State of the Bangladesh Economy in FY2023-24

Third Reading

(Draft)

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Contents

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SECTION I. INTRODUCTION

The Bangladesh economy is currently under significant strain due to several ongoing challenges. While external factors such as the COVID-19 pandemic and the Ukraine war have left their mark, persistent domestic issues—such as policy weaknesses, poor governance, and failure to implement necessary reforms—have also contributed to the difficulties. These ingrained structural weaknesses have exacerbated the pressures on Bangladesh's economy.

During the first three quarters of FY2024 the Bangladesh economy has faced significant pressure. This was evidenced by subdued revenue mobilisation, resulting in a shrinking fiscal space, a high reliance on government borrowing from commercial banks to finance the budget deficit, tightened liquidity in scheduled banks, elevated prices of essential goods, and a deteriorating external sector balance and foreign exchange reserves. Indeed, these challenges were also evident in FY2023 which led the government of Bangladesh (GoB) to initiate a 42-month programme supported by the International Monetary Fund (IMF) in February 2023 to improve balance of payment and restore macroeconomic stability. After more than a year of the IMF programme, the economy is yet to show any improvement on the attendant concerns. Recently, the central bank has adopted policy measures such as market-based interest rates and exchange rates in an attempt to control inflation and improve forex reserves. The success of these policies will depend on consistent fiscal policies.

In this regard, it is expected that the upcoming national budget for FY2025 to be placed at the national parliament on 6 June 2024 will address these issues and help the economy to bounce back and support people who are in distress.

This review of the current FY2024, prepared under CPD's flagship *Independent Review of Bangladesh's Development (IRBD)* programme offers analysis of the economy that is passing through difficult times throughout the fiscal year. The current IRBD presents discussions on the performance of a few selected issues. These are: growth and employment, public finance, inflation, external sector, agricultural commodities, and power and energy.

SECTION II. GROWTH AND EMPLOYMENT

Context

Ongoing macroeconomic instability and consequent policy adjustments, largely influenced by the International Monetary Fund (IMF) conditionalities, surely affected the country's economic growth prospects. In this context, the debate concerning the trade-off between economic growth and macroeconomic stability has once again come to the fore. While stabilising the macroeconomic situation with corrective measures might entail some adverse impacts in the short term, they ultimately prove to be beneficial in the medium to long term if supported by complementary macro-management policies (Stiglitz et al., 2006). It must also be mentioned that stabilisation packages prescribed by multilateral agencies such as the IMF often prioritise stability over growth (Bird, 1996; Przeworski & Vreeland, 2000). However, as was observed from the past experiences of developing countries, there are divergences in the results of such packages (Abbott, Andersen & Tarp, 2010; Taylor, 1988).

In Bangladesh, it is a matter of regret that it has become customary to set targets concerning the macroeconomic framework that are not consistent with ongoing realities (CPD, 2023). For FY2024, the government initially targeted a gross domestic product (GDP) growth of 7.5 per cent despite existing distresses in the macroeconomic scenario. As per the Monetary Policy Statement (MPS) of the Bangladesh Bank, released in January 2024, this target was revised down to 6.5 per cent. Several multilateral agencies were less optimistic regarding Bangladesh's GDP growth prospects. For instance, the Asian Development Bank (ADB) projected Bangladesh's GDP growth in FY2024 to be 6.1 per cent (ADB, 2024). Similarly, the IMF and World Bank projected the corresponding figure to be 5.7 per cent and 5.6 per cent, respectively (IMF, 2024; World Bank, 2024).

GDP growth

The provisional estimates of the Bangladesh Bureau of Statistics (BBS) predicted a GDP growth rate to the tune of 5.82 per cent in FY2024 – a marginal increase from the growth recorded in FY2023 (Figure 2.1).

Figure 2.1: GDP growth of Bangladesh (in per cent)
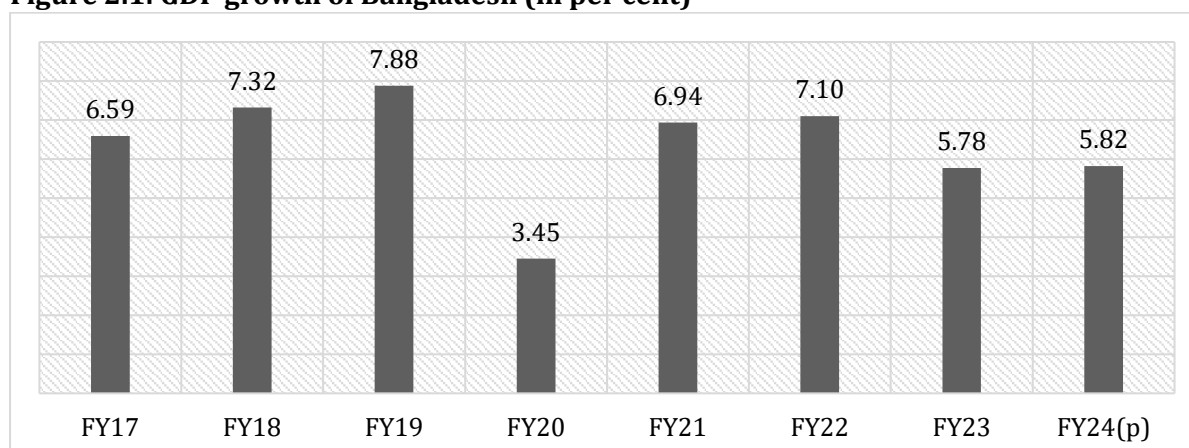
Source: Author's compilation from BBS data.
Note: 'P' denotes provisional estimates.

This estimate, however, was made largely on the basis of the data of the first six to seven months of the ongoing fiscal year and the original programmed national budget, which were surely

overestimated. Hence, the final estimate may be revised downwards once the required data for the entire fiscal year becomes available. This has been the case for the last two fiscal years, i.e., FY2022 and FY2023.

Sources of provisional GDP growth

In the incremental GDP of FY2024, the agriculture and industry sectors are expected to contribute about 6.0 per cent and 41.7 per cent, respectively. The services sector accounted for nearly half of the incremental GDP in FY2024 (49.2 per cent). One of the major contributors to incremental GDP in recent decades, the manufacturing subsector, is projected to contribute only 27.2 per cent to the incremental GDP. This is considerably lower than the corresponding figure for FY2023 (36.0 per cent).

The agriculture sector is estimated to grow modestly by 3.21 per cent, whereas the industry sector posted a growth of 6.66 per cent. Within the industry sector, manufacturing and construction subsectors registered notable growth of 6.58 and 7.45 per cent, respectively. The services sector grew by 5.80 per cent in FY2024. Within services, wholesale and retail trade combined with the repair of motor vehicles, motorcycles, and personal and household goods recorded a growth of 6.19 per cent.

Per capita income

Per capita GDP stood at USD 2,675 in FY2024, while per capita GNI stood at USD 2,784, recording 1.21 per cent and 1.27 per cent annual growth rates, respectively. While the growth, although marginal, is encouraging, the per capita income in dollar terms is still below that of FY2022. The rapid depreciation of BDT against USD is a significant contributing factor to this end. Indeed, the exchange rate considered for this estimation (Tk. 109.97 per USD) will also not be valid by the end of FY2024 in view of the recent significant depreciation (Tk. 117.77 per USD). It must also be noted that these average measures conceal a highly skewed income distribution. One may apprehend further deterioration of the inequality situation in the country considering high food inflation as food costs consist of a much higher share in the total consumption basket for lower-income households.

Investment

During the last five years (FY2020-FY2024), the gross investment-GDP ratio has decreased by 0.33 percentage points. Gross investment was 31.31 per cent of GDP in FY2020, while it crawled down to 30.98 per cent in FY2024 (Table 2.1). Private investment-GDP ratio decreased from 24.18 per cent in FY2023 to 23.51 per cent in FY2024. An uptick in public investment compensated for this slack in private investment. Given the current sluggish implementation of the Annual Development Programme (ADP), whether the provisional estimate for the public investment-GDP ratio will hold remains a question.

Table 2.1: Investment-GDP ratio in Bangladesh (in per cent)

Investment type	FY20	FY21	FY22	FY23	FY24(p)
Total	31.31	31.02	32.05	30.95	30.98
Private	24.02	23.70	24.52	24.18	23.51
Public	7.29	7.32	7.53	6.77	7.47

Source: Author's compilation from BBS data.
Note: 'P' denotes provisional estimates.

Disaggregated dynamics of GDP

It is encouraging to see that BBS is publishing quarterly estimates of GDP on a regular basis. The availability of the provisional GDP estimates for the entire FY2024 as well as the first two quarters creates the opportunity to investigate the growth dynamics of Bangladesh in a more disaggregated (e.g., quarterly or half-yearly) manner.

As Table 2.2 shows, BBS estimated a 6.74 per cent growth of the Bangladesh economy during the second half (H2) of FY2024. This is a divergence from the trend of the last two fiscal years, as GDP growth usually declines during H2 of a particular year. Also, the below 5 per cent growth rate in H2 FY2023 and H1 FY2024 indicates economic distress. In this scenario, the key question is whether the economy will actually be able to attain a 6.74 per cent growth during H2 FY2024, or not.

Table 2.2: Half-yearly GDP growth of Bangladesh (in per cent)

Industrial origin sector	FY22		FY23		FY24(p)	
	H1	H2	H1	H2	H1	H2
A. Agriculture	**2.99**	**3.12**	**2.35**	**4.39**	**3.02**	**3.39**
1 Agriculture, forestry and fishing	2.99	3.12	2.35	4.39	3.02	3.39
B. Industry	**11.01**	**8.80**	**8.69**	**8.06**	**6.21**	**7.08**
2 Mining and quarrying	-3.07	0.61	11.35	13.90	5.22	10.11
3 Manufacturing	12.11	10.76	10.10	7.77	5.18	7.92
4 Electricity, gas and water supply	5.24	7.55	6.06	-0.15	-0.11	1.25
5 Construction	11.95	5.84	5.03	8.80	10.05	5.10
C. Services	**5.76**	**6.70**	**8.13**	**2.93**	**3.39**	**8.05**
6 Wholesale and retail trade; repair of motor vehicles and motorcycles	13.08	4.72	10.53	2.74	4.57	7.72
7 Transportation, accommodation and food service, information and communication	5.22	5.92	7.41	3.97	2.07	8.76
8 Financial and insurance activities	5.72	6.01	3.33	1.80	1.14	8.45
9 Real estate, professional and administrative and support service activities	0.40	7.44	5.54	2.72	2.33	5.71
10 Public administration, health and education	0.80	13.22	10.78	3.52	7.51	9.63
11 Art, recreation and other service	5.85	1.04	5.58	1.30	-1.96	8.32
GDP at constant price	**7.24**	**6.97**	**7.06**	**4.59**	**4.84**	**6.74**

Source: Author's calculation from BBS data.
Note: 'P' denotes provisional estimates.

The growth in H2 FY2024, as predicted by the BBS, is expected to be primarily driven by manufacturing, followed by wholesale and retail trade, repair of motor vehicles and motorcycles; public administration, health and education; and transportation, accommodation and food service, information and communication sectors. In fact, recovery, in terms of growth, is expected in all four sectors. However, the actual scenario might end up being quite different. For instance, from the Index of Industrial Production (IIP) data released by the BBS, it was observed that manufacturing production exhibits a generally upward trend during the H1 period of a fiscal year, and the reverse happens during H2. If this trend continues in FY2024, then the anticipated GDP growth in the manufacturing sector during H2 FY2024 might not materialise. The trends in import payments for capital machinery and intermediate products during the early months of H2 FY2024 also support this notion. Also, it is highly likely that budgetary targets were considered while estimating the GDP for public administration, health and education. Since these targets are usually not attained, the estimated GDP growth in this sector may be revised downward. Furthermore, the consideration of GDP deflator is also a matter of concern. During H2 FY2024,

only a 1.34 per cent growth of GDP deflator was considered. However, this is far from the reality, as CPI inflation has remained over 9 per cent throughout FY2024.

