorates, and other public bodies. The certificate and diploma courses offered under the formal TVET system, apart from the basic courses, are of at least two years in duration and are affiliated with BTEB. Although BTEB has the authority to develop formal TVET curricula for its affiliated institutions, its inadequate staff strength makes it difficult to regularly update or revise curricula to cope with changing market demands and technological changes. For the same reason, BTEB lacks the capacity and resources to regulate private accredited formal TVET programs and carry out regular inspections, resulting in poor service delivery. Non-formal TVET comprises certificate courses with shorter duration ranging from one month to 12 months. The courses offered are not affiliated with, and not accredited by, BTEB.

In an attempt to provide nationally recognized standards for the training currently provided by the many thousands of TVET providers that are not well regulated, BTEB has developed the National Technical and Vocational Qualifications Framework (NTVQF). Besides setting standards, the framework provides different pathways to acquire qualifications and assures employers of the quality of workers. There are eight levels of qualification in the framework. The first two levels are for prevocational education. These two levels cater to the underprivileged and low-education sections of the community, and lead to the award of National Pre-Vocation Certificate 1 & 2 (prevocational trainee). The next five levels cover the vocational education proper, starting from National Skill Certificate 1 (basic skilled worker) and going up to National Skill Certificate 5 (highly skilled worker/supervisor). Level 6 is for technical education, leading to the award of diploma in engineering or equivalent (middle-level manager, assistant engineer, etc.). However, NTVQF has not been widely implemented because of BTEB's lack of capacity.

In 2011, the Ministry of Education published the National Skills Development Policy 2011 to provide a national policy for TVET and skills development. This was a major outcome of the TVET Reform Project, which was a USD20 million project over five years funded by the Government of Bangladesh, the European Commission, and the ILO, with the Ministry of Education as the line ministry responsible for the project. In the same year, the National Skills Development Council (NSDC) was formed as the apex authority on skills development in Bangladesh. Headed by the Prime Minister, with representatives from the government, private sector, workers, and community organizations, NSDC had the primary responsibility of setting directions for skills development in the country.

Despite the various initiatives taken by the government, several deficiencies in the skills development system remain. These include lack of coordination between institutions, resulting in both duplications and gaps in skills training; poor understanding of current and future labor needs in industry; weak linkages between institutions and the labor market, leading to mismatch between curricula and industry needs; overemphasis on theory in teaching and testing rather than on practical instruction; insufficient capacity in the institutions, including poorly qualified teachers, outdated training materials and outdated facilities and equipment for practical training; lack of flexibility for curriculum revision to meet industry demands due to the centralized control by the respective central agencies; lack of regulation of quality of institutions and curricula; and limited planning of skills development infrastructure, particularly at the district level and below. Although

industry skills councils and centers of excellence have been set up in recent years to improve the linkage between training providers and the industry, these are still weak in their institutional capacity and lack the coherent mechanism for sustainability, including maintaining commitment and securing contributions from industry stakeholders. Compounding all these problems is the poor quality of the graduates. The reason is that TVET attracts the lower-quality students since it is considered to be a last resort for those who fail to qualify for higher education.

The strategic thrust is therefore to plug gaps in the skills development system and step up the skilling and reskilling of the workforce. The capacity of the education and training institutions needs to be raised substantially to deliver technical and vocational education and skills training effectively. This covers several areas. First, all quality aspects of the training and education system need to be improved. These include the quality of the institutions, curriculum, teachers, training facilities, and assessments. Second, the education and training institutions should be highly responsive to the skills needs of the industry at all levels, both for the present and the future, so that they are fully factored into the curricula. A comprehensive labor market information system, comprising information on the skills needs of the key industries and employment opportunities, should be developed. This will facilitate planning for skills development and inform training institutions and trainees about employment prospects in key occupations. Third, the various institutions should be held accountable for the labor market relevance of training and employability of their graduates. They should thus institutionalize a mechanism to engage the private sector constantly, monitor the labor market outcomes of their recent graduates and receive feedback from employers about skills gap of graduates. This is critical for adjusting the curricula to meet the changing skills needs of industries. Fourth, the quality assurance system, covering all aspects of the skills development system, needs to be beefed up.

Besides functional or technical skills addressed by the education and TVET institutions, the development of higher-order cognitive and non-cognitive skills, which has hitherto been neglected, should be given attention. As various studies have affirmed the importance of such skills to employers, the specific list of the skills that are transferable across industries and that serve as a foundation to acquire higher functional skills should be identified. These skills are particularly important because the possibility of industry diversification and production of high-value-added goods and services hinges on whether workers have the skills for new, higher-value-added jobs. A program to impart these lifelong generic skills comprehensively to the pre-workforce (post-secondary students) and the workforce should thus be developed. A specific skillset that incorporates both higher-order cognitive skills and non-cognitive skills is that for mid-level managers which is in high demand but scarce. Executive training programs should be designed to train these managers. For those who do not yet have strong basic foundational skills (literacy and numeracy), a bridging program can be introduced before they progress to the courses on the higher-order skills.

Underlying the foundational cognitive skills and higher-order cognitive and non-cognitive skills is the prevailing culture. In the context of productivity, a productivity culture should be promoted. Feedback from employer groups and enterprises reveals certain shortcomings, including lack of teamwork and sense of collective responsibility. Attributes of the desired productivity culture for Bangladesh, e.g., good work attitudes, responsibility, creativity and innovation, and lifelong learning, should be developed in consultation with the key stakeholders. All these will have a bearing on work attitudes, behaviors, and attitude towards continuous learning and skills upgrading. The desired culture should be promoted widely through campaigns, training and education,

involvement in work excellence teams such as quality circles, and reward and recognition systems such as linking of wages to productivity, including manifestation of the desired culture. To help inculcate the productivity mindset, a generic productivity program covering the concept, tools, applications, and benefits of productivity, as well as attributes of a highly productive workforce, should be developed to educate all segments of the workforce. This can be customized to the various sectors and levels of the workforce.

The training and skills upgrading programs should reach out widely to all, including those in rural areas and the informal sector. A public-private partnership model could be taken to ensure maximum reach. For example, the government can partner the key business associations to conduct training. Besides traditional classroom training, e-learning can be used more widely to overcome the constraint of distance and physical remoteness. With increasing ICT connectivity, growth of mobile devices and use of the internet, e-learning becomes a viable option to spur learning anywhere and anytime. In-house training provided by enterprises should also be promoted as it makes training accessible to workers. Currently, the scope and opportunities for training of workers and managers, even in the large enterprises, are limited due to reasons such as financial constraints, training not seen as a strategic tool, and lack of training facilities. Adequate incentive schemes should be devised to encourage enterprises in all sectors to continually skill and reskill their workers. Workers should also be incentivized to engage in lifelong learning.

Strategic Thrust 9: Intensify Technology Development and Diffuse its Applications Widely in Every Sector

R&D, adoption of appropriate technology, and effective use of technology are critical for improved productivity and competitiveness. Introducing new products in the world market, making better-quality products, and breaking the innovation frontier require the use of modern and up-to-date technology.

To date, not much attention has been given to technology development and its applications in the industry. This can be traced to the fact that science and technology have not been emphasized in the education system. Furthermore, the hitherto labor-intensive growth strategy pursued has not had to depend much on technology and innovation. Consequently, Bangladesh has performed poorly on global assessments of countries based on their extent of R&D, technology, and innovation. In GII 2018, it was ranked 116 out of 126 countries, the lowest in South Asia.

R&D in the country and the associated technology diffusion are in their infancy; and there is a lack of high-quality research institutions, researchers, and research. In GCR 2018, Bangladesh was ranked 72 out of 140 countries, with an R&D expenditure/GDP percentage of 0.4%. This was much lower than the 1.8% average for upper-middle-income countries (no comparable figure is available for lower-middle-income countries). In terms of patent applications/million population, Bangladesh was ranked 106 out of the 140 countries. In the Scimago Institutions Rankings 2018, which assessed academic and research institutions worldwide based on research performance, innovation outputs, and societal impact, Bangladesh had only 13 ranked institutions. In comparison, there were 271 such institutions in India, 126 in IR Iran, 35 in Pakistan, and 19 in Indonesia.

What is important for productivity is that the R&D undertaken should be applied in nature so that the resulting applications are widely used by the industry. However, this is lacking in Bangladesh. In GII 2018, Bangladesh was ranked a distant 115 out of 126 countries for university-industry

research collaboration, which means that the output from R&D may not benefit the industry widely. This is borne out by the country's poor ranking of 113 out of the 126 countries for knowledge diffusion. There are hardly cases of academic publications that have been translated into commercially viable products to increase revenue and profitability of private firms. It appears that even the government's own development projects do not source significant intellectual outputs from institutions like the Bangladesh Council of Scientific & Industrial Research. Often such research establishments express dissatisfaction with the lack of interest of entrepreneurs to commercialize technologies developed by them. However, from the point of view of the enterprises, many of the technologies or prototypes of products developed in the laboratories cannot be scaled up for commercialization.

A specific aspect of technology which is becoming increasingly important worldwide is ICT. Bangladesh is a newcomer in this area, which has been given attention only in recent years. Data from the International Telecommunication Union (ITU) show that Bangladesh had 0.4 fixed telephone subscriptions per 100 people and 1.9 fixed (wired) broadband subscriptions per 100 people in 2017. The reach for mobile subscriptions was much wider, at 91.7 mobile cellular subscriptions per 100 people and 30.7 mobile broadband subscriptions per 100 people. However, only 18.0% of the population had access to the internet. In GII 2018, Bangladesh was ranked 111 and 113 out of 126 countries for ICT access and ICT use, respectively.

As regards internet bandwidth, ITU ranked Bangladesh 110 out of 139 countries in 2017 on international internet bandwidth per internet user, with 6.64 kilobits per second. In contrast, Bangladesh received relatively well rankings of 69 and 83 out of 126 countries for government's online service and e-participation, respectively, in GII 2018. Similarly, Bangladesh received a relatively good ranking of 50 out of 126 countries for e-participation index in GCR 2018. These are the results of the government's push for e-governance. Two significant initiatives that underline Bangladesh's achievements are the establishment of Union Digital Centres, which have allowed the government to take centralized services to rural localities and reduce citizens' cost of accessing services; and the setting up of the Bangladesh National Portal, which has virtually integrated nearly 42,000 offices of the government under one address. Nevertheless, the overall state of the ICT infrastructure is weak, and the penetration of ICT services is low.

The strategic thrust is therefore to intensify technology development and diffuse its applications widely in every sector. Bangladesh should build its own capabilities in R&D in the longer term to spur cutting-edge technology and frontier innovation to drive technology diffusion. This should start with a strong emphasis on science and technology in the education system and strengthening of the research capabilities of academic and research institutions. Empirical studies have shown that middle-income countries that are able to progress significantly typically perform better on standard indicators of technology and innovation intensity: R&D stock per worker, ratio of R&D investment to GDP, and patent applications per million persons. Appropriate incentives should be given to promote private sector-driven R&D in the various sectors, which is largely missing today. The focus should be on applied R&D, with the aim of commercializing and diffusing technology widely, and boosting automation and technology applications in all sectors of the economy.

Besides the R&D route to technology commercialization, alternative routes should be explored. One such approach is technology fusion, which focuses on combining existing technologies into hybrid technologies. Instead of starting the journey from scientific discovery, the focus is on understanding the opportunity for improving the performance of existing products and processes

or introducing new products through fusion of available component technologies. A successful fusion strategy depends on three major factors, namely, demand articulation, intelligence gathering, and collaborative R&D. By pursuing this fusion strategy, several Japanese companies such as NEC and Sharp have succeeded in high-value innovations without having ownership of the underlying primary technologies. For example, Sharp fused electronic, crystal, and optics technologies in the 1980s to become the market leader in liquid crystal displays. Similarly, many automation solutions from advanced economies, which are taking over labor-intensive jobs in textiles, garments, and pharmaceutical industries of developing countries like Bangladesh, are basically fusion of commercially available component technologies.

With regard to ICT, the measures recommended to grow the size of the ICT industry (under Strategic Thrust 6) are applicable here. Besides enhancing the ICT infrastructure, ensuring cyber security is paramount. Digital literacy is also critical and should therefore be built up.