GDP and employment

The quarterly GDP estimates and labour force survey (LFS) data from BBS have extended an opportunity to look into the growth-employment nexus on a regular basis. From Figure 2.2, it can be observed that the employment elasticity of GDP (i.e., how employment varies with economic output growth) shows a downward trend. This implies that the economy's ability to generate employment is slowing down. Another salient feature that can be inferred from Figure 2.2 is that the pattern of employment is reverting to its original state. This means that people are gradually shifting from primary (i.e., agriculture) to secondary (i.e., industry) and tertiary (i.e., services) sectors. As may be recalled, the reverse trend happened in the aftermath of the COVID-19 pandemic (often labelled as the reverse structural transformation).

Figure 2.2: Employment elasticity of GDP
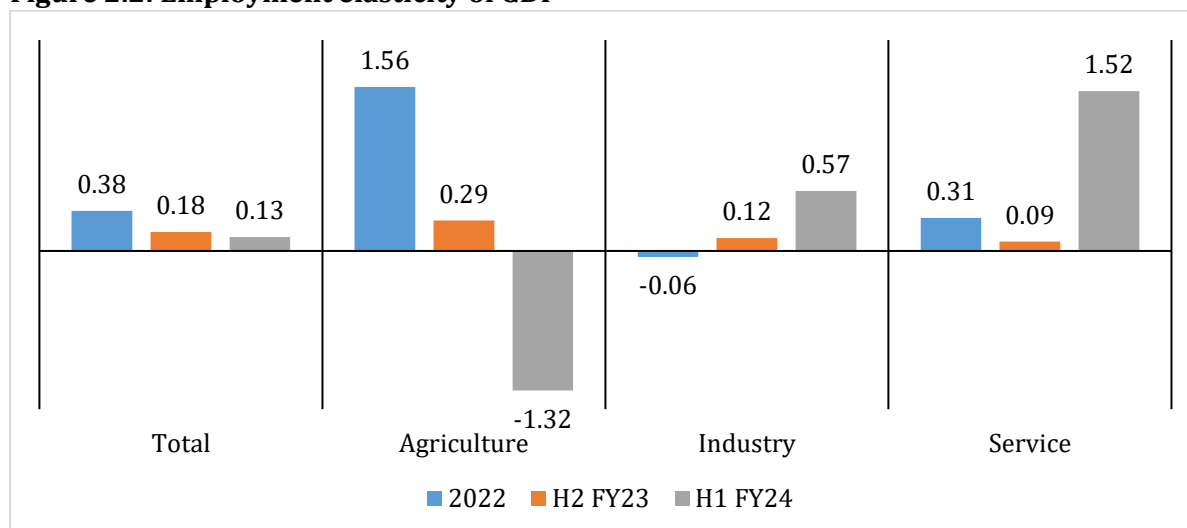
Source: Author's calculation from BBS data.

While the aforementioned trend is encouraging, it needs to be kept in mind that a high degree of informality still prevails in Bangladesh's secondary and tertiary sectors. As the LFS 2022 data shows, 90.5 per cent of the industrial employment and 67.8 per cent of the service sector employment fall under the informal category (BBS, 2023). As such, the concern about decent employment remains. Regrettably, the quarterly LFS reports, in their current format, do not provide any data on informality, wages and income. This needs to be changed in order to get a more accurate representation of the labour market.

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SECTION III. PUBLIC FINANCE

Commenting on the public finance situation has become problematic due to the unavailability of timely data. As of May 2024, the Ministry of Finance (MoF) data is available only until January 2024. As is known, the MoF provides the most comprehensive and better-quality data concerning public finance in Bangladesh (Bhattacharya, et al., 2022). Although alternative and more timely sources such as the National Board of Revenue (NBR), Implementation Monitoring and Evaluation Division (IMED), and Bangladesh Bank can be utilised, their data is fragmented and often lacks accuracy and congruency. The present analyses utilise all these sources but might be constrained in some cases due to data limitations.

3.1 Revenue mobilisation

According to MoF data, total revenue collection recorded a 13.3 per cent growth during the July-January period of FY2024. This is a considerable improvement from the corresponding figure of FY2023 (-2.0 per cent). Despite this, a whopping 63.2 per cent growth will be required during the remainder of FY2024 if the annual target is to be achieved – a highly unlikely prospect[1] (Figure 3.1). The total revenue growth during July-January FY2024 was primarily driven by improved performances in income tax and VAT collection as well as by significant increases in government earnings from dividends and profit.

Figure 3.1: Revenue mobilisation growth by sources (in per cent)
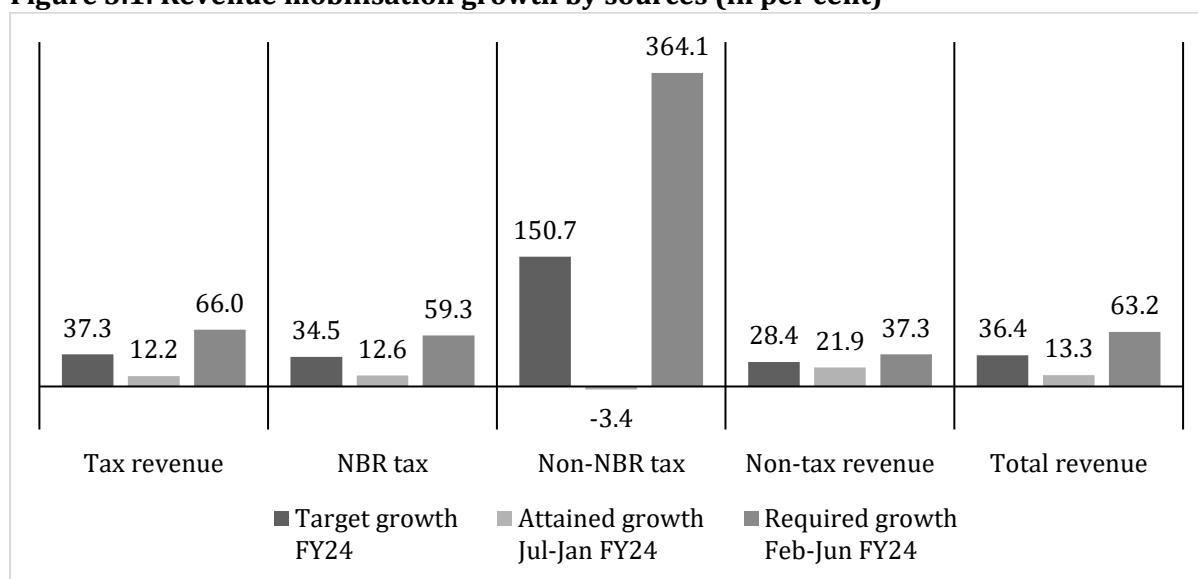
Source: Author's calculation from MoF data.

As per NBR data, tax collection by NBR grew by 15.6 per cent during the July-April period of FY2024. This is a significant increase from the corresponding figure for July-April FY2023, which stood at 7.1 per cent. The growth achieved in the ongoing FY2024 was driven primarily by the collection of VAT and supplementary duty (SD) at the local level and income tax. Perhaps the persistently high price level in the economy is driving the improvement of VAT and SD collection at the local level. On the other hand, the underwhelming performance of indirect taxes collected at the import level, despite the substantial depreciation of the Bangladeshi Taka, can be attributed

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[1] In March 2024, CPD projected that revenue shortfall could reach approximately Tk. 82,000 crore at the end of FY2024.

to the import-related restrictions imposed through government regulatory measures. Given these dynamics, whether the revenue-related conditionalities set by the IMF can be met remains a critical question.

3.2 Public expenditure

In general, a restrained approach in terms of public expenditure was observed during the first seven months of FY2024. As MoF data shows, overall budget utilisation was 32.4 per cent during July-January of FY2024. The corresponding figure for FY2023 was also the same. The Annual Development Programme (ADP) implementation rate was on the lower side – with 20.0 per cent of the allocated amount spent during July-January FY2024 (the corresponding figure for FY2023 was 16.3 per cent). According to World Bank (2024), import-related difficulties originating from the ongoing foreign currency crisis and reprioritisation of projects have contributed to this.

The government has taken some initiatives to reduce its subsidy burden in line with the IMF prescription. These include the reduction of export subsidies to several sectors, increasing electricity prices, and adopting a periodic formula-based price adjustment mechanism for petroleum products. The pricing mechanism for petroleum products was introduced in March 2024, which is expected to reduce subsidy requirements as a result of changes in international fuel prices. The government also issued a series of special bonds, at below-market interest rates, to clear arrears to fertiliser suppliers and independent power producers. These bonds, purchased by the domestic banks, will be eligible for Bangladesh Bank's repo facilities and will be taken into account for meeting the statutory liquidity ratio criteria. This can be perceived as deficit monetisation and could counteract the central bank's contractionary monetary policy stance.

According to IMED data, the ADP implementation rate against the original budget allocation reached 45.4 per cent during July-April of FY2024 – the lowest in the last ten years (Figure 3.2).

Figure 3.2: ADP implementation rate (in per cent)
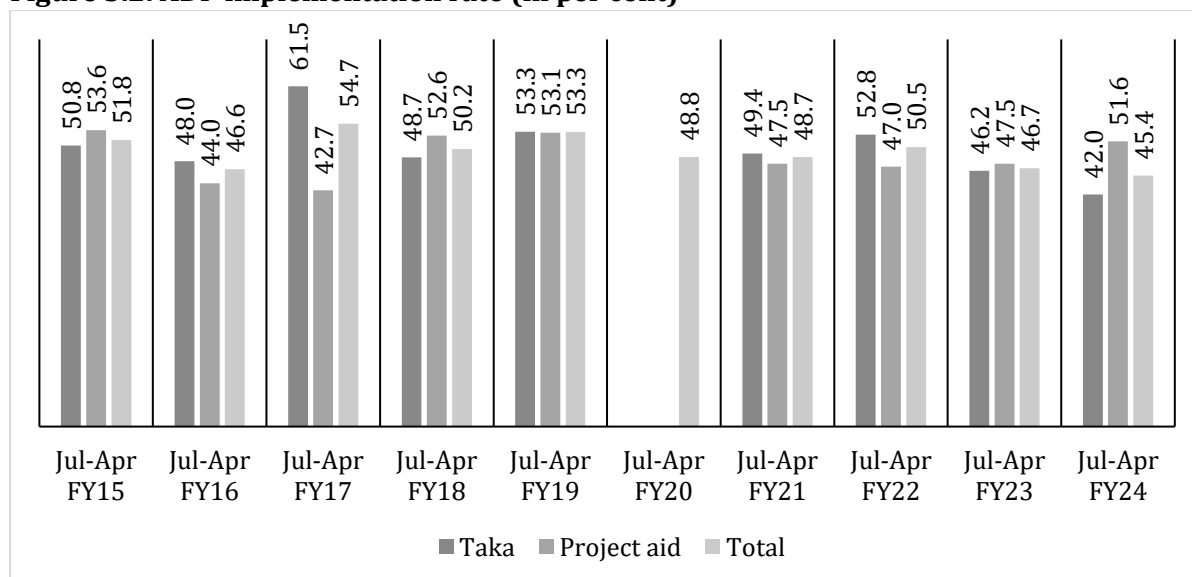
Source: Author's calculation from IMED data.
Note: For the July-April FY2020 period, IMED changed its data reporting format due to the COVID-19 pandemic. Hence, 'Taka' and 'Project aid' components are not available.