Yet another aspect of technology that should be given attention is the group of technologies associated with Industry 4.0, which are expected to spur the next industrial revolution. These technologies include big data, cyber-physical systems, internet of things (IoT), digitization, robotics, additive manufacturing, and augmented reality. Underlining the significance of Industry 4.0, the World Economic Forum (WEF) has set up the World Economic Forum Center for the Fourth Industrial Revolution Japan as the first center in the WEF's new global network to be established outside the USA. Supported by the Japanese government and businesses, the center will co-design pilot projects to speed up Japan's response to technological change. It will also create new governance models for other countries to follow. Even though the Industry 4.0 technologies may appear to be remote to many enterprises in Bangladesh, the government, together with the business associations, should prepare enterprises and workers in the applications of these technologies. An example is the use of sewbot technology in RMG factories. Besides education and training of the workforce, there should be incentive schemes to help enterprises invest in the various technologies.

Strategic Thrust 10: Remove All Obstacles Faced by Businesses and Improve Every Aspect of the Business Environment

The business environment in the country is important as it directly affects business operations and growth, including export competitiveness. It also shapes perceptions of the attractiveness of the country for investments and location of businesses. A commentary by Abu Ahmed, Professor of Economics, University of Dhaka, in *The Financial Express* on 14 November 2018, sums up the importance of the business environment:

“Every year we expect Bangladesh to do better in doing business index, though unfortunately we get routinely frustrated seeing the country's pitiable performance. In the World Bank's ‘Doing Business Report 2019’ Bangladesh ranked 176th among 190 countries. Even war ravaged Afghanistan improved its position from last year's 183rd position to 167th but Bangladesh moved only one spot up, ranking at 176th from the 177th of the last year's.....Ease of doing business in a country matters in the sense that even if all other conditions are found to be in the right context except the ease of doing business, then those supportive conditions will be of no use.....Many investors come to Bangladesh with enthusiasm seeing our investment policy but after staying here for some time they get frustrated.....This is one of the key reasons why foreign investors do not find things congenial here, and as a result, Bangladesh is one of the lowest recipients of foreign

direct investment....Many well-to-do middle class people have the money to start small businesses, but because of perceived hindrances in their way of starting such businesses they shelve the idea and instead keep the money either in the banks or buy government sponsored saving instruments.”

Bangladesh has indeed not performed well in the Ease of Doing Business ranking in the World Bank's Doing Business 2019 report, in which it was ranked 176 out of 190 countries, with a distance to frontier score of only 41.97 out of 100 (this score captures the gap between an economy's current performance and the best practice country). The ranking was based on Bangladesh's performance on five factors of doing business. On the first factor of 'starting a business,' Bangladesh was ranked 138 out of 190 countries, with nine procedures involving an average of 19.5 days to start a business. In GCR 2018, Bangladesh was ranked 101 and 107 out of 140 countries for time to start a business and cost of starting a business, respectively. On the second factor of 'getting a location,' Bangladesh was ranked poorly for all the three aspects: dealing with construction permits (138 out of 190 countries), getting electricity (179), and registering property (183). On the third factor of 'accessing finance,' Bangladesh was ranked a distant 161 out of 190 countries for getting credit. In GII 2018, Bangladesh was ranked 121 out of 126 countries for ease of getting credit. On the fourth factor of 'dealing with day-to-day operations,' Bangladesh's performance was poor on two of the three aspects: complying with the tax regime (151 out of 190 countries), trading across borders (176), and protecting minority investors (89). The tariffs are high, as reflected by the poor rankings of 128 out of 140 countries in GCR 2018 and 117 out of 126 countries in GII 2018. On the fifth factor of 'operating in a secure environment,' Bangladesh's performance was far from the frontier: 189 and 153 out of 190 countries for enforcing contracts and resolving insolvency, respectively.

With regard to the labor market, Bangladesh was ranked a creditable 47 out of 181 countries in the Labor Freedom Sub-index of the Heritage Foundation's 2019 Economic Freedom Index. This reflects the various aspects of the legal and regulatory framework of the labor market in Bangladesh, including the minimum wage, laws inhibiting layoffs, severance requirements, and the regulatory burdens on hiring. The relatively good assessment of the labor market was also borne out in GCR 2018: hiring and firing practices (50 out of 140 countries); flexibility of wage determination (81); internal labor mobility (87); and pay and productivity (78). Another aspect of the labor market is the state of industrial relations. Bangladesh's performance in GCR 2018 was moderate for cooperation in labor-employer relations (87 out of 190 countries) and workers' rights (92). This reflects improvement in the state of industrial relations over the years.

Overall, the business environment in Bangladesh is far from ideal. The strategic thrust is therefore to remove all obstacles faced by businesses and improve every aspect of the business environment continually. To make significant improvements to the business environment, a concerted effort needs to be taken across all factors that affect the ease of doing business in Bangladesh. In particular, steps should be taken to simplify and reduce the number of procedures and to reduce the length and cost of starting a business. Other improvements that should be made include simplifying compliance with the tax regime; reducing the cost, time, and procedures for import and export; improving access to finance; strengthening contract enforcement; and expediting dispute resolutions. Continual measures should also be taken to sustain good industrial relations. Besides improvements in the labor dispute mechanism, there should be better enforcement and proper interpretation of legal provisions related to the various labor laws in the country as well as the international labor conventions. Constant dialogs involving the tripartite partners of employers, unions, and government are critical.

Strategic Thrust 11: Collaborate with Relevant Institutions to Improve Macro Enablers Continually

The macro enablers, comprising institutional environment, infrastructure, macroeconomic stability, and education and health, are not under the direct responsibility of the national productivity drive. Nevertheless, they cannot be taken off the radar. Like business enablers, macro enablers are prerequisites that must be given attention to sustain productivity growth.

Institutional environment consists of three components: political stability, quality of public institutions, and legal and regulatory framework. Perceptions on all three components are not favorable, thus adversely affecting public trust in public institutions and confidence in doing business in the country.

Bangladesh was ranked 174 out of 195 countries in the World Bank's 2017 Political Stability Index and 116 out of 126 countries for political stability and safety in GII 2018. The low ranking reflects perceptions of the likelihood that the government could be destabilized or overthrown by unconstitutional or violent means, including politically motivated violence and terrorism.

The quality of public institutions is unsatisfactory. In the Transparency International's Corruption Perceptions Index 2017, Bangladesh was ranked 149 out of 180 countries with a score of only 26 out of 100. In GCR2018, it was ranked 120 out of 140 countries for incidence of corruption. The effectiveness of the government is perceived to be low in terms of the quality of public services, the quality of the civil service and the degree of its independence from political pressures, the quality of policy formulation and implementation, and the credibility of the government's commitment to such policies. Bangladesh was ranked 150 out of 193 countries in the World Bank's 2017 Government Effectiveness Index; and 116 out of 126 countries in GII 2018.

Similarly, the legal and regulatory framework is weak. For rule of law, Bangladesh was ranked 137 out of 193 countries in the World Bank's 2017 Rule of Law Index and 97 out of 126 countries in GII 2018. For regulatory quality, i.e., the ability of the government to formulate and implement sound policies and regulations that permit and promote private-sector development, Bangladesh was ranked 153 out of 193 countries in the World Bank's 2016 Regulatory Quality Index and 114 out of 126 countries in GII 2018. On judicial independence, Bangladesh was ranked a distant 93 out of 140 countries in GCR 2018.

Infrastructure, the second macro enabler, comprises the provision of public utilities and the transport infrastructure. Both of these components are underdeveloped. Unless the infrastructure bottlenecks in Bangladesh are addressed in a timely manner, they risk becoming increasingly severe constraints limiting future growth prospects.

According to World Bank data, the percentage of the population with access to electricity shot up from 8.5% in 1990 to 75.9% in 2016. However, this was still lower than 83.4% in the lower-middle-income countries and 99.4% in the upper-middle-income countries. Because of the low electrification rate, Bangladesh was ranked 108 out of 140 countries by GCR 2018 on this measure. For many years until 2010, Bangladesh had not invested in power generation, leading to a huge power shortage and power blackouts across all sectors of the economy. For businesses, insufficient supply of power and frequent power outages disrupt operations and are major constraints to investment and growth.

According to data from the World Health Organization (WHO), the percentage of population using safely managed drinking water services hovered in the range of 55.6% to 55.9% between 2000 and 2015. In 2015, it was 55.7% (no comparable figures are available for lower- and upper-middle-income countries). In GCR 2018, Bangladesh was ranked 126 and 106 out of 140 countries for exposure to unsafe drinking water and reliability of water supply, respectively. As regards sanitation, 47.0% of the population used at least basic sanitation services in 2015, lower than the 53% for the lower-middle-income countries and 81% for the upper-middle-income countries. The percentage in rural areas was 43.4% while that in urban areas was 53.7%.

The transport system consists of roads, railways, inland waterways, seaports, maritime shipping, and air transport, catering to both domestic and international traffic. According to the 2017 Statistical Yearbook, there were 19,759 km of paved roads; 2,877 route-km of railways; and 4,347 km of navigable waterways which increase to about 6,000 km during the monsoon. There are also two seaports, and three international airports and seven domestic airports. Despite the considerable growth of the transport system over the years, it is still inadequate. The country's two existing seaports, Chittagong and Mongla, are too shallow for large container ships and require costly load transfers to smaller vessels to get cargo in and out. Furthermore, the various modes of transport are not integrated.

All these pose a major constraint to business operations, expansion of exports, and economic growth. In GCR 2018, Bangladesh was ranked 121 out of 140 on road connectivity index and 111 for quality of roads; 81 on liner shipping connectivity index, and 93 for efficiency of seaport services; and 63 for airport connectivity and 109 for efficiency of air transport services. It performed better on railroads parameters: 40 for railroad density and 68 for efficiency of train service. Bangladesh's overall poor performance on these various measures means that the trade logistics cost for businesses is high. This hinders enterprise operation and growth.

Macroeconomic stability, the third macro enabler, comprises the degree of price stability and public finance management. According to available World Bank data for Bangladesh for the period 1987 to 2017, the average inflation rate was 6.3%, with a minimum of 2.0% in 2001 and a maximum of 11.4% in 2011. In 2017, it was 5.7%, much higher than the 3.9% for lower-middle-income countries and 3.3% for upper-middle-income countries. In GCR 2018, it was ranked 105 out of 140 countries for inflation. The moderately high inflation rate may be a concern to investors as it erodes the returns on their investments.

Public finance management has improved over the years and there is no danger of debt distress. The government budget/GDP percentage averaged -3.4% for the period 1991 to 2017, reaching an all-time high of -1.3% in 1993 and a record low of -4.8% in 2017. The government debt/GDP percentage averaged 39.0% for the period 1995 to 2017, reaching an all-time high of 50.0% in 2002 and a record low of 33.1% in 2017. The external debt/GDP percentage in 2017 was 18.1%. In conjunction with its 2018 Article IV Consultation, IMF expressed the view that Bangladesh's risks of external debt distress and overall debt distress continued to be low. Control on spending and slower implementation of development projects have more than compensated for revenue underperformance.

Education and health, the fourth macro enabler, determines whether there is a flow of well-educated and healthy people to meet business needs and to be trained for high-skilled jobs. According to the latest World Bank data for 2016, the government expenditure on education/GDP percentage in

Bangladesh was 1.5%, much lower than the 4.3% for both the lower- and upper-middle-income countries. The net primary enrolment rate rose from 50.8% in 1970 to 90.5% in 2017. The gross secondary enrolment rate rose from 20.5% in 1973 to 67.3% in 2017, but this was below the 69.6% for lower-middle-income countries and the 92.7% for upper-middle-income countries. The gross tertiary enrolment rate rose from 2.5% in 1973 to 17.6% in 2017, but this was lower than the 24.4% for the lower-middle-income countries and the 52.1% for the upper-middle-income countries. According to BBS, 72.3% of the population were literate in 2016, up from just 61.0% in 2011. Nevertheless, the low enrolment rates in secondary and tertiary education restrict the pipeline of well-educated workers to meet business needs and to be trained for high-skilled jobs.

The state of health of the population has improved considerably but still lags that in the upper-middle-income countries. According to the latest WHO data for 2015, the health spending/GDP percentage was 2.6%, much lower than the 4.0% in the lower-middle-income countries and 5.7% for the upper-middle-income countries. The infant mortality rate (number of infants dying before reaching one year of age per 1,000 live births in a given year) fell from 147.9 in 1971 to 26.9 in 2017. The figure in 2017 is lower than that for the lower-middle-income countries (36.8) but much higher than that for the upper-middle-income countries (1.6). From a low 47.1 years in 1971, life expectancy at birth shot up to 72.5 years in 2016. The figure in 2016 is higher than the figure of 67.9 years in the lower-middle-income countries but lower than the figure of 75.3 years in the upper-middle-income countries.