The slow utilisation of the 'Taka' component (i.e., the part of ADP that is financed by domestic resources) is the primary reason behind the overall slow implementation. On a positive note, within the components of ADP, project aid utilisation breached the 50 per cent mark after five years. This is commendable, given the ongoing foreign currency situation.

Among the top ten ministries/divisions that account for 70.2 per cent of the ADP allocation for FY2024, the ADP implementation of six was below the average level. These include the Road Transport and Highways Division, Secondary and Higher Education Division, Health Services Division, Ministry of Primary and Mass Education, Ministry of Water Transport, and Bridges Division. It appears that the trend of poor ADP implementation in the education and health sectors has continued in FY2024.

3.3 Deficit and its financing

As per MoF data, during the July-January period of FY2024, the budget deficit increased only marginally compared to the corresponding period of FY2023 – by Tk. 730 crore. However, significant shifts were observed in the composition of deficit financing. In the first seven months of FY2024, deficit financing was primarily reliant on foreign borrowing. The scenario was converse during the corresponding period of FY2023. Within the domestic sources, high dependency on scheduled banks for deficit financing was observed. In this connection, it must be noted that there is a considerable risk of increased government borrowing crowding out private investment, given the current tight liquidity situation in the market. A combination of tighter control over National Savings Certificates (NSC) issuance and less competitive interest rates resulted in net NSC sales by the government remaining negative in the first seven months of FY2024.

3.4 Five key principles

In view of the discussion so far, five key principles have been identified that should be taken into consideration for public finance management in the upcoming FY2025.

Enhancing fiscal space
Any attempt to enhance the fiscal space should focus on generating more resources as well as sealing the leakages. In the upcoming FY2025 budget, efforts to widen the tax base must be prioritised as part of the former. To this end, initiatives such as taxing the digital economy and digitalising the taxation system need to be given due attention. Analysing current tax exemptions in-depth with thorough data analysis needs to be a top priority for the government. There are also frontier issues that need to be addressed immediately, such as the meaningful taxation of wealth and property, and the growing digital economy. As part of sealing the leakages, curbing illicit financial flows (IFF) must be high on government's agenda. At the same time, highest effort should be given to limit tax evasion and tax avoidance.

Prioritising expenditure
The framework for public expenditure in FY2025 needs to account for the ongoing rise in the price of essentials. The current austerity measures must be maintained in a way that their impact on the social safety net, health and education sectors, agriculture, and small and medium enterprises (SMEs) becomes less burdensome. Also, prior government directives to curtail "unnecessary and luxury" public expenditure (which includes purchase of government vehicles and international travel) should be continued. Exit plans will need to be formulated in the cases

of fiscal incentives towards exports and remittances. If a market-based exchange rate regime is eventually put into place, the resultant depreciation should be able to cover the fiscal incentives currently being provided.

Prioritising foreign financing

Considering the declining foreign exchange reserve situation, the government should prioritise implementing all foreign-funded ADP projects. The government should give higher priority to implementing projects that are very close to their completion (about 90-95 per cent completion rate in June 2024). Availability of financing from foreign sources hinge upon ADP design and implementation capacities of the government agencies. Thus, rapid improvement in these aspects have become an exigency. In the case of availing budget supports, policy reform ends up being the determining factor. Thus, the government will need to become more accommodative in this regard.

Ensuring good governance

The political economy dynamics of Bangladesh have frequently impeded substantial reforms, even while the stakeholders have acknowledged their need. For example, political economy factors have played a significant role in the postponement, cancellation, and reversal of revenue mobilisation-related reforms, such as the preparation and implementation of the new Act on VAT, income tax, customs, related automation as well as tax administration reforms. In addition, the government must review public expenditure, especially in light of the hefty price tag of public investment projects and devise a strategy to ensure value for public money. It goes without saying that good governance and political buy-in from the highest level is a prerequisite in this regard.

Protecting the interests of vulnerable and disadvantaged groups

While enhancement of fiscal space and prioritisation of public expenditure ought to the centre stage in the public finance framework for FY2025, the associated economy-wide implications and equity concerns should not be undermined. Supporting the vulnerable and disadvantaged groups should be the central focus of fiscal management in FY2025. Design of both revenue and expenditure related measures need to take this into cognisance.

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SECTION IV. INFLATIONARY PRESSURES CONTINUE UNABATED

4.1 Introduction

For over two years, Bangladesh has been grappling with high inflation. This phenomenon is in stark contrast to several developed and developing economies, including the troubled Sri Lanka, which managed to control inflation through effective policies. Bangladesh's persistent high inflation phenomenon is due to policy and institutional failures. The burden of high inflation falls disproportionately on the poor and low-income households. Due to price hikes in essential goods like food and fuel, the purchasing power of ordinary people has eroded significantly. The suffering of the poor and low-income families, which began following the outbreak of the COVID-19 pandemic in early 2020, has continued to date. The Ukraine war further worsened the situation in February 2022. However, while many countries have managed to control inflation, Bangladesh still struggles to overcome the ongoing inflationary pressure. This section represents the trends of continuing inflation, policies and measures taken by the government, and a set of recommendations.

4.2 Point-to-point inflation

In the new base index, where the consumer price index (CPI) in FY2021-22 is assumed to be 100, there is currently data available for point-to-point inflation rates for the general inflation rate, food inflation rate, and non-food inflation rate over thirteen months from April 2023 to April 2024.

The data paints a clear picture of Bangladesh's inflation situation. The general inflation rate has been consistently high, hovering around 10 per cent. There were slight increases in April, May, and June of 2023, but the rate remained steady at 10 per cent for most of the following months. In April 2024, the general inflation rate was again 10 per cent, indicating persistent and unyielding inflationary pressure. (Bangladesh Bank, 2024a).

Food inflation, however, exhibited more variation. While it started at 9 per cent in April 2023, it reached a high of 13 per cent in August 2023 before dipping to 9 per cent in February 2024 (Bangladesh Bank, 2024a). In April 2024, the food inflation rate was 10 per cent (Bangladesh Bank, 2024a). Non-food inflation displayed the least fluctuation. It started at 10 per cent in April 2023 and remained at 10 per cent for almost the entire year, except for August and September 2023, when it dipped to 8 per cent (Bangladesh Bank, 2024a). In April 2024, the non-food inflation rate was 9 per cent (Bangladesh Bank, 2024a).

Figure 4.1: Point-to-point inflation rate (Base Index 2021-22=100)
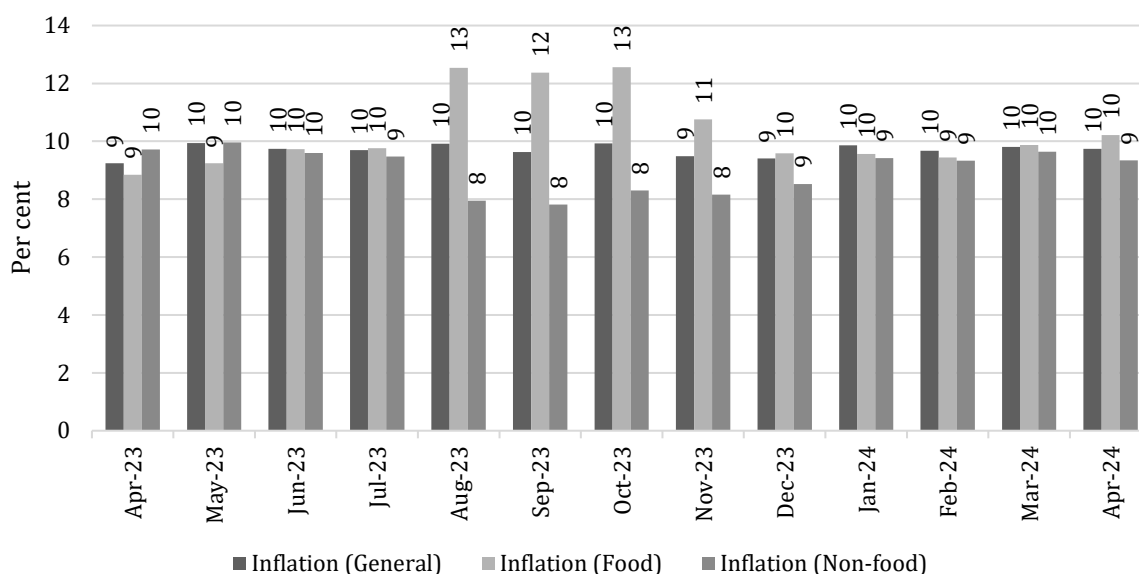
Source: CPD illustration based on data from Bangladesh Bank (Bangladesh Bank, 2024a)

4.3 Trends in the prices of essential items

Analysis of the average daily prices of 34 essential food items in Dhaka from 1 January 2019 to 19 May 2024 shows that prices increased from 10 per cent to 310 per cent (Figures 4.2 to 4.16). In its earlier reports, CPD showed that the price of three common types of rice in Dhaka has been consistently higher than that of Thai and Vietnamese rice (CPD, 2024). The price of unprocessed flour (Aata), processed flour (Maida), and edible oil started increasing in Dhaka before the start of the conflict in Ukraine (Figures 4.4 and 4.5). This indicates that there may be other domestic causes of the increase in the price of unprocessed flour (Aata), processed flour (Maida), and edible oil, which warrant a comprehensive investigation by the Bangladesh Competition Commission. CPD reports have previously shown that soyabean oil prices have been consistently higher in Bangladesh than in the world market from January 2019 to October 2022. As of April 2024, the price of soyabean oil in the world market was BDT 105 per litre, which was lower than the prevailing price in the Bangladesh market at the same time (World Bank, 2024a). The price of beef and mutton has skyrocketed in Dhaka over the past few years, almost elevating the status of these basic food items from essential goods to luxury goods. A comparison of the price of beef in Bangladesh and the world market shows that the price of beef has been consistently higher in Bangladesh than in the world market from January 2019 to October 2022. For instance, in October 2022, the price of beef was BDT 528 per kg in the world market but BDT 718 per kg in Bangladesh. Moreover, the price of beef in the world market fell from June 2022 to October 2022, but the price of beef in Bangladesh increased during the same time (World Bank, 2024a). As of April 2024, the price of beef in the world market was BDT 663 per kg, which was lower than the prevailing price in the Bangladesh market at the same time (World Bank, 2024a). Over the past few years, the price of sugar in Dhaka has increased dramatically. A comparison of the price of sugar in Bangladesh and the price of sugar in the EU, US, and world markets shows that the price of sugar has been consistently higher in Bangladesh than in the world market from January 2019 to October 2022. For instance, in October 2022, the price of sugar was BDT 31 per kg in the EU

market, BDT 37 per kg in the world market, and BDT 74 per kg in the US market (World Bank, 2024a), but BDT 98.75 per kg in Bangladesh (BBS, 2022). Moreover, while the price of sugar remained largely stable in the world market from June 2022 to October 2022, the price of sugar in Bangladesh increased during the same time. As of April 2024, the price of sugar in the EU market was BDT 39 per kg, the price of sugar in the US market was BDT 96 per kg, and the price of sugar in the world market was BDT 50 per kg, all of which were lower than the prevailing price in the Bangladesh market at the same time (World Bank, 2024a).