Since the state of health of macro enablers has an impact on the proximate factors and business enablers affecting productivity, the strategic thrust is for the institutions driving national productivity to collaborate with other relevant institutions to improve the enablers continually. Feedback from the industry on legislation and regulations that may impede business operations and growth should be given promptly to the institutions to act upon. These institutions will have to work out the detailed strategies for improvement, not solely for the purpose of the national productivity drive but more in relation to the economic development of the country.

INSTITUTIONALIZING THE PRODUCTIVITY MOVEMENT

High-profile Productivity Movement Supporting the National Economic Plan

The 11 strategic thrusts must be managed in an integrated manner to realize the Productivity 2031 vision in the Bangladesh National Productivity Master Plan FY2021–FY2030. The reason is that they are not independent of one another and hence need to be addressed holistically to achieve maximum impact. This can be done through a high-profile Productivity Movement.

The strategic intent of the Productivity Movement should be positioned to support the country's national economic plan since productivity is a key determinant of economic growth. The current economic plan is the 7th Five-Year Plan FY2016 – FY2020. The four pivotal underlying themes for the economic growth strategy in the plan are: break out of the sphere of 6% growth and raise the average annual growth rate to 7.4%; growth will be inclusive, pro-poor, and environmentally sustainable; extreme poverty will be around 8.9% by the end of FY2020; and all the additional labor force will be employed, including much of the underemployed. To achieve the targets in the Five-Year Plan, the Ministry of Industries has developed Industrial Policy 2016. In the area of productivity and quality, the plan lists the following initiatives:

- a. The National Productivity Organisation (NPO) will develop an annual program in consultation with the private sector. The Ministry of Industries will regularly monitor this activity.
- b. The NPO will implement activities with the help of the regional productivity organization to increase labor productivity and green productivity.
- c. Necessary training will be provided to enhance the capacity and efficiency of mid-level managers and workers. Application of appropriate technology will be encouraged to ensure high productivity in the manufacturing of products and efficient use of resources and the labor force.
- d. The NPO will collect and compile productivity-related information from all public- and private-sector industries and store them in a productivity database for dissemination. A report on the state of productivity will be produced annually. This will identify the prevailing bottlenecks to increasing productivity and propose solutions for improvement.
- e. Bangladesh Accreditation Board (BAB) will be strengthened through technical skills development and institutional capacity development.
- f. The technical capacity and efficiency of the national standards organizations including Bangladesh Standards and Testing Institution (BSTI) will be enhanced in order to be accepted internationally.
- g. Necessary measures will be taken to harmonize local standards with international standards to facilitate the entry of domestically produced products into international markets.

While this listing specifies the initiatives (in particular the first four) to be carried out by the NPO, there is no explicit framework or document to show how the Productivity Movement is positioned to support Industrial Policy 2016 and the Five-Year Plan. In fact, the term “Productivity Movement” is not used at all; and the focus is on enterprise-level productivity.

A national Productivity Movement should thus be institutionalized. The goals of the Productivity Movement should be specified and linked to the country’s long-term economic goals. How the Productivity Movement fits into the national development plans (especially the current 7th Five-Year Plan FY2016 – FY2020 and any other similar plans that will be developed in the future) should be clearly shown, so that it does not appear as a silo. The coverage of the Productivity Movement, addressing the proximate factors and business enablers of productivity directly, should also be stated explicitly.

The positioning framework for the Productivity Movement should be published and disseminated to all stakeholders in the government and the industry. This will foster common understanding and alignment with the national goals. The national-level framework can then be cascaded down to the enterprise level to show clearly how the Productivity Movement affects enterprise productivity and hence product competitiveness, sales, profit, and wages. The aim is to generate interest in participating in productivity activities at the national level and in individual enterprises.

Action Plans to Execute the Strategic Thrusts Systematically

Detailed action plans must be worked out to execute the 11 strategic thrusts. These plans consist of the specific initiatives to be implemented, targets, timelines for implementation, parties responsible, and monitoring and reporting mechanisms.

Some of the strategic thrusts can be taken together when the plans are being worked out. In particular, the strategic thrusts for economic sectors and economic structure can be integrated. Detailed sector plans to uplift the country’s productivity over time, as well as to transform the economic structure, can then be worked out. The constituent industries in the sector (e.g., RMG, jute, and leather) should be examined in detail, with specific productivity targets set and initiatives implemented. Business and macro enablers that impact a sector’s productivity can also be included, even though there should be separate plans for them. What is critical is that there should be oversight of the development of all the actions plans so that they are coordinated and not done in silos. All these plans should be integrated, as far as possible, with the existing and new development plans.

Once the actions plans are completed, they should then be implemented by the relevant agencies. Whenever a plan is ready to be implemented, it can be launched to create widespread publicity and awareness. For each launch, it is important to link the plan to the national Productivity Movement so that it is clear that each plan is part of the integrated approach taken.

Sustained Promotion of the Productivity Movement to Keep Interest Aflame

Besides the implementation of the action plans, a concurrent action that should be taken is the sustained promotion of the Productivity Movement. Only then will everyone be aware that there is an ongoing national productivity drive, and that the government is committed to the Productivity Movement. Over time, a distinct identity for the Productivity Movement will then be created. This is critical for encouraging and prodding enterprises and the workforce to be actively involved in taking actions to improve productivity.

Currently, the National Productivity Day celebration is the most visible activity to give a distinct identity to the Productivity Movement. At the inauguration of the Multilateral Conference on the Productivity Movement in Bangladesh: Strategy for 2021, jointly organized by the NPO and the APO Society for Bangladesh on 2 October 2011, the Prime Minister said:

“I would like to take the opportunity to declare productivity as the national movement and I hope we would reach our desired goal by involving all in this movement.... Everybody, including the government, owners, workers, politicians, planners, researchers, professionals, civil society and mass media, has to come forward to turn productivity improvement activities to a national movement.”

The Prime Minister declared that 2 October would be observed as Productivity Day every year. She also announced the introduction of the Productivity and Quality awards for the best industries and entrepreneurs.

The first National Productivity Day was celebrated with much fanfare throughout Bangladesh on 2 October 2012, with colorful posters on main streets, an early-morning awareness rally led by the Minister of Industries, a seminar, and special supplements published by daily newspapers. All mobile phone operators posted the message “Improve Productivity for Efficient Production” to their millions of customers. The press and electronic media covered related events, with a widely watched talk show on Bangladesh Television. The NPO published a colorful souvenir publication containing congratulatory messages from the President, Prime Minister, and APO Secretary-General. Since then, National Productivity Day has been celebrated every year, with similar activities. In the last celebration in 2018, the theme adopted was “Productivity for Developing Happy & Prosperous Country.” Unlike in the past where the celebration was confined to Dhaka, 2018 marked the extension of the celebration to all eight divisions, 64 districts, and 300 sub-districts (upazila parishad) in collaboration with the local government organizations.

However, the impact of the National Productivity Day is unclear as no assessment has been made. Feedback from employer groups and enterprises reveals that understanding of productivity is still low. The NPO should thus undertake a review and measure the effectiveness of the National Productivity Day with a view to improving the subsequent editions. Besides the government taking the lead in the celebration, the NPO could incentivize partners such as business associations and enterprises to take ownership and organize their own activities in conjunction with the National Productivity Day.

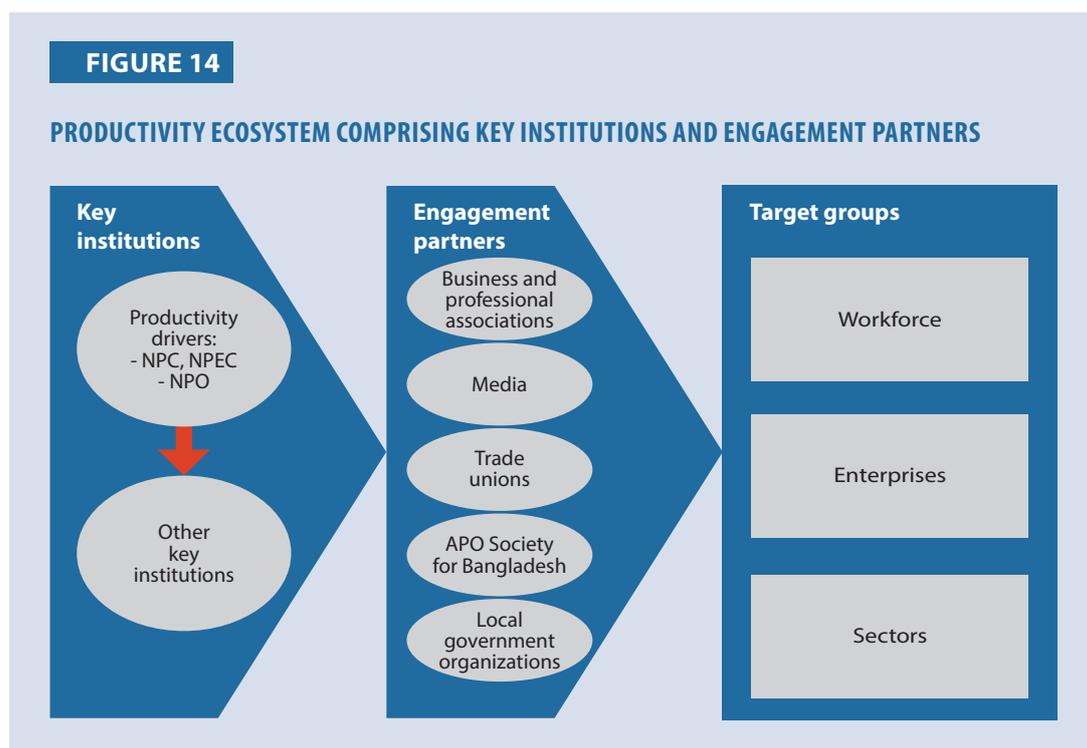
To increase awareness about the Productivity Movement, there should be sustained activities throughout the year beyond the National Productivity Day. The current state is one where awareness of the Productivity Movement is still low despite seven years of National Productivity Day celebrations. High awareness of the Productivity Movement is needed to generate continuous interest and commitment from enterprises and the workforce in playing their parts in the national productivity drive. What is important is that there is a clear year-long action plan on the key productivity initiatives that will be undertaken, and communication of the plan and the initiatives when they are launched. The communication should all be linked to the national Productivity Movement so that they do not appear as ad hoc activities. It is critical to work with the mainstream media and to engage social media for this purpose. Furthermore, now that the National Productivity Day has been extended to the sub-national levels, the local organizations should be roped in to play an active role in planning and organizing year-long productivity initiatives.

STRENGTHENING THE PRODUCTIVITY ECOSYSTEM: INSTITUTIONS AND PARTNERS

Need for a Strong Productivity Ecosystem

A strong productivity ecosystem, comprising the key institutions and engagement partners, must be in place to drive the Productivity Movement successfully. Currently, this is not the case. There is no identification of the key institutions and engagement partners as well as the target groups.

The proposed productivity ecosystem for Bangladesh is shown in Figure 14. The key institutions comprise the group of productivity drivers and other key institutions with which they work closely. All these institutions collaborate with the engagement partners to execute their programs, which are directed at the three target groups of workforce, enterprises, and sectors. Such collaborations enable a wider reach to the target groups.



Key Institutions: Responsible for Spearheading the Productivity Movement

The key institutions are those that are responsible for formulating the plans and policies and implementing the programs of the Productivity Movement. The appropriate institutions must be in

place at all levels and in different parts of the country. As many institutions carry out their work that directly or indirectly impact productivity, the key ones should be identified and equipped with the capabilities to lead the Productivity Movement. Their roles and responsibilities should be clearly defined, and their policies coordinated to ensure synergy and alignment of efforts in driving national productivity and avoiding duplications, gaps, inconsistencies, or contradictions.