Figure 4.2: Average daily price of rice in Dhaka from 1 January 2019 to 25 May 2024 (BDT per kg)
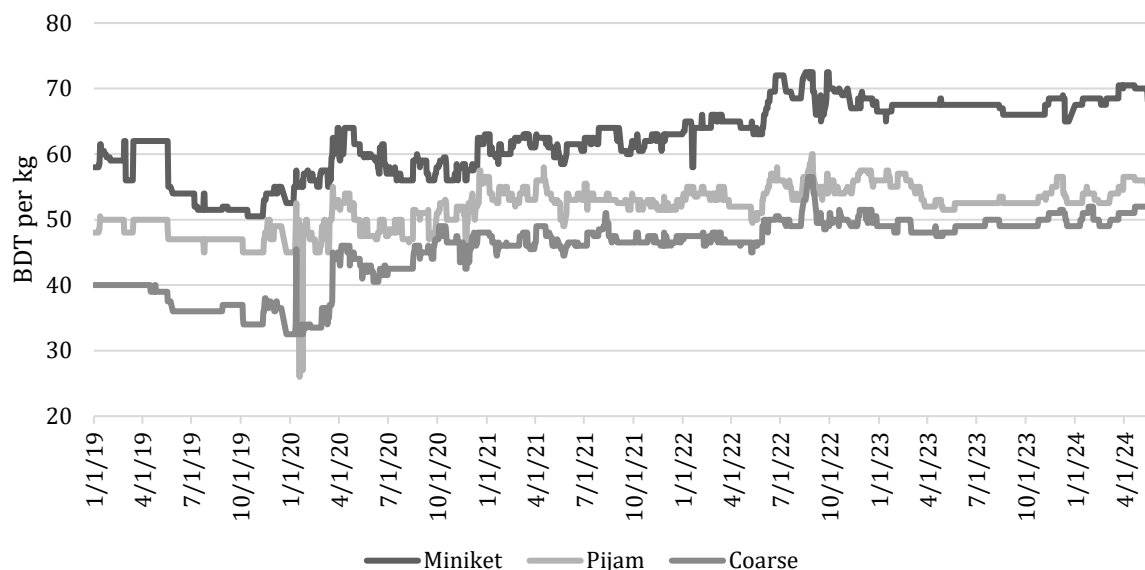
Source: CPD illustration based on data from Trading Corporation of Bangladesh (TCB, 2024)

Figure 4.3: Average daily price of dal (lentils) in Dhaka from 1 January 2019 to 25 May 2024 (BDT per kg)
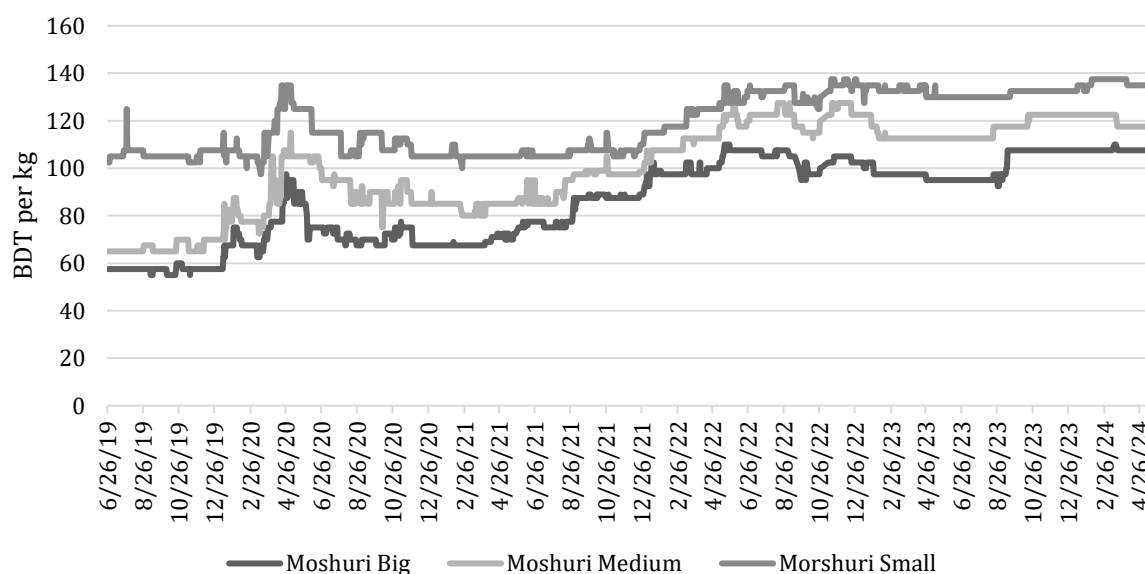
Source: CPD illustration based on data from Trading Corporation of Bangladesh (TCB, 2024)

Figure 4.4: Average daily price of unprocessed flour (Aata) in Dhaka from 1 January 2019 to 25 May 2024 (BDT per kg)

Source: CPD illustration based on data from Trading Corporation of Bangladesh (TCB, 2024)

Figure 4.5: Average daily price of processed flour (Maida) in Dhaka from 1 January 2019 to 25 May 2024 (BDT per kg)

Source: CPD illustration based on data from Trading Corporation of Bangladesh (TCB, 2024)

Figure 4.6: Average daily price of edible oil in Dhaka between 1 January 2019 to 25 May 2024 (BDT per litre)

Source: CPD illustration based on data from Trading Corporation of Bangladesh (TCB, 2024)

Figure 4.7: Average daily price of fish in Dhaka between 1 January 2019 to 25 May 2024 (BDT per kg)

Source: CPD illustration based on data from Trading Corporation of Bangladesh (TCB, 2024)

Figure 4.8: Average daily price of beef and mutton in Dhaka between 1 January 2019 and 25 May 2024 (BDT per kg)

Source: CPD illustration based on data from Trading Corporation of Bangladesh (TCB, 2024)

Figure 4.9: Average daily price of chicken in Dhaka between 1 January 2019 to 25 May 2024 (BDT per kg)

Source: CPD illustration based on data from Trading Corporation of Bangladesh (TCB, 2024)

Figure 4.10: Average daily price of sugar in Dhaka from 1 January 2019 to 25 May 2024 (BDT per kg)

Source: CPD illustration based on data from Trading Corporation of Bangladesh (TCB, 2024)

Figure 4.11: Average daily price of four brands of powdered milk in Dhaka from 1 January 2019 to 25 May 2024 (BDT per kg)

Source: CPD illustration based on data from Trading Corporation of Bangladesh (TCB, 2024)

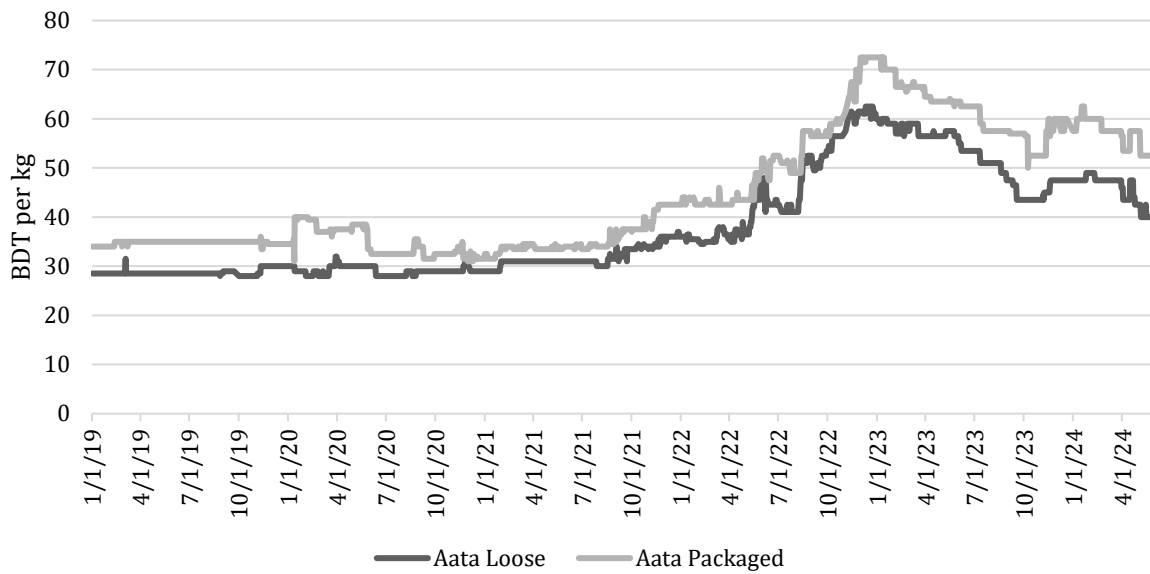**Figure 4.12: Average daily price of onions in Dhaka from 1 January 2019 to 25 May 2024 (BDT per kg)**
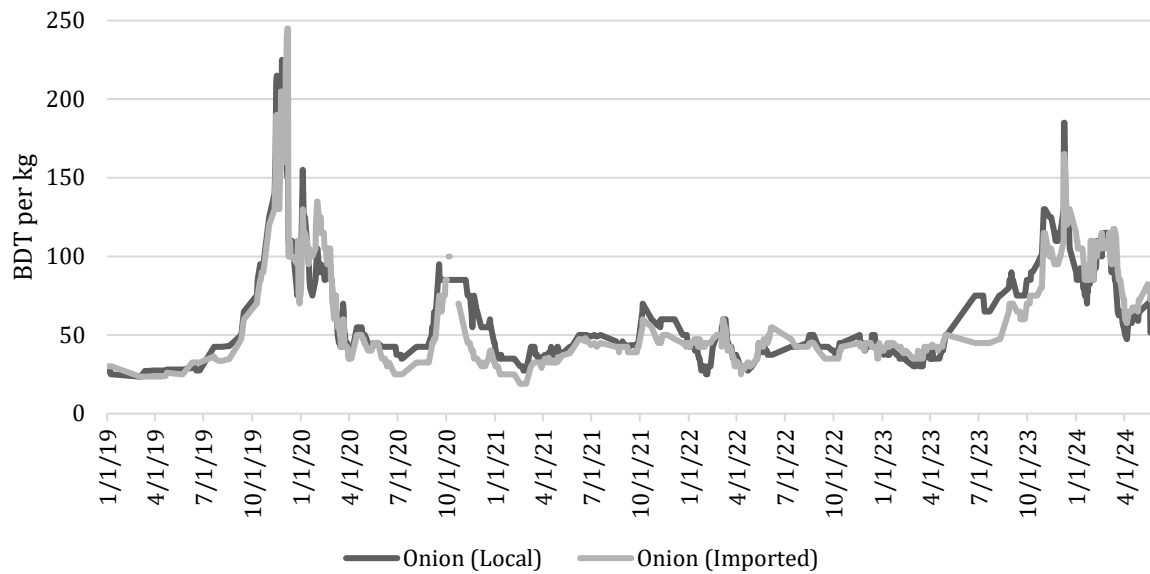
Source: CPD illustration based on data from Trading Corporation of Bangladesh (TCB, 2024)