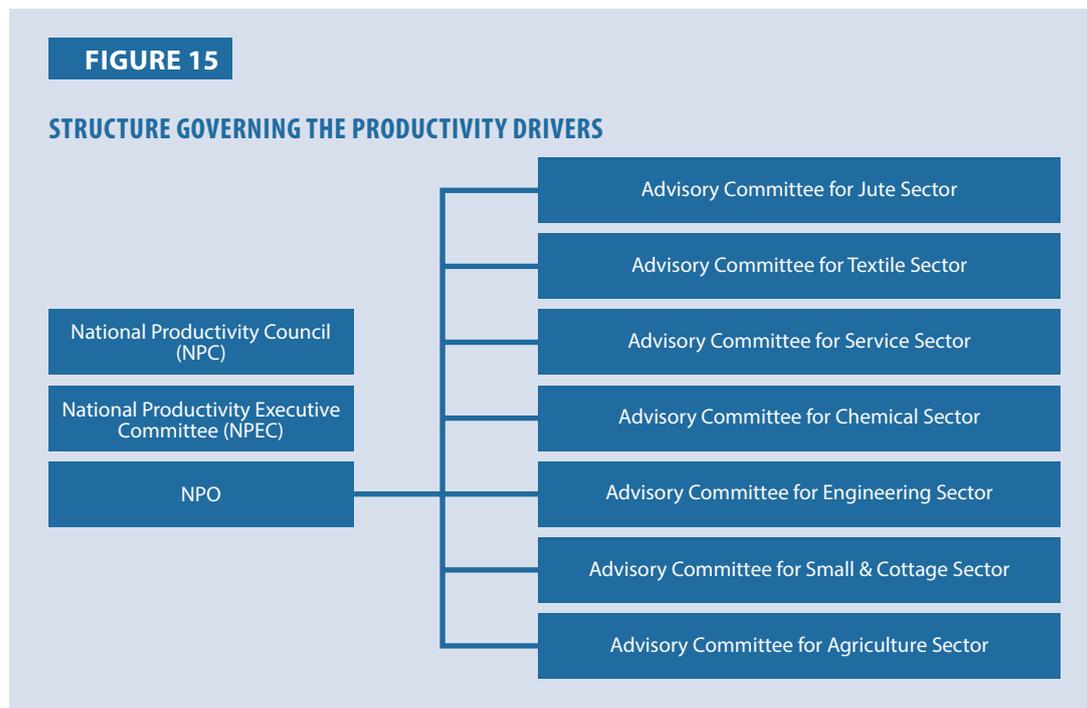
There are two major categories of productivity drivers in Bangladesh. The first comprises the National Productivity Council (NPC) and the National Productivity Executive Committee (NPEC), which are non-executive bodies. The second is the National Productivity Organisation (NPO), which is an executive body.

National Productivity Council and National Productivity Executive Committee

Figure 15 shows the structure governing the productivity drivers. The NPC is the highest-level body formulating national productivity policies, plans, and programs. Chaired by the Minister of Industries, it has 38 members representing key ministries, chambers of commerce and industry, workers’ federations, academic bodies, and professional and research institutions. Director NPO serves as the secretary. The NPC meets once a year.

The NPEC is a tripartite committee that executes the decisions and recommendations of the NPC and supervises the activities of the NPO. Chaired by Secretary, Ministry of Industries, it has 22 members. Director NPO serves as the secretary. The NPEC meets three times a year.

The NPO is the body that is responsible for implementing the directions and decisions taken by the NPC and the NPEC. For seven of the economic sectors, there is a Productivity Advisory Committee each to provide guidelines and to assist in the regular activities of the NPO. Each committee has about 20 members, comprising professional experts and senior managers of public sector corporations and employer associations of the respective sector. The committees each meet at least twice a year.



As the Bangladesh National Productivity Master Plan FY2021–FY2030 covers strategies that cut across all sectors, the NPC should be headed by someone who has the clout to ensure implementation by the relevant government agencies. This invariably means that the Council should be chaired by the Prime Minister, Deputy Prime Minister or a senior Minister. In the case of Bangladesh, the Ministry of Industries is of the view that the Minister of Industries is of the appropriate level and has the clout to chair the NPC.

Once the Master Plan has been developed, the NPC will have to be actively involved in overseeing its implementation. This includes monitoring the progress made, identifying and removing any bottlenecks, and introducing new strategies and initiatives whenever needed. What is critical is that timely and swift decisions and actions are taken. This means that the frequency of NPC meetings should be increased, e.g., once a quarter. Similarly, the frequency of NPEC meetings should be increased, e.g., once in two months, to execute the decisions taken by the NPC and to guide the activities taken by the NPO more expeditiously.

National Productivity Organisation

The NPO is a government institution and its operations are fully funded by the government. Originally set up as the National Centre for Monitoring Labor Productivity under the Ministry of Labor and Manpower in 1982, it was renamed the Bangladesh Productivity Centre in 1987. In 1989, in line with the new industrial policy of the government, it became the NPO under the Ministry of Industries to act as a catalyst and focal point for the promotion of productivity in the country.

The objectives of the NPO are to: a) act as a promoter to create productivity consciousness and awareness among the masses, particularly industrial enterprises; b) evolve the institutional framework for the productivity movement in the country; c) undertake human resource development programs for productivity improvement and skill development; d) conduct surveys, studies, and research on productivity; e) work as a catalyst to promote plant-level productivity through consulting services; f) convert industrial enterprises into efficient, profitable, and productive organizations by adopting productivity improvement activities; and g) assist the government in formulating productivity policy.

Currently, the NPO has an approved staff strength of 67 but only 42 positions are filled. Approximately half of the staff undertake operational work, while the other half are in administration. The operational work of the NPO covers 12 activities: a) conduct training courses on productivity for all levels of staff and trade union officials; b) organize seminars, workshops and discussion meetings on productivity issues at national, sector, and firm levels; c) collect and compile productivity-related information and store them in a data bank for dissemination; d) render guidance and consulting services to enterprises for improvement of productivity; e) organize inter-firm comparisons and business clinics for members; f) encourage and assist enterprises to set up Productivity Improvement Cells; g) undertake surveys and studies on productivity; h) organize productivity awareness campaign through mass media; i) assist the government in formulating national plans, programs, strategies, and policies for productivity improvement at enterprise, industry, sector, and national levels; j) disseminate information and distribute research studies and other publications; k) act as the APO Liaison Office and implement APO programs on behalf of the government; and l) implement projects sponsored by ILO and other international and national agencies.

Of the 12 activities, the first two are given more emphasis. The focus is on enterprise-level productivity in 12 industries in line with economic priorities: jute; textile and garment; chemical

and tannery; engineering; sugar & food and fish processing; small cottage industries; agriculture; transport, communication and tourism; water, gas and electricity; IT, education and health; financial intermediation; and hotel and restaurant. The NPO assists both private enterprises and SOEs in these industries. To help carry out its activities, the NPO has signed memoranda of understanding with a number of business associations and other organizations. In spite of all these, awareness of the NPO's activities is not widespread among enterprises.

In conjunction with the Master Plan, the NPO's scope of responsibilities should be broadened considerably as the lead productivity agency. Although the NPO organizes an annual National Productivity Day and productivity awareness seminars, its focus has been on the productivity of enterprises, in particular on imparting knowledge on productivity tools and techniques to enterprises. Besides enterprises, it should now oversee the other proximate factors and enablers affecting national productivity. In addition to promoting the Productivity Movement, its duties should include policy and research, setting directions and targets, and spearheading national productivity programs. It does not mean that it should be the one driving all the strategies in the Master Plan, which are under the purview of different government agencies. What it does mean is that it must provide leadership and advice, coordinate the productivity policies and programs of other key institutions, garner the cooperation of the different stakeholders, and build competencies in the various institutions.

With its enlarged responsibilities, the NPO's stature as the country's national productivity agency should be raised; and it should be given greater autonomy, e.g., to recruit staff on its own based on the approved staff strength, and resources. Its current office in the Ministry of Industries and the approved staff strength of 67 are too small. What augurs well for the stature and image of the NPO is that it will in future have its own building which is currently under construction. The NPO has also put up a proposal to increase its staff strength to 243. However, this increase is due mainly to the proposal to set up three regional NPO offices in Chittagong, Khulna, and Rajshahi. In the light of its new responsibilities in conjunction with the Master Plan, the NPO, together with the Ministry of Industries, should determine what the appropriate staff strength is.

To carry out its expanded role effectively, the NPO has to build up its capabilities. Besides enterprise-level productivity tools and techniques, the NPO should develop capabilities in productivity research, benchmarking, and measurement at the national and sector levels; build up a comprehensive database on productivity statistics and indicators at different levels; and promote and sustain awareness of productivity effectively. It should also build the capabilities of its partners such as district offices, associations, and government agencies to act as multipliers to complement its efforts.

SME Foundation (SMEF)

SMEF was set up in 2017 by the government, through the Ministry of Industries, as the apex institution for small and medium enterprise (SME) development in the country. Its legal status is a non-profit organization. The specific objectives of SMEF are to: a) assist the government in implementing policies; b) provide policy advocacy and design intervention to grow SMEs; c) update data and information for formulating SME policies and strategies, and establish a data bank to provide information support to SMEs and other stakeholders; d) administer and facilitate SMEs' access to finance; e) facilitate human resource and capacity development programs for SME development; f) facilitate ICT and technology adoption by SMEs; and f) encourage SMEs to undertake productivity and quality improvement programs.

SMEF focuses on what it calls the ‘missing middle’ namely, the micro, small, and medium enterprises (MSMEs) that sit between the cottage industries and the large enterprises. Its structure comprises a General Body of 60 members with 50% from the public sector and the remaining 50% from the private sector; a Board of Directors of similar composition; and the management team. The approved staff strength for the management team is 107, but only 68 are filled due to financial constraints. To guide the work of the management, 12 Working Committees, involving all the members of the General Body and Board of Directors, have been formed.

Three notable initiatives by SMEF are: collaboration with banks to provide low interest credit facilities (single-digit interest rates) to SMEs with no collateral required; women entrepreneurship development programs; and the cluster development approach for the development of MSMEs in the rural areas. There are currently 177 clusters identified by SMEF, each of which comprises MSMEs producing similar products or services within a radius of five kilometers. This concept of cluster development refers more to the concentration of similar enterprises within an industry rather than the geographic concentrations of interconnected businesses, suppliers, service providers, government agencies, and other associated institutions.

Besides SMEF, there are other institutions that are involved in supporting cottage, small and medium enterprises. These include Bangladesh Small and Cottage Industries Corporation (BSCIC) that focuses on providing infrastructure, the NPO, and business and trade associations such as Federation of Bangladesh Chambers of Commerce and Industry (FBCCI) and National Association of Small and Cottage Industries of Bangladesh (NASCIB). There appears to be some duplication and lack of coordination of the activities between these different organizations. In line with its status as the apex body for MSMEs, SMEF should coordinate the activities of the various organizations. Given its limited resources, it should leverage more on these other institutions as multipliers to reach out to and assist the enterprises under their purview.

The current services rendered by SMEF focus more on addressing the challenges commonly faced by the broad base of MSMEs (e.g. facilitating access to credit and adoption of technology). In addition to these services, SMEF should roll out specific programs to facilitate the growth of promising MSMEs into large enterprises. These promising MSMEs could subsequently be profiled as success stories for the rest to emulate.

To effectively play the advocacy role and support the government to formulate policies, SMEF should review all business rules and regulations regularly, and benchmark them against international best practices. It should be given the authority to collect data from MSMEs, similar to the authority given to a statistics bureau. Alternatively, SMEF could work with BBS to collect the data and then analyze and disseminate statistics and research on SMEs, e.g., productivity levels of SMEs in different sectors. This alternative arrangement is feasible only if BBS dedicates resources for the collection of SME data.

Bangladesh Small and Cottage Industries Corporation (BSCIC)

BSCIC, the successor of East Pakistan Small & Cottage Industries Corporation established by an Act of Parliament in 1957, is the organization responsible for the development of small, medium and cottage industries (SMCI). Since its establishment, BSCIC has been the prime mover in supporting the industrialization process by building SMCI enterprises and creating an entrepreneurial society.

BSCI is an autonomous statutory organization with line reporting to the Ministry of Industries. It has country-wide establishments run by 2,410 employees. The establishments include four regional

offices, 64 district offices called Industrial Services Centres, 15 Skills Development Training Centres, 76 Industrial Estates, and a Design Centre in the headquarter in Dhaka. Apart from these, it has 27 Development & Training Centres and three Cottage Industries Development Program Offices in the Hill Tracts Districts. It also has a dedicated office for salt production and development in Cox's Bazaar and six bee breeding/multiplication centers in six districts. For entrepreneur development, BSCIC has the Small & Cottage Industries Training Institute located in Uttara, Dhaka.

BSCIC's services are wide-ranging and fall under three main categories. The first category comprises regulatory functions: registration of small and cottage industrial units, recommendation for exemption of duties and taxes, and recommendation for import entitlement of raw materials and packaging materials. The second category comprises extensional and promotional functions. These include entrepreneurship development through training programs, allotment of plots in industrial estates and parks, extension of credit facilities to the entrepreneurs from its own fund and through financial institutions, and facilitation of marketing of SMCI products and access to markets through trade fairs and dissemination of market studies. The last category is the implementation of development projects under the government's annual development program. Lands are acquired and developed into industrial estates with infrastructural facilities. Plots are then leased to entrepreneurs for a tenure of 100 years. The types of industries in the industrial estates include textiles, plastic products, food, light engineering, chemicals, and RMG. Examples of industrial estates are the Tannery Industrial Estate in Dhaka and the Active Pharmaceutical Ingredients Industrial Park in the Gajaria Upazila of Munshigonj. In contrast to the industrial lands managed by Bangladesh Economic Zones Authority (BEZA), which are larger in size and cater to the bigger export-oriented enterprises, the industrial estates managed by BSCIC are small and are aimed at developing local enterprises.

While BSCIC's intent of developing local enterprises through industrial estates is good, there are several issues that need to be addressed. First, it appears that there is a lack of thorough planning for the industrial estates. Several of the plots allocated have been left vacant because of poor infrastructural facilities including poor transport system and power disruptions; and a lack of proper controls to ensure allocation to deserving entrepreneurs and utilization after allocation. Second, the facilities provided, especially for the older industrial estates, are not sufficient or tailored for non-traditional industries such as ICT and tannery. Third, there is no technical support provided to the entrepreneurs, e.g., in the areas of business development and workplace safety, to help them sustain and grow their businesses. Fourth, the increasingly higher rates of the land leases have deterred potential entrepreneurs from applying for plots in the industrial estates.

In view of the importance of growing the industry sector, particularly manufacturing, BSCIC can play a critical role in uplifting the productivity of the many SMCI enterprises in the sector. Besides providing broad-based assistance programs such as training and consultancy, BSCIC should leverage its industrial estates as a strategic platform to support the growth of enterprises in their different stages of development. The first priority is to do a thorough assessment of each industrial estate to determine the specific issues and the strategies to grow each of them. A customized cluster approach should be taken for each of the industrial estates.

Depending on the types of enterprises in an industrial estate, the geographic concentrations of interconnected businesses, suppliers, service providers, government agencies, and other associated institutions can then be determined and built up. In addition to building up the cluster in an industrial estate, the enterprises should be given customized technical assistance. Examples of

technical assistance are providing business incubation and mentoring services; improving the operations of the enterprises; facilitating access to local and international markets; and linking the enterprises to bigger or foreign companies for business collaboration and knowledge sharing. All these go well beyond the current practice of allocating land to enterprises and then leaving them on their own. BSCIC should work closely with SMEF and rationalize the activities undertaken, as well as leverage NASCIB to reach out to the enterprises.

Bangladesh Council of Scientific & Industrial Research (BCSIR)

BCSIR was established in 1973 as an autonomous government scientific research organization. Its objectives are to: a) initiate, promote and guide scientific, industrial, and technological research; b) establish, maintain, and develop laboratories, workshops, institutes, centers, and organizations for furtherance of scientific and industrial research; c) give grants-in-aid for scientific, industrial, and technological research schemes and projects of the universities and other research institutions; d) adopt measures for the commercial utilization of discoveries and invention resulting from the research carried by the Council, universities or any other research organization; e) collect and disseminate information of scientific, industrial, and technological matters and publish scientific papers, reports, and periodicals; f) encourage establishment of industrial research organizations; g) maintain contact with scientific, industrial, and technological research organizations of other countries; h) take out patents and make arrangements for the industrial utilization of research processes developed in the institutes and laboratories established by the Council; and i) establish libraries, museums, experimental plantations, and herbaria. Its mission is “to assist in the industrialization and development of the country by establishing international laboratories, creating skilled manpower, inventing and developing technology.”

BCSIR has a network of 12 laboratories, institutes, and centers. The fact that it is funded by the government and reports to the Ministry of Science and Technology means that its priorities are determined largely by the directions given by the ministry. Besides carrying out regular R&D, it executes technical assistance projects and various development projects under the annual development program of the government. It is also mandated to offer analytical services to solve fundamental and applied problems faced by the industry.

Despite its wide-ranging objectives, BCSIR has not worked closely with the industry to determine its needs and hence it has not developed many products that have been successfully commercialized on a large scale. In short, there is a disconnect between what it does and what the industry needs, which results in a lack of translation of the R&D undertaken into widespread commercial applications.

In line with its objectives, BCSIR should step up its role in promoting science and technology, developing indigenous technology, and diffusing technology applications in the industry. In an attempt to facilitate the commercialization of technology, BCSIR set up an Institute of Technology Transfer and Innovation in September 2018. To be effective, the institute should work closely with the industry to determine their needs and problem areas so that the R&D undertaken will be aligned to what really matters to the industry. In the area of industrial technology, BCSIR should work closely with Bangladesh Industrial Technical Assistance Centre (BITAC) to disseminate technical knowhow and applications to industries and render technical advice to them.

The objectives of BCSIR allow it to play a lead role in coordinating the types of R&D undertaken in the various institutions and in facilitating the diffusion and transfer of technologies from the various institutions to the industry. BCSIR should thus coordinate with the universities and research

institutes to engage in various areas of applied R&D that meet the needs of the different industries, and to ensure that there are no duplications and gaps. It should also ensure that there are receptacles to commercialize the R&D developed, for widespread dissemination and application in the industries.

Bangladesh Standards and Testing Institution (BSTI)

BSTI is the national standards body in Bangladesh, reporting to the Ministry of Industries. Besides its standards role, BSTI plays the lead role in the fields of product testing and metrology. It is empowered with some regulatory measures in these fields.

As a standards body, BSTI sets and monitors standards based on international standards, such as those established by the International Standards Organization. Priorities for standards to be developed are determined based on national needs, requirements by manufacturers and exporters, and health and safety considerations.

As a conformity assessment body, BSTI is accredited by BAB to inspect products for conformity with applicable product standards and safety regulations and to issue product certifications. It provides both voluntary and mandatory certifications to ensure quality and safety of products. Currently, 181 products have been placed by the government under BSTI's mandatory product certification. Examples are noodles, bread, and natural mineral water. BSTI helps exporters by providing information on standards, technical regulations, and conformity assessment procedures. It also recognizes and accepts goods bearing certifications from institutions of other countries. BSTI is thus in effect the leading national product certification body. However, the extent of international acceptance of its test certificates is limited. To date, it has mutual recognition arrangement for product testing only with India for 21 products. To improve the situation, strengthening of BSTI's technical competence is critical.

As a national metrology body, BSTI is responsible for maintaining standards, weights, and measures with international traceability; developing national standards of measurements; promoting metrological activities by creating physical facilities to implement legal metrology and industrial & scientific metrology in the country; and verifying and calibrating weights, measures, and weighing and measuring instruments used in industries and commercial transactions.

Raising productivity is not within the remit of BSTI. Hence, it has not used standards and standardization to drive productivity in industries and enterprises. In conjunction with the Master Plan, BSTI's role should be enlarged. In addition to its current role of developing standards and disseminating them to the industry, BSTI should use standards and standardization as a strategy to raise the productivity of sectors and enterprises. Widespread adoption of standards, which encapsulate the best practices at a point in time, leads to improvements in quality, efficiency of processes, and reduction of costs. It also provides the basis for innovation. Together with the other government agencies, BSTI should identify the standards that are important for the productivity of the key industries, and work with industry partners to promote them for adoption and to use standardization to drive industry-level productivity.

To undertake its role in using standards and standardization to drive productivity, BSTI needs to be given adequate resources. It should also be trained on productivity matters.

National Skills Development Authority (NSDA)

In October 2018, the government approved an Act for the establishment of NSDA as an autonomous body to take over the role of NSDC in overseeing skills development in the country. This was in

recognition of the need for a more effective institutional arrangement to replace NSDC and its supporting Executive Committee, which were non-establishment bodies consisting of part-time members from ministries and the industry and which met infrequently.

The objectives of NSDA are to: a) provide support to the technical and vocational training (TVT) institutes to produce skilled human resources; b) create opportunities to produce skilled manpower required by industries; c) create self-employment opportunities and reduce unemployment through TVT; and d) supply skilled manpower to the international labor market. Its key responsibilities are to: a) develop skills development policies and strategies; b) register, accredit, and monitor performance of TVT institutes; c) develop and standardize curricula; d) establish a skills database and project future demand for skilled workers; e) implement recognition of prior learning approach and accredit it; f) evaluate and coordinate all skills development projects and programs of the government; g) make arrangements for improving quality of skills training, certification, and equivalency certifications; and h) establish and strengthen industry skills councils. The overall aim is to ensure a supply of skilled workers that adequately meet the specific job needs of various industries.

NSDA is overseen by a Governing Body that provides strategic guidance for skills development in the country. Chaired by the Prime Minister, the Governing Body comprises members from the public and private sectors. The executive chairman of NSDA serves as the secretary. The Governing Body will meet at least once a year. In addition to the Governing Body, there is an Executive Committee. Its major functions are to establish strong coordination among the key stakeholders from both the public and private sectors for smooth operation and implementation of skills development initiatives; and to provide strategic guidance on the National Human Resource Development Fund. Chaired by the Principal Secretary of the Prime Minister's Office, it comprises members from the public and private sectors. The executive chairman of NSDA serves as the secretary. The Executive Committee will meet at least three times a year.

The establishment of NSDA is timely in view of the need for an effective executive organization to oversee and set the directions for skills development in the country. As all its activities are still at the planning stage, steps should be taken to expedite their implementation. There are already many comprehensive national skills development policies, plans, and frameworks in place to guide NSDA's work. What is important is good and timely implementation. In carrying out its functions, NSDA will have to work closely with other government agencies and institutions to ensure coordination and no duplication or gaps. In particular, NSDA's role and BTEB's role should be clearly differentiated and yet complementary. Although NSDA has the intent to focus on TVT, leaving technical and vocational education to BTEB, it is unclear whether the distinction between the two can be so clearly demarcated. Furthermore, there needs to be clarity between the roles of NSDA and BTEB vis-a-vis the National Qualification Framework that is currently being developed. NSDA will also need adequate resources to ensure follow-up actions and compliance with all decisions taken on national skills development by the NSDA Governing Body and Executive Committee.

Besides focusing on the TVT skills specific to each industry, NSDA should pay attention to higher-order cognitive and non-cognitive skills which have largely been neglected by the education and training system in Bangladesh. Another area that should be included and emphasized by NSDA is management skills, especially among middle managers, which the industry sees as lacking.

Public Sector

As the body developing and implementing policies and programs that impact the proximate factors and enablers affecting national and enterprise productivity, the public sector should be the paragon

of productivity. Only then can it gain the trust of the private sector and the public and serve as a role model for others to emulate.

International assessments have concluded that the quality of public institutions in Bangladesh is unsatisfactory. The public administration system was inherited from British colonial rule and was built primarily for the purpose of extracting surplus from the resources in the country. This system is still very much in place and is a source of the major problems of public administration today. The problems can be classified under four broad areas that are interrelated: lack of accountability, lack of transparency, corruption, and inefficiency. First, lack of accountability results in poor performance. This is due to weak institutional controls such as span of supervision, weak audit and accounts system, lack of participatory management, lack of strong civil society, and poor enforcement of action against violation of service rules. Second, lack of transparency reduces efficiency and quality of decision making. This can be traced to the Government Servants Conduct Rules of 1979 that bind civil servants to an oath of secrecy at all times. The result is that many activities remain outside the public purview, a phenomenon that is partly a carryover from colonial times when official interests were divergent from those of the public. Third, corruption results in misuse of resources, inefficiencies, and lower economic growth because of rent-seeking behaviors. This is due to several factors including cultural and social factors, ability to exploit positions of power and to go unpunished, and absence of effective means of seeking redress through legal or administrative channels. Fourth, inefficiency results in low productivity.

Besides the above three factors, inefficiency is caused by a host of factors including bureaucratic culture, weak personnel management system (e.g., rewards not linked to performance and tolerance for mediocre performance) which causes low morale and poor performance, factionalism among various groups, misuse of power and position, lack of professionalism, over-centralization of decision making, dearth of qualified personnel, and lack of training of staff. There is also lack of coordination and integration in the various elements of policies, including coordination between the government agencies. As a result, the policies fail largely in implementation.