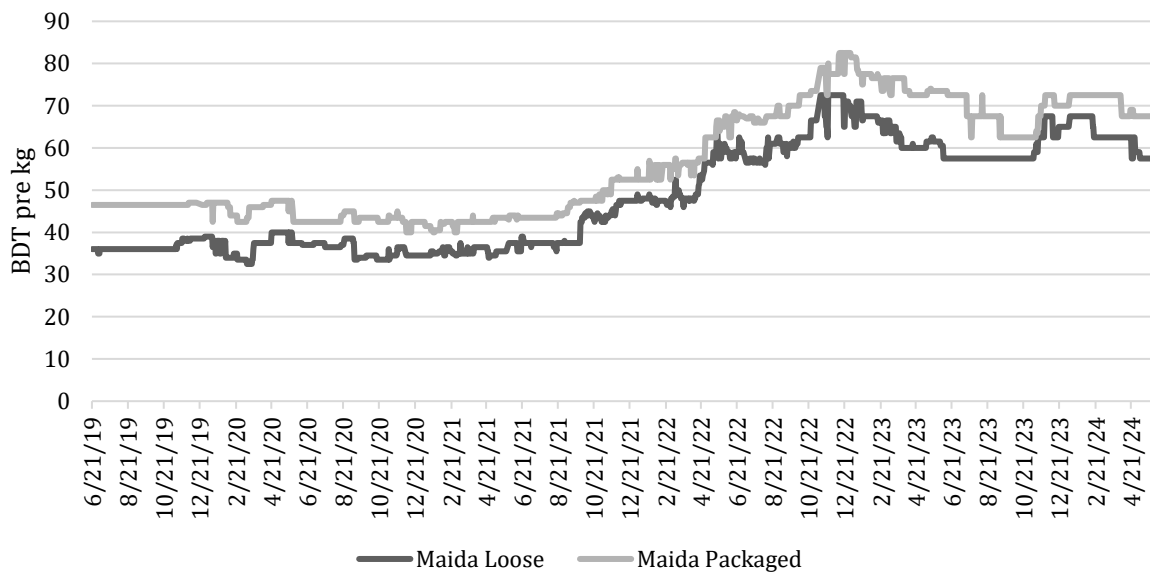**Figure 4.13: Average daily price of garlic in Dhaka from 1 January 2019 to 25 May 2024 (BDT per kg)**
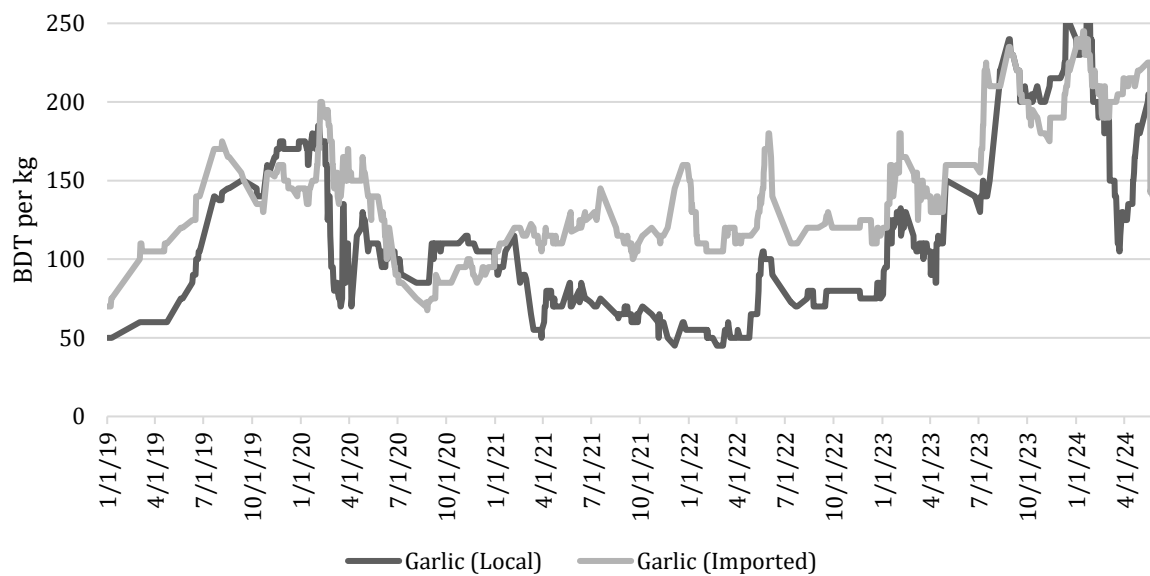
Source: CPD illustration based on data from Trading Corporation of Bangladesh (TCB, 2024)

Figure 4.14: Average daily price of dried chillies in Dhaka from 1 January 2019 to 25 May 2024 (BDT per kg)
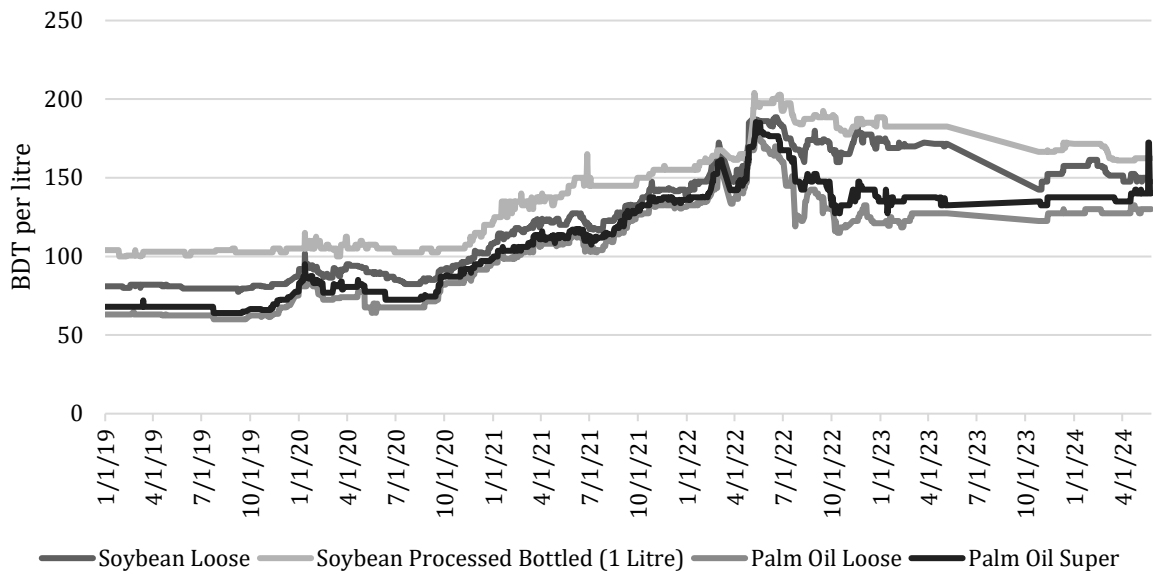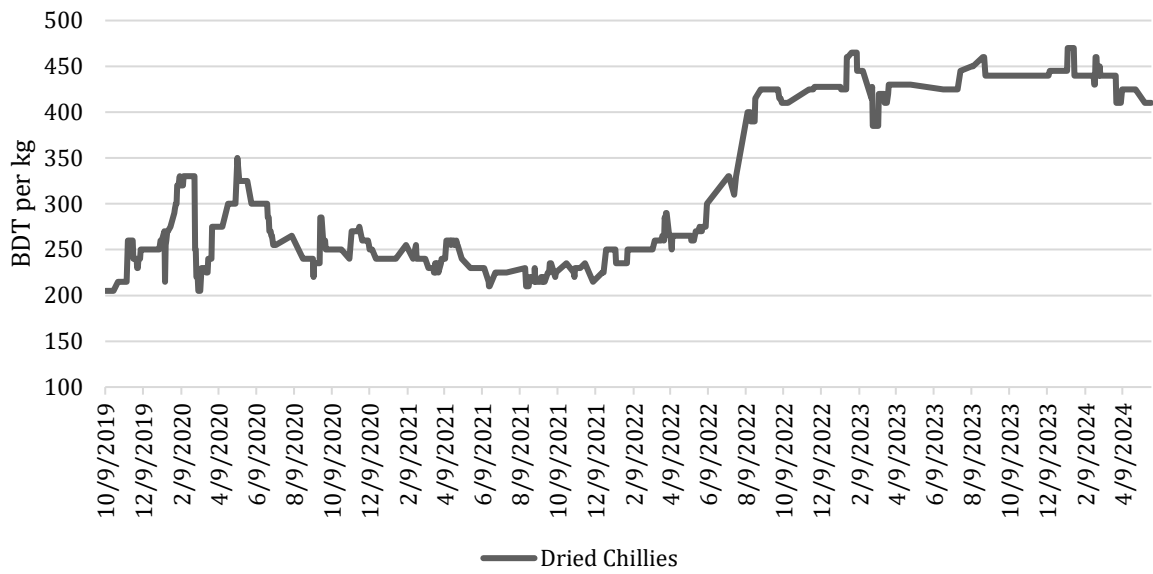

Source: CPD illustration based on data from Trading Corporation of Bangladesh (TCB, 2024)

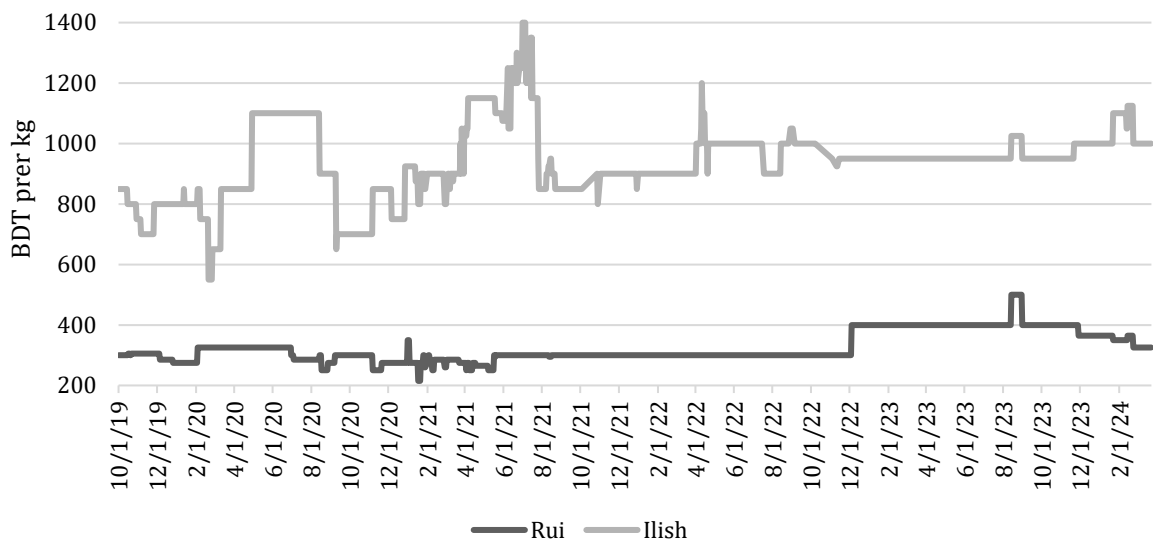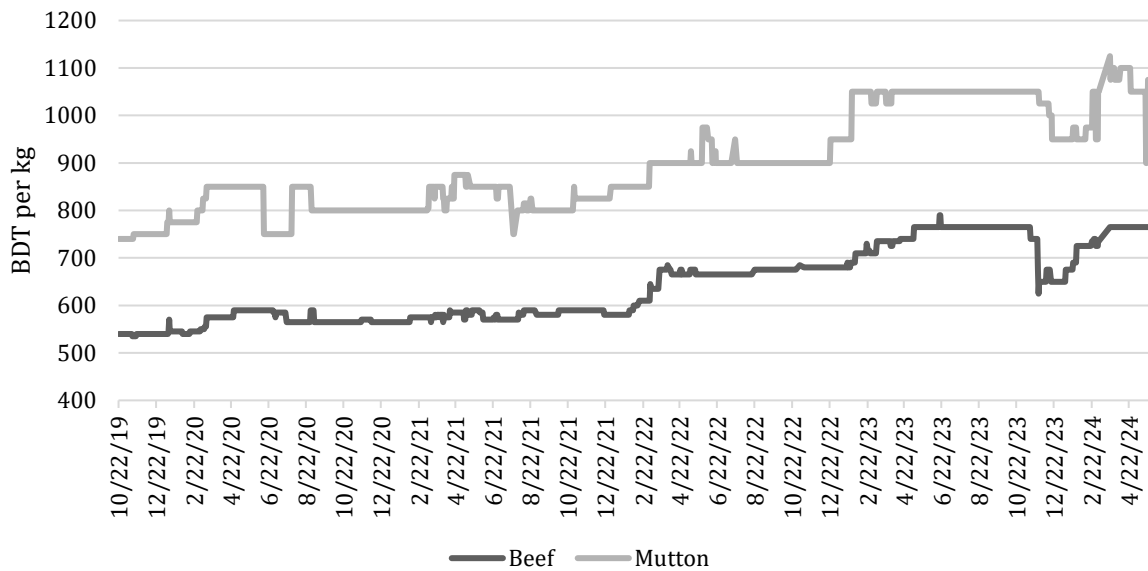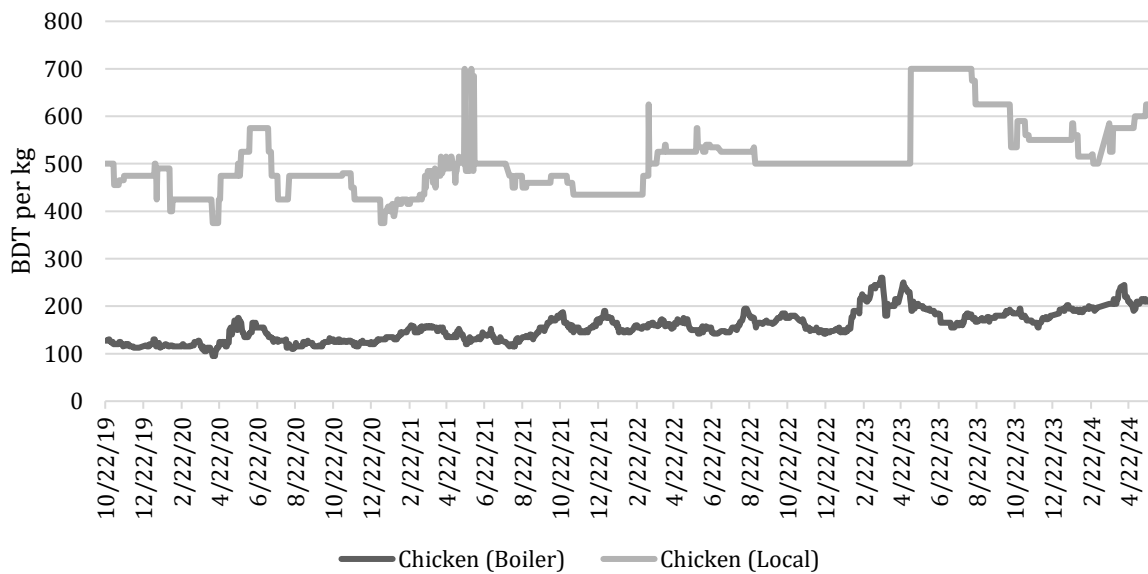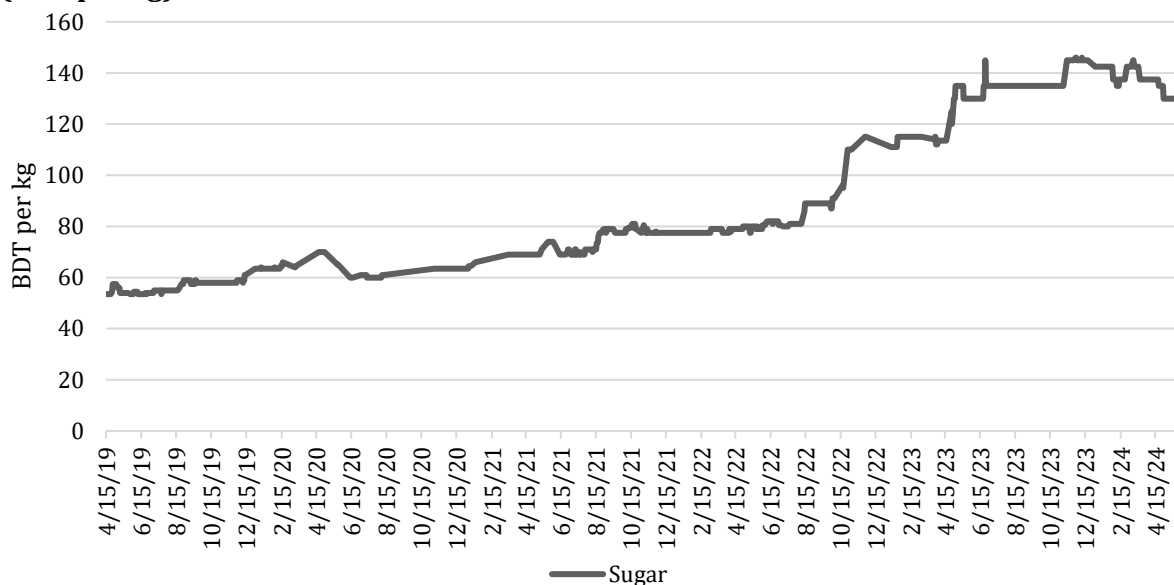**Figure 4.15: Average daily price of turmeric powder in Dhaka from 1 January 2019 to 25 May 2024 (BDT per kg)**
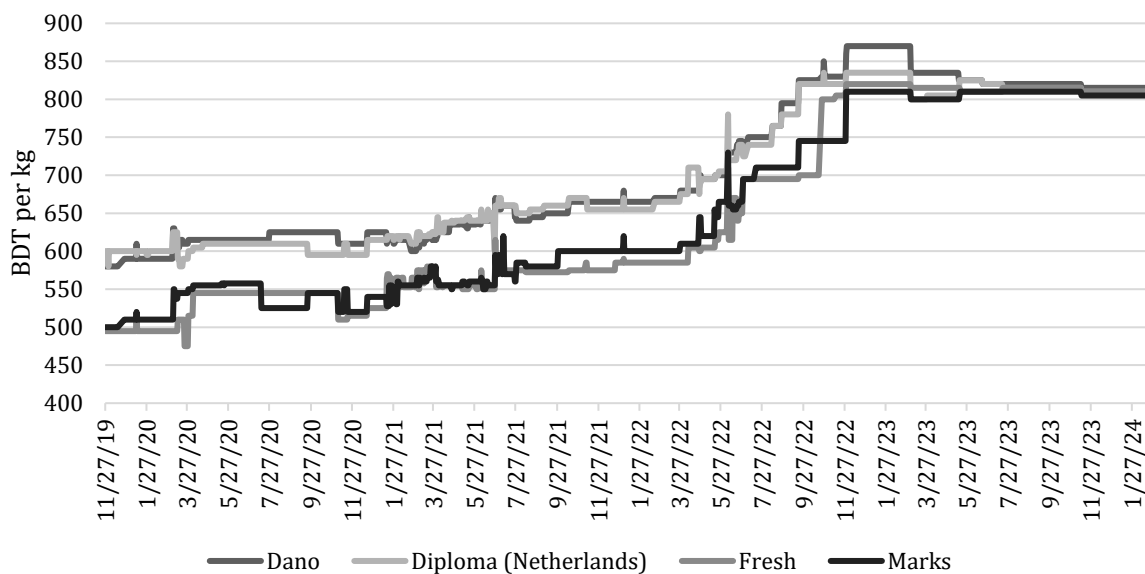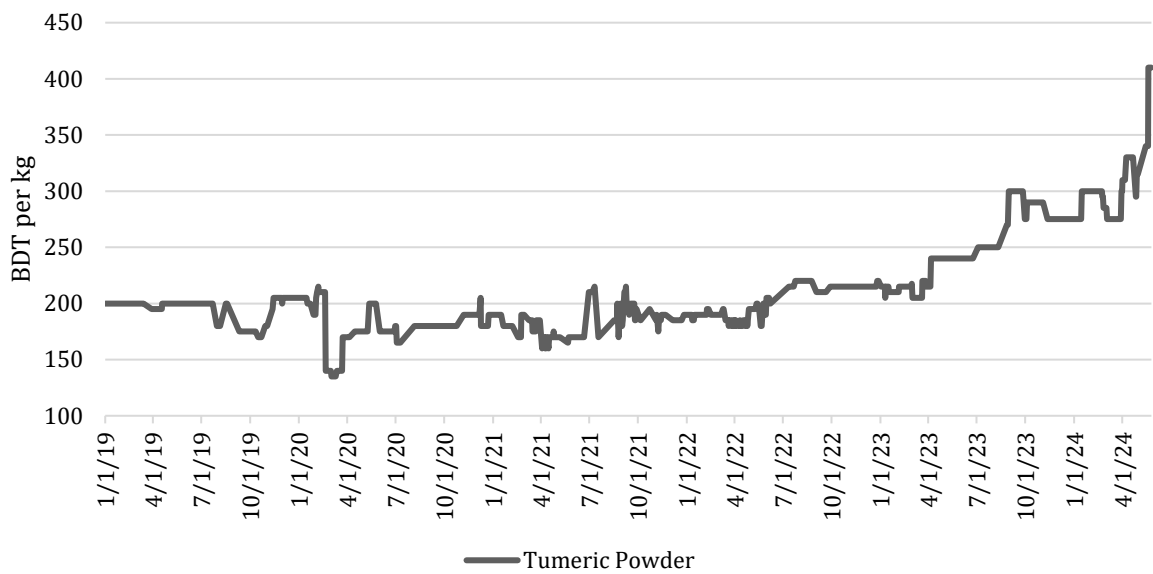

Source: CPD illustration based on data from Trading Corporation of Bangladesh (TCB, 2024)

Figure 4.16: Average daily price of ginger in Dhaka from 1 January 2019 to 25 May 2024 (BDT per kg)
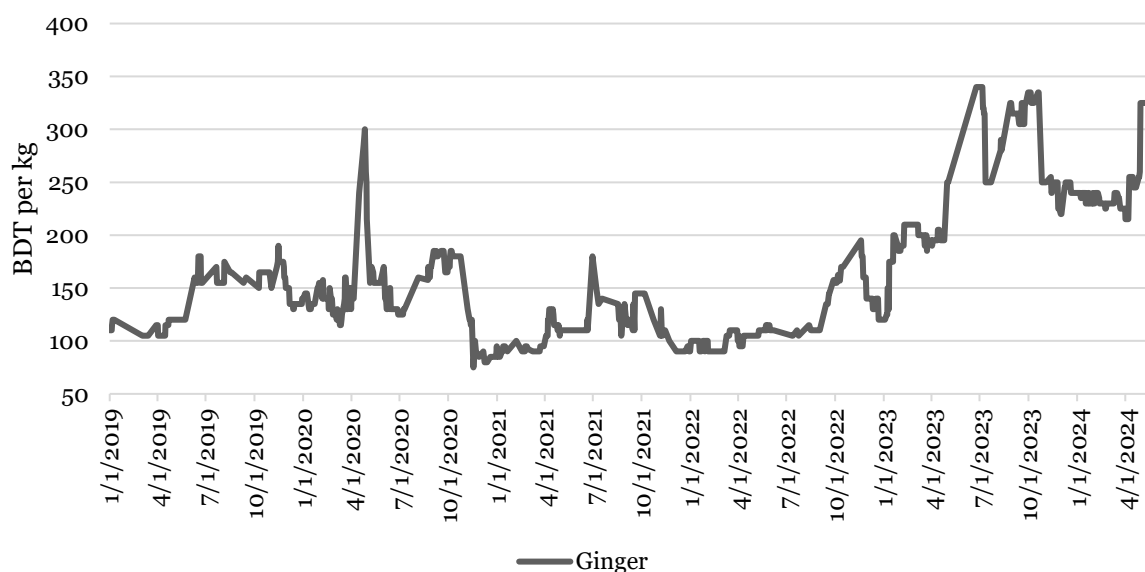
Source: CPD illustration based on data from Trading Corporation of Bangladesh (TCB, 2024)

Table 4.1 summarises the price rise of 34 essential food items, showing the absolute and percentage change between 1 January 2019 and 19 May 2024.