Over the years, several attempts have been made to reform the civil service but it appears that the success has been limited. In a research paper in 2012 titled *Civil Service Reform in Bangladesh: All Play but Hardly Any Work*, Pan Suk Kim and Mobasser Monem wrote:

“There is a long history of administrative reform commissions in Bangladesh and almost every administration in Bangladesh has instituted administrative commissions since its independence. However, the work of these commissions often remains limited to keeping the basic structure unchanged. These commissions do not always delve deeper into the issues. Yet, the cumulative problems of poor administration have now become so apparent in Bangladesh that hardly anyone remains to be convinced that something of more fundamental nature needs to be done...The civil service of Bangladesh, nearly one million public servants, has not kept pace with a rapidly changing environment in public administration.”

More recently, in an article titled *Civil Service Reform Plans: Doomed All Along*, published in *The Daily Star* on 23 July 2018, M. Abul Kalam Azad expressed similar views:

“All the successive governments made moves to reform the civil service but none of them brought about the much-needed changes due to lack of political will and resistance from a section of bureaucrats. Since 1972, around two dozen committees and commissions have been formed, and

they made scores of recommendations for having a merit-based, efficient and service-oriented civil administration. But most of the recommendations are yet to be implemented...Many former bureaucrats and researchers believe that the failure to bring about reform has resulted in a fall in efficiency, accountability and professionalism in the civil service, growing inter-cadre disparity and commotion, and alarming political influence on bureaucracy.”

According to the World Bank’s Systematic Country Diagnostic of Bangladesh in 2015:

“The quality of the public administration is hampered by the way in which it is managed. Indicators of government effectiveness place Bangladesh in the 20th percentile. Successive governments have politicized the administrative system, weakening its capacity while fostering inefficiency and vulnerability to vested interests and corruption...An emerging set of initiatives to strengthen the performance orientation in the public sector provide opportunities to support the development of a public sector reform agenda. A public sector which focuses on results rather than rules can be an entry point to reforms of the civil service and personnel management, strengthening the results focus of the public financial management reforms and resource allocation decisions, quality of the public investment portfolio, and oversight and accountability within the administration from front line service delivery agents to policy making authorities, and from autonomous bodies and state owned enterprises to parent ministries and the Ministry of Finance.”

Clearly, civil service reforms or attempts at such reforms are not new. Since many areas for improvement have already been identified, actions should be taken earnestly to improve them. In particular, priority should be given to the four areas of problems that are prevalent. In conjunction with the reforms, a public sector productivity movement should be instituted to build the capabilities of every part of the public sector so that it can effectively take the lead in implementing the initiatives to drive national productivity. It will also provide a clear signal to the private sector that the government is serious about the national Productivity Movement. The Ministry of Public Administration, together with the NPO, should take the lead in driving the public sector productivity movement.

The ministries and all autonomous statutory agencies should be involved in the public sector productivity movement. For them to do so effectively, the competencies of public sector officers should be enhanced, including the knowledge and skills to implement productivity programs. At the same time, a productivity culture should be developed within the public sector; expectations regarding behaviors and performance should be clearly spelt out; and non-compliance and under-performance should be swiftly dealt with. Depending on the scale of what needs to be implemented, additional budgets could be allocated to each organization.

As active involvement is critical, specific outcome and output targets and accountabilities should be assigned to each organization, and progress in achieving the targets should be closely monitored so that corrective measures can be taken if necessary. Performance assessments and rewards should be linked to the achievement of the targets at the implementing agency level and cascaded down to various levels with their respective targets.

Engagement Partners in the Productivity Movement: Serving as Multipliers

Engagement concerns the strategies to involve major partners in the Productivity Movement. This is important as the key productivity institutions will not be able to reach out to all the target groups

on their own. Engagement partners act as channels and multipliers. As there are many possible engagement partners, the key ones must be identified and their roles clarified. As shown in Figure 14, the key engagement partners in Bangladesh are the business and professional associations, media, trade unions, the APO Society for Bangladesh, and local government organizations. These partners should be roped in to play active roles as intermediaries in reaching out to the target groups.

A comprehensive engagement plan should be worked out. The engagement plan should include identification of the key institutions for reaching out to various segments of the target groups, e.g., the NPO for the industry at large, SMEF for the SMEs, NSDA for the workforce, and Ministry of Public Administration for the public sector. For each of them, the main engagement partners and their involvement, as well as the engagement platforms, should be spelt out. This will ensure a consistent and coherent approach in engaging the target groups.

Communication on the key productivity principles and applications should be customized for each target group to help understanding. The messages should be communicated consistently, and in a manner that resonates with the target group. For example, for the workers, simple and direct messages on how improving productivity leads to higher wages and job security could be used.

Business and Professional Associations

Business and professional associations play a vital role in connecting the business community and the government, as well as in developing the capabilities of enterprises in the respective sectors.

Federation of Bangladesh Chambers of Commerce and Industry (FBCCI)

FBCCI was established in 1973 as the apex trade organization of Bangladesh. It has 505 members, comprising chambers of commerce and industry (86), trade and industrial associations (399), and joint chambers with foreign countries (20). Its functions include: a) coordinate and promote the interest of its members; b) stimulate investment and development of the various sectors; c) project, encourage and safeguard the cause of the private sector through effective participation in the process of consultation and interaction with the government; d) collect and disseminate statistical and other information for advancement of trade and industry; e) disseminate knowledge for promotion of commercial, technical, industrial, and scientific education; and f) study and undertake research for promotion and growth of trade and industry.

As the apex trade organization, it plays a vital role in contributing to the development of commercial, industrial, and fiscal policies at the national level. Besides making representations to the government on a wide range of subjects, it represents the industry in all committees, task forces, and forums of the government and economic agencies that are organized to address issues concerning and affecting the national economy. FBCCI maintains close relations with overseas business associations and economic organizations; and forges bilateral ties between and among countries through its counterpart organizations for commercial and economic cooperation. It helps promote FDI, including joint ventures in Bangladesh and identification of the appropriate partners. In an attempt to meet the specific needs of the industry that are not currently catered to by the existing educational and training institutions, FBCCI will be setting up a FBCCI University (focusing on science, technology, engineering, and mathematics) and an institute for TVET.

To carry out its various areas of work effectively, FBCCI has set up 66 standing committees to deliberate on the key issues of specific sectors and focus areas. Nevertheless, there is no focus on raising the productivity of sectors and enterprises.

Below FBCCI, there are many active chambers of commerce and industries. Examples are the Dhaka Chamber of Commerce & Industries, and the Bangladesh Chamber of Industries. These business associations serve the specific needs of their members and provide valuable networking and training opportunities for them.

[Bangladesh Employers' Federation \(BEF\)](#)

BEF was set up in 1998 as a national organization representing all sectors on matters related to industrial relations, occupational safety and health, workplace cooperation, skills development, labor laws, and other labor-related issues. Its membership comprises 160 large companies and business associations that represent around 6,000 enterprises. BEF is represented on all national bodies/committees concerning labor-management relations; and it renders expert assistance, advice and services to the government, in particular the Ministry of Labor and Employment, in the formulation of various plans and policies. It is a member of the International Organization of Employers and, through it, maintains close touch with employers' organizations in other countries and exchanges views and information on current issues. It represents the employers at the International Labor Conference held every year in Geneva and is the ILO's main counterpart in working with employers' organizations on various labor-related issues in Bangladesh.

Services provided by BEF to its members include: a) direct advisory services on labor problems and guidance to employers in their collective bargaining with the unions; b) monthly meetings in Dhaka and Chittagong of senior personnel and labor welfare officers to facilitate exchange of views and solutions on current topics; c) weekly reports and monthly bulletins to keep members informed of the labor situation; d) collection, compilation, and circulation to members of comparative information on pay scales and terms of service; e) preparation of index of facts and figures to make them available to members and government agencies, as and when needed; and f) limited research on labor-related issues. Management training programs, including seminars and workshops, are conducted regularly.

BEF has not provided assistance to its members on matters related to productivity improvement. The reason is that it lacks both the capacity and the knowledge of productivity concepts and tools.

[National Association of Small and Cottage Industries of Bangladesh \(NASCIB\)](#)

Established in 1984 with facilitation from BSCIC, NASCIB is now the apex trade organization for MSMEs, including cottage industries in the micro category which are not covered by SMEF. Its objectives are to: a) enhance industrialization through the MSME sector; b) improve socioeconomic conditions through development of MSMEs; c) formulate favorable policies for MSMEs through dialog with the government; d) create employment opportunities in the MSME sector; e) encourage the establishment of MSMEs based on indigenous raw materials; f) develop creative cottage industries for local and international markets; g) provide consultancy and advisory services to entrepreneurs of MSMEs; h) conduct research and development activities for promotion of MSMEs; i) encourage and develop women entrepreneurs in MSMEs; and j) safeguard the rights and interests of the MSME sector. It has a membership base of 20,000 MSMEs. To reach out to the MSMEs, NASCIB has offices in 55 districts, managed by one staff each.

NASCIB's activities include training, organization of industrial fairs, provision of business information, and assistance in enterprise development (getting credit, obtaining trade license, introducing technology, etc.). It maintains regular dialog with the government in the formulation of policies for the development of the MSMEs and plays an advocacy and lobbying role in discussions with the government and its various agencies to protect the interests of the sector.

NASCIB provides support to the National and District Offices to offer services to members and other entrepreneurs in the MSME sector. The support includes conducting training programs, carrying out trade and commerce-related activities, and organizing industrial fairs. In the area of productivity, NASCIB works closely with the NPO to organize seminars and activities at the sub-national levels to celebrate the National Productivity Day.

Bangladesh Garment Manufacturers and Exporters Association (BGMEA)

A good example of a trade association that was set up to meet the specific needs of its members is BGMEA, which is one of the largest trade associations in the country today. It was set up in 1983 to represent the RMG industry, particularly the woven garments, knitwear, and sweater sub-sectors. Currently, BGMEA has about 4,500 member factories. Around 60% of the member factories are woven garment manufacturers, and 40% are knitwear and sweater manufacturers. BGMEA member factories account for 100% of woven garment exports of the country, more than 95% of sweater exports, and about half of knitwear exports.

BGMEA's two-fold mission is to protect and promote the interests of the industry, thus ensuring a sustained growth in the foreign exchange earnings of the country; and to ensure all legitimate rights and privileges of the garment workers. It carries out its mission through several activities: a) act as voice of industry and play an advocacy role in discussions with the government; b) promote safety and sustainability practices among member factories, and ensure workers' rights and social compliance at factories; c) collaborate with the government and other development partners in running different programs to promote good environmental practices in the factories; and d) run skills development programs to enhance productivity in the industry. As part of its social responsibility, it operates free hospitals, health centers, and schools for its members' workers and their children.

BGMEA has its own BGMEA University of Fashion & Technology (BUFT) in a permanent campus. Set up in March 2012 under the Private University Act 2010, BUFT aims to produce technically competent human resources for the RMG industry. Its predecessor was the BGMEA Institute of Fashion & Technology (BIFT), set up in 1999 and affiliated with the National University. BUFT offers graduate, diploma, and certificate-level courses.

Besides training, BGMEA has not had structured programs to help the RMG industry or its individual members to improve the productivity of their operations. It has just started the process of undertaking research on a baseline study of the productivity of the RMG industry. BGMEA is also reviving a Productivity Cell which was formed some time back but had been dormant, to give greater attention to productivity matters in the RMG industry. Issues that BGMEA will address include understanding the specific needs and problems of RMG factories by size of operation; planning and forecasting of RMG demand and supply; costing and purchasing practices, including negotiation; pre-production planning to optimize use of production lines; and scaling up the product value chain from basic garments to high-end garments.

Professional Associations

Besides business associations, which cater to the general business needs of enterprises, there are professional associations that serve the needs of specific professions such as finance, engineering, and human resources. Examples are the Engineering Institution of Bangladesh, the Bangladesh Economic Association, and the Bangladesh Society for Human Resources Management. These professional associations provide various services such as training, consultancy, and surveys to improve the capabilities of their members in the respective professions.

Since business associations represent the industry, they serve as good outreach platforms to spread the productivity message to the various industries and to help them upgrade through various programs. With their wide representation of businesses, FBCCI, BEF, and NASCIB should be engaged as key engagement partners of the Productivity Movement.