Table 4.1: Increase in price of essential food items from 1 January 2019 to 19 May 2024

		Price on 1 Jan 2019 BDT	Price on 19 May 2024 BDT	Absolute change in BDT	Percentage change
1	Miniket Rice (1 kg)	58	68	10	17
2	Pijam Rice (1 kg)	48	55	7	15
3	Coarse Rice (1 kg)	40	52	12	30
4	Aata (unprocessed flour) Loose (1 kg)	29	40	12	40
5	Aata (unprocessed flour) Packaged (1 kg)	34	52.5	19	54
6	Maida (processed flour) Loose (1 kg)	36	57.5	22	60
7	Maida (processed flour) Packaged (1 kg)	47	67.5	21	45
8	Soybean Oil Loose (1 litre)	81	150	69	85
9	Soybean Oil Processed Bottled (1 litre)	104	162.5	59	56
10	Palm Oil Loose (1 litre)	63	130	67	106
11	Palm Oil Super (1 litre)	68	140	72	106
12	Moshuri Dal (Lentil) Big (1 litre)	55	107.5	53	95
13	Moshuri Dal (Lentil) Medium (1 kg)	63	117.5	55	88
14	Morshuri Dal (Lentil) Small (1 kg)	85	132.5	48	56
15	Onion (Local) (1 kg)	27.5	72.5	45	164
16	Onion (Imported) (1 kg)	30	80	50	167

		Price on 1 Jan 2019 BDT	Price on 19 May 2024 BDT	Absolute change in BDT	Percentage change
17	Garlic (Local) (1 kg)	50	205	155	310
18	Garlic (Imported) (1 kg)	70	225	155	221
19	Dried Chillies (1 kg)	200	410	210	105
20	Tumeric Powder (1 kg)	200	340	140	70
21	Ginger (1 kg)	110	335	225	205
22	Rui Fish(1 kg)	310	340	30	10
23	Ilish (Hilsha) Fish (1kg)	850	1150	300	35
24	Beef (1 kg)	485	765	280	58
25	Mutton (1 kg)	750	1050	300	40
26	Chicken (Boiler) (1 kg)	135	215	80	59
27	Chicken (Local) (1 kg)	410	600	190	46
28	Dano Powder Milk(1 kg)	565	810	245	43
29	Diploma Powder Milk (Netherlands) (1 kg)	550	805	255	46
30	Fresh Powder Milk (1 kg)	440	790	350	80
31	Marks Powder Milk(1 kg)	445	795	350	79
32	Sugar (1 kg)	52	130	79	152
33	Salt (1 kg)	32	41	10	30
34	Eggs (20 eggs)	34	49	15	44

Source: CPD compilation based on data from Trading Corporation of Bangladesh (TCB, 2024)

4.4 High prices but low income

As a result of the persistent rise in the prices of essential food items, people in Bangladesh are now spending more on food than in other richer countries (Figure 4.17). For instance, the average annual expenditure on food eaten at home per person in 2022 was USD 924 in Bangladesh, compared to USD 882 in Brazil and USD 874 in Colombia (USDA Economic Research Service, 2023), both of which have a GDP per capita more than twice that of Bangladesh (World Bank, 2024b). As of 2022, at least 16 countries with a higher GDP per capita than Bangladesh (World Bank, 2024b) spent less on food than Bangladesh (USDA Economic Research Service, 2023).

Figure 4.17: Average annual expenditure on food eaten at home per person in 2022 (in USD) vs GDP per capita, PPP (constant 2021 international USD) in 2022
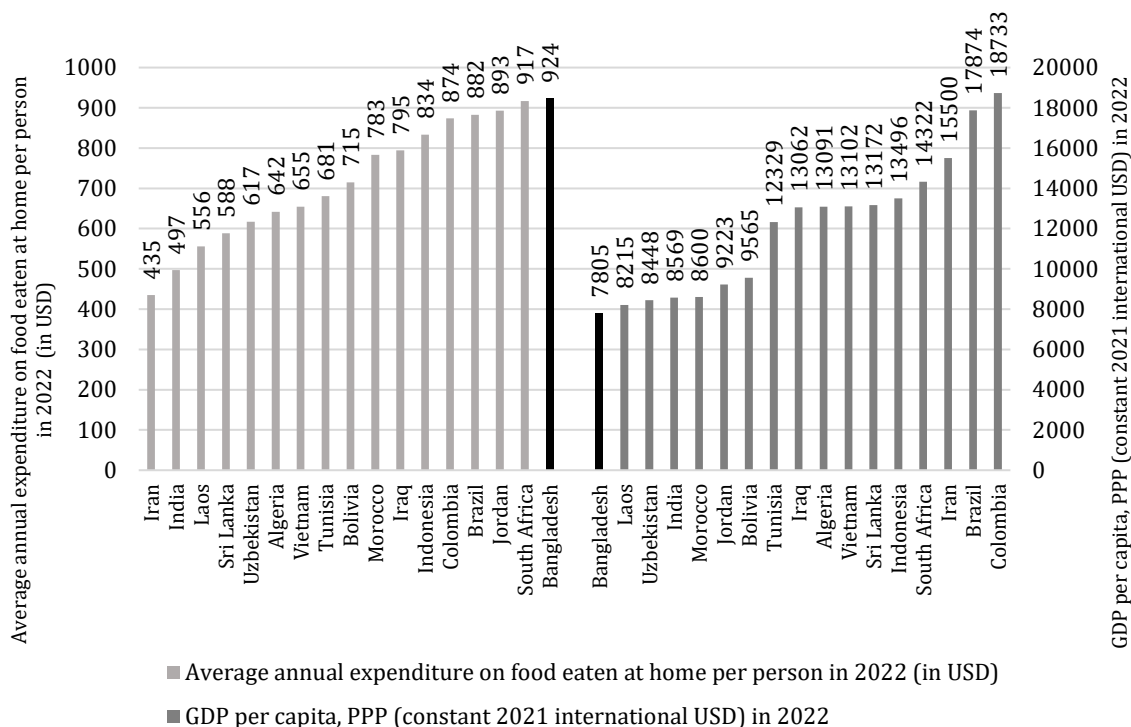
Source: CPD illustration based on data from the United States Department of Agriculture Economic Research Service, (USDA Economic Research Service, 2023) and the World Bank (World Bank, 2024b)

4.3 Measures taken by the government to tackle inflation

Unlike several countries that have successfully controlled inflation by applying monetary policy tools, the Bangladesh Bank was averse to the idea of a market-based interest rate. Since April 2020, the central bank imposed a cap on interest rates, fixing the lending rate at 9 per cent and deposit rate at per cent. However, at a time when the inflation rate has been higher than 9 per cent and close to 10 per cent, borrowing became too cheap. Hence, this policy proved to be ineffective. This policy stifled economic activity and unfairly disadvantaged depositors who earned negative real returns due to inflation exceeding the deposit rate. Later, in July 2023, the central bank adopted the Six-month Moving Average Rate of Treasury bills (SMART) mechanism for determining lending rates (Bangladesh Bank, 2023). Finally, on 8 May 2024, the central bank raised the policy rate by 50 basis points to 8.5 per cent (Bangladesh Bank, 2024b). In January 2024, the rate increased from 7.75 per cent to 8 per cent in January 2024 (Bangladesh Bank, 2024c). The new measures of leaving interest to the market are expected to increase competitiveness and efficiency in the banking system.

Another recent policy measure by Bangladesh Bank has been the introduction of a Crawling Peg Mid-Rate system, setting the initial exchange rate at Bangladeshi Taka (BDT) 117 per US dollar (USD) (Bangladesh Bank, 2024d). This system announced on 8 May 2024, aims to stabilise the value of BDT against the USD by allowing banks to buy and sell dollars within a designated band. The central bank intends for the Crawling Peg Mid-Rate to reflect the prevailing market rate, with adjustments made as necessary. Over the past two years, the BDT has depreciated by over 29 per cent against USD. The new system reflects a further depreciation of more than 6 per cent in a

single step. Previously, Bangladesh Bank had maintained an overvalued currency to keep import costs low. However, this policy made Bangladeshi exports less competitive in the global market. While exporters and remittance senders stand to benefit, importers will likely face increased costs. Indeed, the private sector is also apprehending the increased cost of production due to interest rate hikes. Policymakers need to address other important factors to reduce the cost of doing business. For example, improved infrastructure, better connectivity, skilled human resources, adoption of technology and reduction of corruption can significantly reduce the cost of doing business in Bangladesh.

While the central bank has adopted a contractionary monetary policy, the government follows an expansionary fiscal policy. The lack of consistency between monetary and fiscal policies has contributed to persistent inflation. The operation cost of the government is still high. The government has relied on the banking sector to undertake its expenditure. This has added to the domestic debt burden. High inflation in Bangladesh is also due to market distortion, where market rules do not work. Often, prices of imported and domestic commodities are controlled by a small group of market players who artificially create supply chain bottlenecks and high prices.

4.5 Conclusion and recommendations

The success in controlling inflation will depend on the proper implementation of the policies undertaken by the government. No policy can work in isolation. Therefore, relevant ministry departments will have to coordinate among various policies for containing inflation. While monetary policy is an important instrument, fiscal trade and agriculture policies are also crucial in addressing the challenge of inflationary pressure. In this regard, four specific measures should be undertaken.

- **Strengthening the Bangladesh Competition Commission:**
  - The Bangladesh Competition Commission should develop a database, regularly monitor the dominant market players' operations, examine the market control and manipulation (if any), and take proper measures.
  - The Bangladesh Competition Commission should adopt a strong stance against cartels and a zero-tolerance policy towards collusive practices.
- **Revision of the Competition Act 2012:**
  - The Competition Act 2012 should be revised to address monopolies and include specific anti-trust clauses and concrete penalties for violators.
- **Support to the poor and low-income households:**
  - The government should provide direct cash support to people experiencing poverty, enhance social protection for low-income families, and extend stimulus packages to small businesses for survival during challenging times.
  - Distribution of essential commodities sold through the open market system (OMS) must be managed effectively and without corruption so that eligible people can access these items at low prices.
- **Reduction of tariffs on essential items:** CPD earlier showed that at least 27 essential items have import tariffs imposed on them. Reducing tariffs on those items for a certain period will help reduce market prices. However, the authorities should ensure the actual reduction of prices in the market due to the tariff reduction.

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SECTION V. EXTERNAL SECTOR PERFORMANCE: THE SPELL OF HEADWINDS CONTINUES

5.1 Context: Some steps in the right direction, but results are yet to be visible

A large part of Bangladesh's ongoing macroeconomic woes originates in the headwinds facing the external sector. Accordingly, restoration of macroeconomic stability will critically hinge on how quickly the external sector correlates recover from the current disquieting status. True, in recent times the central bank has taken some steps in the right direction, albeit with considerable delay. These included market-based interventions (e.g. significant exchange rate depreciation), change in policy stance (contractionary monetary policy) and administrative measures (e.g. import controls). However, the derived impacts in the form of rising export competitiveness and robust remittance flows, growing forex reserves and stabilisation of balance of payments position are yet to be fully felt on the ground. The external sector of Bangladesh, thus, continues to remain vulnerable and the balance of payments scenario continues to evince uncomfortable trends. In this backdrop, as is known, some of the key IMF external sector targets had also to be revised downwards.

5.2 Trade scenario: Timid export market response in the backdrop of continuing restrictive import measures

One would have expected a tangible positive impact of the significant depreciation of the BDT over the recent past months, against all major currencies, on Bangladesh's export competitiveness and export performance. However, this is yet to be seen. As is known, BDT depreciated by about 35 per cent (from BDT 86 to BDT 117 to a dollar) over the past couple of years. This should have given substantial competitive edge to exports from Bangladesh as also significantly incentivise remitters.