Below the federation or apex level, the various business associations, including trade associations, representing specific industry interests should also be brought into the fold of the Productivity Movement. As the experience of BGMEA has shown, these associations can play the important role of promoting programs that meet industry-specific needs.

Professional associations should be engaged to take the lead in building the capabilities of their members in specific productivity-related areas and in supporting enterprises to raise productivity, e.g., by introducing financial practices that save costs.

To perform their roles effectively, the business associations at various levels as well as the professional associations will need to be aware of the concepts and tools of productivity and have the requisite knowledge, resources, and capabilities. They will also need to be equipped with the skills to assist their members in productivity upgrading. The NPO should play a facilitative role to strengthen their capabilities.

Media

The media can play an important role in promoting the Productivity Movement, educating enterprises and the public on various productivity programs, and shaping opinions on all matters related to productivity.

There is a wide range of mass media, including print, broadcast (television and radio), and online media, in the country. The number of state-run media is limited while private media is on the rise. Bangladesh Sangbad Sangstha (BSS) is the only state-owned news agency, while the United News of Bangladesh is the very first private and computerized news agency of the country established in 1988. The print media consist of various dailies, weeklies, biweeklies, quarterlies, and monthlies in the English and Bengali languages, appealing to different segments of the society. In terms of circulation, *The Daily Prothom Alo* is the largest-selling newspaper in Bangladesh. It is published in the Bengali language and read by half a million people every day. *The Daily Star* is the largest-selling English newspaper in Bangladesh. Television is the biggest source of entertainment for the people. There is a single state-owned national television station named Bangladesh Television (BTV), which operates a popular channel called BTV World. The number of private television stations totals 31. Bangladesh Betar is the only state-run radio broadcasting organization. In addition, there are 24 FM radio stations and 32 community radio stations. Internet-based news portals, providing up-to-date news and information, are also available in Bangladesh. There are now more than 1,500 online news outlets.

In an attempt to check abuses of the media, the government passed two Acts in 2018. First, in September, the Digital Security Act 2018 came into force. The purpose of the Act is “to ensure national digital security and enact laws regarding digital crime identification, prevention, suppression, trial, and other related matters.” The Act allows the police to arrest an individual if they believe that an offence under the law has been or is being committed or there is a possibility of committing crimes or destroying evidence. To fulfil the objective of the Act, a Digital Security Agency will be set up. Second, in October, the Cabinet approved the National Broadcast Act 2018.

The purpose of the Act is to enact a new law to regulate broadcasting media and news portals. Under the Act, media outlets could be fined, lose their licenses or see staff jailed if they publish or broadcast anything deemed to be “false” or against the national interest. An independent national broadcasting commission will be created for this purpose. The two Acts are seen by critics as further measures by the government to restrict freedom of speech and expression and to silence dissenters. Even before these Acts, Bangladesh was rated 146 out of 180 countries in the 2018 World Press Freedom Index by Reporters Without Borders. Nevertheless, the government’s justification is that these Acts are necessary in the interest of the country and to protect individuals.

From the point of view of the Productivity Movement, the current situation is one where the media is not actively engaged in the national productivity drive. Government agencies use the traditional print and broadcast media as platforms to publish news and activities on an ad hoc basis. However, they are generally not open to sharing information with the media, due to a lack of understanding of how they can leverage the media and the fear that the media will portray them in bad light.

In view of their wide reach, the traditional media should be embraced as a major partner in promoting the Productivity Movement. Hence, they should be educated on productivity-related matters and their importance to employees, enterprises, sectors, and the economy. There should be cultivation of relationship with selected media partners, correspondents, and beat reporters to ensure continuous and accurate coverage of productivity-related news, articles, and interviews. In particular, the state-owned BBS, BTV, and Bangladesh Betar and the two major newspapers, *The Daily Prothom Alo* and *The Daily Star*, should be engaged to actively promote the Productivity Movement. The productivity drivers and other key institutions should build up their expertise in leveraging and engaging them in the Productivity Movement. For example, they could be involved as partners in the formulation of the engagement strategies with the target groups, and not just as a mouthpiece at the end of the process. The key institutions could also proactively provide inspiring success stories to the media to feature, so that others can emulate them. Examples of success stories are the NPO’s National Productivity and Quality Excellence Award winners, and individuals and enterprises that have made a difference because of their commitment to productivity. Besides inspiring individuals and enterprises to excel in productivity, these success stories will help build a productivity culture.

With its widespread use, especially among the young, social media should be capitalized upon to advance the Productivity Movement. The government has stated its intention to use social media to increase interactions with the community. To influence public conversation on the Productivity Movement, the key institutions must actively participate in that conversation, which, in today’s digital age, is on social media. They should use social media to rally public sentiment and support for the Productivity Movement through the use of targeted and concise messaging. Unlike the traditional media, social media enables instant messaging and provides real-time listening and monitoring of views and discussions.

Trade Unions

Trade unions, as organizations representing workers, can play a critical role in mobilizing workers and working with employers to drive productivity. They can also support the skilling and reskilling of the workforce.

The trade union movement in Bangladesh is complex, as there is a multiplicity of trade unions, which results in lack of collective strength. According to the book *Trade Unions of the World 2016*,

by International Centre for Trade Union Rights, an NGO that has accredited status with the UN Economic and Social Council and the ILO Special List of International NGOs:

“Bangladesh has a highly complex trade union movement, with dozens of trade union centres and numerous industrial federations. The industrial relations framework emphasizes a workplace structure, placing the national centres at something of a distance from day to day bargaining. Numerous sectors are excluded from the framework, with the result that unions organising in these sectors risk criminal and civil liabilities. A rush of labor law reforms have not solved the core problems, and lawful and effective union organizing in the crucial export zone factories remains highly restricted by the legislation.

The recent history of the labor movement in Bangladesh has been of violence, repression, and a series of industrial disasters, culminating in the awful events of 2013, when the Rana Plaza factory collapsed, killing more than 1200 workers and injuring thousands more. In the decade leading up to the collapse the background for labor rights was extremely serious, featuring several serious industrial accidents, rising anger at pay and conditions, highly problematic laws that keep unions out of export zones, and numerous serious incidents of violent anti-union repression, including many killings.

Of the many rival trade union centres, two coordinating bodies are loosely associated with the International Trade Union Confederation and its predecessor the International Confederation of Free Trade Unions – the Sramik Karmachari Oikya Parishad, established in the 1980s, originally affiliated 22 national centers, and currently reports 16 centers in affiliation, and continues to play an important role as a national policy liaison point. The National Coordination Committee for Workers’ Education (NCCWE) is another platform of 13 national centers that work with the Bangladesh Institute of Labour Studies. The influence of socialist and communist politics has been strong in the Bangladeshi labour movement.”

In view of the complex structure of the union movement in Bangladesh, the ILO has adopted the strategy of working with union counterparts at various levels. At the national level, collaboration takes place with NCCWE as it is “a united platform of 13 major national trade union federations in Bangladesh who represent the maximum number of workers and employees of the country.” At the sectoral level, collaboration takes place with both NCCWE and the IndustriALL Bangladesh Council, which has a strong presence in the RMG industry and is affiliated with the IndustriALL Global Union. This approach takes into account the relative presence, strengths, and needs of unions at the various levels

Similarly, the NPC and the NPO should map out the key trade union bodies to be engaged at different levels, as well as the modes of engagement. The trust of these trade union bodies should then be built up. Thereafter, the purpose of the Productivity Movement and its benefits to workers, and the roles of the trade unions, can be explained to them. Such engagements with the trade unions cannot be overemphasized as a stable tripartite relationship between employers, labor, and the government is critical for the Productivity Movement to be successful.

With the labor unions brought in as a key partner in the Productivity Movement, they should then be educated and trained in greater detail on the concepts and tools of productivity and how these can be applied in the workplace with workers’ involvement. They can subsequently serve as effective multipliers to reach out to workers to involve them in various productivity-related

activities. Regular engagement with the trade unions is critical to strengthen the bonds with them. They should be updated periodically on the progress of the Productivity Movement and on any new initiatives in the pipeline that may impact workers. There should be no surprises when any program is launched.

APO Society for Bangladesh

The APO Society for Bangladesh was set up as a non-profit organization in 1991. Its membership is restricted to individuals who have participated in APO programs. Currently, it has about 400 members. Its objective is stated as “to propagate the concept and spread the message of productivity with a view to help accelerate the economic development of Bangladesh.” Three of its activities to achieve this objective are: a) promoting fraternity among the ex-participants of APO programs and upgrading their knowhow on productivity through appropriate professional and other activities; b) organizing appropriate programs to provide a multiplier effect from the APO programs; and c) developing and publishing books, journals, folders, brochures, and publicity materials on productivity to be used for different levels of productivity education and practice.

Since the APO Society for Bangladesh comprises individuals who have participated in APO programs, it means that there is a group of people who have been trained in various areas of productivity. A database of these people, the areas that they have been trained in, and their competencies should be compiled and updated regularly. They should then be actively engaged to act as multipliers of the productivity knowledge gained. This can be done in a couple of ways. First, when they complete their participation in an APO program, they should be asked to conduct a seminar or workshop for the industry; and the materials used could be widely disseminated by putting them online. This should be made an obligation for participation in APO programs. Second, they can be engaged to lead various productivity projects undertaken by the NPO.

There should be greater publicity of the APO Society for Bangladesh to raise interest in productivity, as well as in the APO and its programs. The NPO should co-organize more activities such as conferences, seminars, workshops, and training programs with the APO Society. This will raise the profile of the events, as well as underline the importance placed by the government on productivity, in view of the APO name. Adequate recognition should also be given to the APO Society and the individuals who contribute actively to the Productivity Movement.

Local Government Organizations

There are various levels and types of local government organizations as shown in Table 19. Below the central government, there are eight divisions and 64 administrative districts. The tiered system of local government starts below the district level. This comprises single-tier urban authorities made up of 11 city corporations (at the division level) and 329 municipalities (paurashavas, in other towns); and a three-tiered rural local government system comprising 64 zila (district) parishads, 492 upazila (sub-district) parishads, 4,573 union parishads, and three hill district parishads.

The range of functions for which each type of authority is responsible varies widely: from provision of public health and hospitals, education, and social welfare for city corporations and municipalities to implementation of development projects, public libraries, and roads for upazila and union parishads. Currently, they have no specific role in the Productivity Movement apart from the fact that the National Productivity Day celebration has now been extended to the sub-district level.

TABLE 19

LEVELS AND TYPES OF LOCAL GOVERNMENT ORGANIZATIONS

Division	District (zila parishad)	Sub-district (upazila parishad)	Rural local government		Urban local government		Total local authorities
			Union parishad	Hill district parishad	City corporation	Municipality	
Barisal	6	42	356	0	1	25	431
Chittagong	8	103	959	3	2	64	1,139
Dhaka	13	88	886	0	4	63	1,054
Khulna	10	59	581	0	1	36	687
Mymensingh	4	35	353	0	0	28	420
Rajshahi	8	67	565	0	1	62	703
Rangpur	8	58	535	0	1	31	633
Sylhet	4	40	338	0	1	19	402
Total	64	492	4,573	3	11	329	5,469

Since local government organizations are present throughout the country, they can play a crucial role in promoting productivity programs to enterprises in both the urban and rural areas. In particular, they can be catalysts in rural development. A good start has already been made in involving them in the organization of the annual National Productivity Day. However, they are handicapped by shortage of manpower and financial resources, and inadequate competencies in public administration. There are also the problems of lack of accountability of the local government organizations, and insufficient monitoring of the performance of these organizations.

The capabilities of the local government organizations need to be strengthened for them to play an effective role in the Productivity Movement. In particular, their capacity to implement productivity programs and reach out to workers and enterprises should be built up. The staff of these organizations should be educated and trained on productivity techniques and their applications in the local context. Adequate resources should be given to them to carry out their tasks. They should then be made accountable for the progress of implementing the programs and for the targets given to them.

CONCLUSION

In her message for Bangladesh's National Productivity Day 2018, Prime Minister Sheikh Hasina said:

“Recent performance in economic growth and changes in social indicators of Bangladesh has drawn the attention of the global economist, political and business community. It is very important to increase productivity in every sector for sustainable development.

The Awami League government has been striving hard to turn Bangladesh into a middle income country by 2021 and developed- and prosperous one by 2041. To achieve this goal, it is inevitable to improve productivity in all sectors. For this reason, awareness on productivity among the mass people is very essential.”

The clear message is that attention must be given to increasing productivity in all sectors of the economy to support the country's economic goals. This is the message that prevails in the Bangladesh National Productivity Master Plan FY2021–FY2030. The Master Plan sets out a high-productivity growth strategy to raise productivity in all sectors and the economy as a whole. This will drive economic growth to achieve the goals of Bangladesh becoming an upper-middle-income country by 2021 and a developed country by 2041. Without such a strategy, Bangladesh's productivity will grow at a slow pace at best and languish at worst.

The vision for the high-productivity growth strategy, termed Productivity 2031, comprises the stretch target of 5.6% average annual productivity growth and five goals for the 10-year period of 2021–31. These goals cover all aspects of the economy that are important for sustained high-productivity growth.

The critical factor for the realization of Productivity 2031 is the integrated framework that underpins the high-productivity growth strategy. The framework comprises three related parts. The first part is the adoption of a holistic approach to productivity management, covering all the proximate factors and enablers affecting national productivity. This approach comprises 11 strategic thrusts to achieve Productivity 2031. The second part is the execution of the holistic approach through a high-profile Productivity Movement. The third part is the strengthening of the productivity ecosystem of key institutions and engagement partners to drive the Productivity Movement. All three parts are currently lacking in Bangladesh.

The challenge is to institutionalize the integrated framework in Bangladesh and ensure good and timely implementation of the Master Plan. This will require top-level commitment from the government, as well as the involvement of the stakeholders of the Productivity Movement including all enterprises and the workforce. Productivity must be top on the country's economic agenda.

ANNEXURE

IMPLEMENTATION STRUCTURE

No.	Strategy	Institution in charge	FY2021–25			FY2026–30
A. Strategic thrusts						
1	Raise SMEs to a higher plane to break out of low-productivity-low-growth vicious cycle					
a.	Strengthen SMEF as apex SME agency to uplift the large number of SMEs to a higher plane	Ministry of Industries				Review progress every two years.
b.	Adopt a tiered approach in developing SMEs	SMEF				Review progress and strategy every three years.
c.	Identify and groom promising SMEs for growth through customized assistance	The NPO, working with SMEF				Review progress and strategy every year.
2	Scale up core of innovative and agile large enterprises to drive the economy's productivity					
a.	Provide customized assistance to large enterprises to grow into global enterprises	The NPO, working with relevant ministries and government agencies				Review core of large enterprises, progress, and strategy every year.
b.	Transform operations of large RMG enterprises, and develop more large non-RMG enterprises	The NPO, working with relevant ministries				Review progress and strategy every two years.
c.	Drive productivity improvement in SOEs, and improve their performance management system	Ministry of Finance, working with the NPO				Bulk of the work should be done in the first three years. Review progress and strategy thereafter.
3	Promote productivity in all the sectors without compromising sustainable development					
a.	Promote sector-customized messages on productivity as the key driver of growth in each sector	The NPO, together with relevant ministries				Review strategy and progress every three years.
b.	Promote sustainable development practices in each sector	The NPO, together with Ministry of Environment, Forests and Climate Change and other Ministries				Review strategy and progress every two years.
4	Modernize and diversify agriculture beyond rice and crop production					
a.	Improve and modernize all aspects of the rice value chain	Ministry of Agriculture				Review strategy and progress every three years.
b.	Diversify crop production beyond rice	Ministry of Agriculture				Review strategy and progress every three years.
c.	Step up diversification into fisheries and livestock (non-crop production)	Ministry of Fisheries and Livestock				Review strategy and progress every three years.
5	Strengthen and enlarge the industrial base beyond readymade garment manufacturing					
a.	Shift RMG manufacturing to higher ends of production value chain	Ministry of Textiles and Jute				Review progress and strategy every three years.

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No.	Strategy	Institution in charge	FY2021–25			FY2026–30
b.	Diversify into selected areas of light industries and heavy manufacturing (intermediate or capital goods)	Ministry of Industries				Review progress and strategy every three years.
c.	Transform construction industry into a high-skill, capital- and technology-intensive industry	Ministry of Housing and Public Works				Review progress and strategy every three years.
d.	Develop the energy industry, including attracting investments from the private sector	Ministry of Power, Energy and Mineral Resources				Review progress and strategy every three years.
6	Transform traditional services and accelerate the growth of modern and exportable services					
a.	Regulate growth of businesses and employment in traditional services industries and upgrade their productivity	Ministry of industries, Ministry of Commerce				Review progress and strategy every two years.
b.	Improve education and training of workers for employment in higher-paying jobs overseas to increase remittances to Bangladesh	Ministry of Labor and Employment				Review progress and strategy every three years.
c.	Diversify services exports beyond factor services (labor).	Ministry of Commerce, Ministry of Civil Aviation and Tourism				Review progress and strategy every three years.
d.	Expand modern services, in particular the ICT industry.	Ministry of Commerce, Ministry of Information, Ministry of Posts and Telecommunications				Bulk of work to be done in first five years. Review progress and strategy thereafter.
7	Drive growth of new high-value-added industries in top end of product space, and expand and strengthen capabilities of existing core industries					
a.	Develop high-value-added, high-productivity industries in the three sectors	Ministry of Agriculture, Ministry of Industries, Ministry of Commerce				Review progress and strategy every three years.
b.	Expand and strengthen core industries of rice, RMG, and factor (labor) services exports	Ministry of Agriculture, Ministry of Industries, Ministry of Commerce, Ministry of Labor and Employment				Review progress and strategy every two years.
c.	Transit informal employment into formal employment	Ministry of Labor and Employment				Review progress and strategy every two years.
8	Plug gaps in the skills development system and step up skilling and reskilling of the workforce					
a.	Improve all quality aspects of the education and training system	Ministry of Primary and Mass Education, Ministry of Education, NSDA				Review progress and strategy every three years.
b.	Institute a system to ensure that education and training institutions are responsive to industry needs	Ministry of Education, Ministry of Labor and Employment, NSDA				Review progress and strategy every two years.

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No.	Strategy	Institution in charge	FY2021–25					FY2026–30					
c.	Beef up the quality assurance system for skills development.	NSDA, BTEB										Review progress and strategy after three years.	
d.	Develop programs to build generic cognitive and non-cognitive competencies	NSDA										Review progress and strategy after two years.	
e.	Promote productivity culture	The NPO, together with Ministry of Education and Ministry of Labor and Employment										Review progress and strategy every three years.	
9	Intensify technology development and diffuse its applications widely in every sector												
a.	Build capabilities in R&D, with emphasis on applied R&D and technology diffusion and commercialization	BCSIR										Review progress and strategy every two years.	
b.	Explore alternative routes to technology commercialization, including technology fusion	BCSIR, Ministry of Industries										Review progress and strategy every two years.	
c.	Invest in ICT infrastructure and promote ICT applications	Ministry of Information, Ministry of Posts and Telecommunications										Review progress after three years.	
d.	Prepare enterprises and the workforce for Industry 4.0 by investing in infrastructure and training	The NPO, working with Ministry of Industries and BCSIR										Review progress after two years.	
10	Remove all obstacles faced by businesses and improve every aspect of the business environment												
a.	Make concerted efforts to improve all factors that affect the ease of doing business	The NPO, together with relevant government agencies										Review progress every year.	
b.	Sustain good industrial relations through regular dialogs involving the tripartite partners of employers, unions, and government	Ministry of Labor and Employment										Review progress every two years.	
11	Collaborate with relevant institutions to improve macro enablers continually												
a.	Provide regular feedback on legislation and regulations that may impede business operations and growth	The NPO, working with relevant Ministries											
B. Productivity Movement													
a.	Position Productivity Movement strategically in relation to economic plans	NPC and the NPO										Review progress every year.	

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No.	Strategy	Institution in charge	FY2021–25				FY2026–30				
b.	Develop action plans associated with the 11 strategic thrusts for implementation	Relevant ministries, together with the NPO			Review progress every two years.						
c.	Promote Productivity Movement through National Productivity Day and year-long plan of productivity initiatives	The NPO									
C. Productivity ecosystem: Institutions and partners											
I. Key institutions											
a.	The NPC: Expand scope of responsibilities to oversee National Productivity Master Plan implementation and review	Ministry of Industries									
b.	The NPO: Expand scope of work to become a full-fledged national productivity agency	Ministry of Industries									
c.	SMEF: Enlarge responsibilities to become a full-fledged SME development agency	Ministry of Industries									
d.	BSCIC: Take strategic approach to development of industrial estates, including supporting enterprise growth	Ministry of Industries			Review progress and strategy every two years.						
e.	BCSIR: Step up role in promoting science and technology, developing indigenous technology, and diffusing technology applications in the industry	Ministry of Science and Technology			Review progress and strategy every two years.						
f.	BSTI: Enlarge responsibilities to include using standards and standardization to drive productivity	Ministry of Industries			Review progress and strategy every two years.						
g.	NSDA: Expedite implementation of skills development initiatives	NSDA		Review progress every year.							
h.	Public sector: Institute a public-sector productivity movement	Ministry of Public Administration		Review progress every year.							
II. Engagement partners											
a.	Bring on board engagement partners and work out an engagement plan to reach out to target groups	The NPO		Review progress every year.							
b.	Business and professional associations: Strengthen their capabilities to assist the industry	The NPO		Review yearly and sustain the engagement.							

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No.	Strategy	Institution in charge	FY2021-25		FY2026-30
c.	Media: Cultivate traditional media and use social media to profile the Productivity Movement and promote productivity	The NPO, together with the other key institutions			Review yearly and sustain the engagement.
d.	Unions: Forge strong partnership with, as well as gain trust of, key trade union bodies at different levels to support the Productivity Movement	Ministry of Labor and Employment, together with the NPO			Review yearly and sustain the engagement.
e.	APO Society for Bangladesh: Leverage the members to multiply productivity knowledge	The NPO			Review yearly and sustain the engagement.
f.	Local government organizations: Strengthen their capabilities to implement productivity programs for the industry	The NPO, together with Ministry of Local Government and Rural Development & Cooperatives			Review progress every three years.

ABBREVIATIONS

ADB	Asian Development Bank
APO	Asian Productivity Organization
APO20	20 APO member economies
BAB	Bangladesh Accreditation Board
BBS	Bangladesh Bureau of Statistics
BCSIR	Bangladesh Council of Scientific & Industrial Research
BEF	Bangladesh Employers' Federation
BEZA	Bangladesh Economic Zones Authority
BGMEA	Bangladesh Garment Manufacturers and Exporters Association
BIDA	Bangladesh Investment Development Authority
BITAC	Bangladesh Industrial Technical Assistance Centre
BJMC	Bangladesh Jute Mills Corporation
BPO	Business process outsourcing
BSCIC	Bangladesh Small and Cottage Industries Corporation
BSS	Bangladesh Sangbad Sangstha
BSTI	Bangladesh Standards and Testing Institution
BTEB	Bangladesh Technical Education Board
BTV	Bangladesh Television
BUFT	BGMEA University of Fashion & Technology
EPZ	Export processing zone
EU	European Union
FBCCI	Federation of Bangladesh Chambers of Commerce and Industry
FDI	Foreign direct investment
GCI	Global Competitiveness Index
GCR	Global Competitiveness Report
GDP	Gross domestic product
GII	Global Innovation Index
GNI	Gross national income
HYV	High-yield variety
ICT	Information and communication technology
ILO	International Labor Organization
IMF	International Monetary Fund
IT	Information technology
ITU	International Telecommunication Union

ABBREVIATIONS

KPO	Knowledge process outsourcing
LFPR	Labor force participation rate
MFA	Multi-Fibre Agreement
MSMEs	Micro, small and medium enterprises
NASCIB	National Association of Small and Cottage Industries of Bangladesh
NCCWE	National Coordination Committee for Workers' Education
NGO	Non-government organization
NPC	National Productivity Council
NPEC	National Productivity Executive Committee
NPO	National Productivity Organisation
NSDA	National Skills Development Authority
NSDC	National Skills Development Council
NTVQF	National Technical and Vocational Qualifications Framework
PPP	Purchasing power parity
R&D	Research & development
RMG	Readymade garment
SMCI	Small, medium and cottage industries
SME	Small (including micro and cottage) and medium enterprise
SMEF	SME Foundation
SOE	State-owned enterprise
TFP	Total factor productivity
TVET	Technical and vocational education and training
TVT	Technical and vocational training
UN	United Nations
USA	United States of America
UNCTAD	United Nations Conference on Trade and Development
UNDP	United Nations Development Programme
WHO	World Health Organization

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