Figure 5.1: Exports growth trends during July-April: FY2024 Vs FY2023
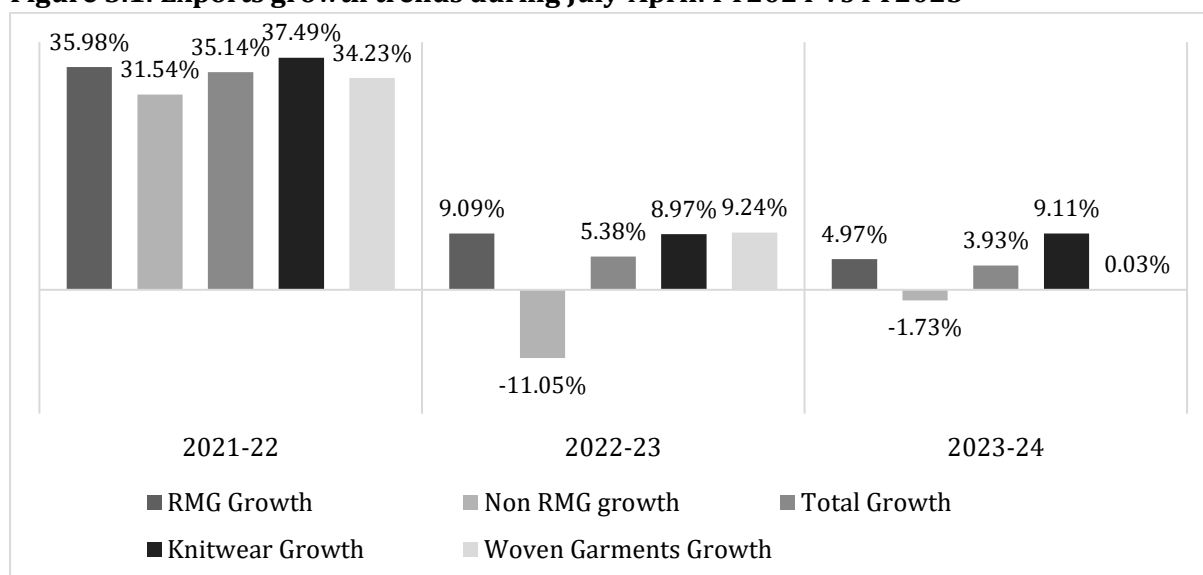
Source: Calculated from EPB figures.

However, as the data from Figure 5.1 indicates, over the July-April period of FY2024, exports have posted a rise of only 3.93 per cent compared to the corresponding period of FY2023. To note, this growth was based on a rather low-reference point- export growth in FY2023 over FY2022 during

the corresponding period was a lowly 5.38 per cent. This must send warning signals to the policymakers as to why Bangladesh's export performance is behaving in such an unaccepted way. It is evidently clear that, only a policy of exchange rate depreciation will not raise competitiveness of Bangladesh's exports. So, at a time when BDT was experiencing very high pace of depreciation, export earnings failed to take advantage of the gains through export competitiveness originating from the competitive advantage that this provided.

To note, concentration of RMG in export composition has gained further strength during the period under discussion: while RMG earnings rose by 4.97 per cent, that of the non-RMG came down by (-) 1.73 per cent. Within the RMG, the growth was driven primarily by knitwear export (9.1 per cent), while export of woven wear (0.03 per cent) almost stagnated. These trends are indeed disconcerting. In all likelihood other factors such as labour and capital productivity, skills, technology-embeddedness of exports, cost of doing business, business environment etc. are undermining the formidable gains that should have come with such significant depreciation, not to speak of the cash incentives.

This is not to deny the demand-side factors may have also contributed to this. During the first nine-months of FY2024 (July-March), imports of apparels by the USA from Bangladesh posted a negative growth (-17.8 per cent), with both volume of export (-8.0 per cent) and price /unit (-10.7 per cent) registering a decline. To note, the trends are same also for China and Vietnam (USITC Database). These trends are similar for the EU as well with the three corresponding figures for July- February, FY2024 period being – 28.3 per cent (export value), -16.6 per cent (export volume), and –13.9 per cent (for export price per unit). These trends are also similar for China and Vietnam (European Union Database).

Thus, at a time when exporters are facing demand-side crunch, all efforts must be put in raising competitive strength of Bangladesh's export sector. Otherwise, once the initial gains from depreciation withers away, the exports will be faced with even more formidable difficulties. Policymakers must look at the underlying factors driving the low levels of export performance-to what extent fall in price of intermediates are driving the fall in price of outputs and whether this is reflected in lower export earnings. Also, policymakers must investigate to what extent export earnings are not being repatriated back to the country. The discrepancy between Ministry of Finance data and EPB figures must be looked into in-depth and whether this discrepancy is fully explained by double-counting of *deemed export* must be thoroughly looked into.

The upshot of the above scenario as regards export performance correlates are several. Firstly, the significant exchange rate depreciation did not have tangible impact on Bangladesh's export competitiveness and export performance and this need to be analysed and investigated to unearth the underlying drivers. Secondly, Bangladesh should put emphasis on incentivising intra-RMG diversification, towards non-cotton RMG which is the expanding segment of the global apparels markets. Thirdly, the need for export diversification and market diversification are becoming ever more urgent. Bangladesh must target the expanding markets of South Asia, RCEP and ASEAN regions, by creating supply-side capacities in special economic zones, by attracting FDI and domestic investors to these zones. All efforts must be made to have at least a few SEZs up and running. The services promised as part of the One Stop Service Act (OSSA) of 2018 must be ensured and on time. A triangulation of investment, transport and trade connectivities will be called for to translate Bangladesh's comparative advantages into competitive advantages.

Fourthly, in view of challenges emanating from the upcoming LDC graduation, a transition will need to be made from preference-driven competitiveness to *skills and productivity-driven competitiveness*. The emerging global trade scenario is also rather bleak and a radical departure from the *business-as-usual* scenario will be called for if export earnings are to go back to their historical trends.

That the trade balance has somewhat improved (the negative figure has come down significantly), has primarily been driven by the GoB's conscious policy to restrict imports, and a dearth of availability of foreign exchange on the part of private sector. Higher dollar price also had a dampening impact from the demand side. For example, imports during July-March in FY2022 was worth about USD 66.50 billion, which came down to USD 58.27 billion (-12.3 per cent) in FY2023 and thereafter to USD 49.21 billion in FY2024 (a decline of about 15.5 per cent over the matched period of FY2023). The composition of imports shows that, import payment for intermediates (-14.7 per cent and -14.2 per cent) and capital machineries (-11.9 per cent and -23.6 per cent) have come down significantly over the period between FY2022, FY2023, and FY2024 respectively (July-March). Thus, import restrictions in the backdrop of lack of availability of foreign exchange and falling forex reserves have played their role in somewhat reducing the yawning gap in trade balance. However, in all likelihood, the timid investment growth in the backdrop of high inflation, and the rising interest rates, have also played a part in this, reinforcing the subdued supply-side. Thus, the negative in trade account (during July- March period) which jumped from (-) USD 15.21 billion in FY2021 to (-) USD 24.90 billion in FY2022, had come down sharply to (-) USD 14.63 billion in FY2023 to (-) USD 4.74 billion in FY2024, in view of the above. But as was noted, this improvement came at a formidable cost which is also being reflected in timid GDP growth (over the first two quarters of FY2024) and the depressed investment scenario (low import of capital machineries and intermediates bear this out). This in turn is also manifested in subdued export growth. However, while these may be acceptable as fire-fighting measures, from medium term macroeconomic sustainability and stability these can only serve as short-term measures.

5.3 Balance of Payments scenario: A mixed picture

That there has been some improvement in the *Current Account* component (which include trade and services accounts) owes largely to improvements in trade account and the rise in the remittance flows, particularly since January 2024. As the balance of payments scenario indicates, Current Account Balance which stood at (-) USD 14.07 billion at the end of March 2022, improved to (-) USD 3.29 billion in March 2023 to a positive of (+) USD 5.80 billion at the end of March 2024, as is evidenced from Table 5.1.

Table 5.1: Balance of Payments position (July-March): FY2021-FY2024

Items	July-March (million USD)			
	FY2021	**FY2022**	**FY2023**	**FY2024**
Trade balance	-15,218	-24,907	-14,633	-4,745
Of which:				
Export	27,549	36,617	39,306	40,875
Import	42,767	61,524	53,939	45,620
Secondary income	190,46	15,800	16,528	17,541
Of which: remittances inflows	18,598	15,299	16,035	17,074
Current Account Balance	-555	-14,072	-3,298	5,799
Financial account	7,950	11,343	-2,928	-9,258
Overall Balance	6,990	-3,097	-8,486	-4,754

Source: Extracted from Bangladesh Bank.

The impact of exchange rate depreciation and introduction of 5 per cent cash incentives on remitted amount (2.5 per cent by the Bangladesh Bank and up to 2.5 per cent by the dealing banks), has in all likelihood stimulated a shift from sending of remittance through formal channels (with April 2024 remittance figures showing a USD 2.04 billion inflow). However, while encouraging at a time when reserves are depleting, there is a need to go deeper into factors why remittances are not rising at a faster pace. Over the last three years almost 2.8 million people have gone abroad in search of work. A large number of these workers have gone to Middle-East countries, particularly Kingdom of Saudi Arabia. Indeed beginning from January 2021 till April 2024, about 1.7 million people have gone to Saudi Arabia alone. However, if we juxtapose the number of people going to particular destination countries and the sources of flow of remittances, the mismatch is quite compelling and telling. This is clearly discernible from Figure 5.2 and Figure 5.3.

Figure 5.2: Country-wise employment (calendar years)
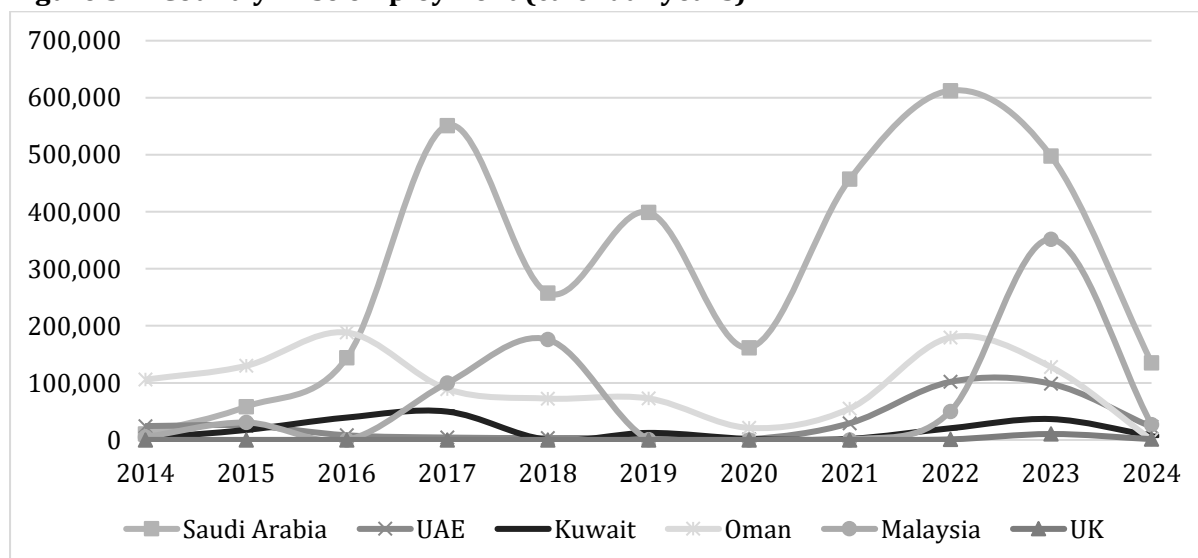
Source: Extracted from BMET.
Note: The 2024 figures are for January to April.

Figure 5.3: Remittance inflow to Bangladesh from selected major sources (July-April)
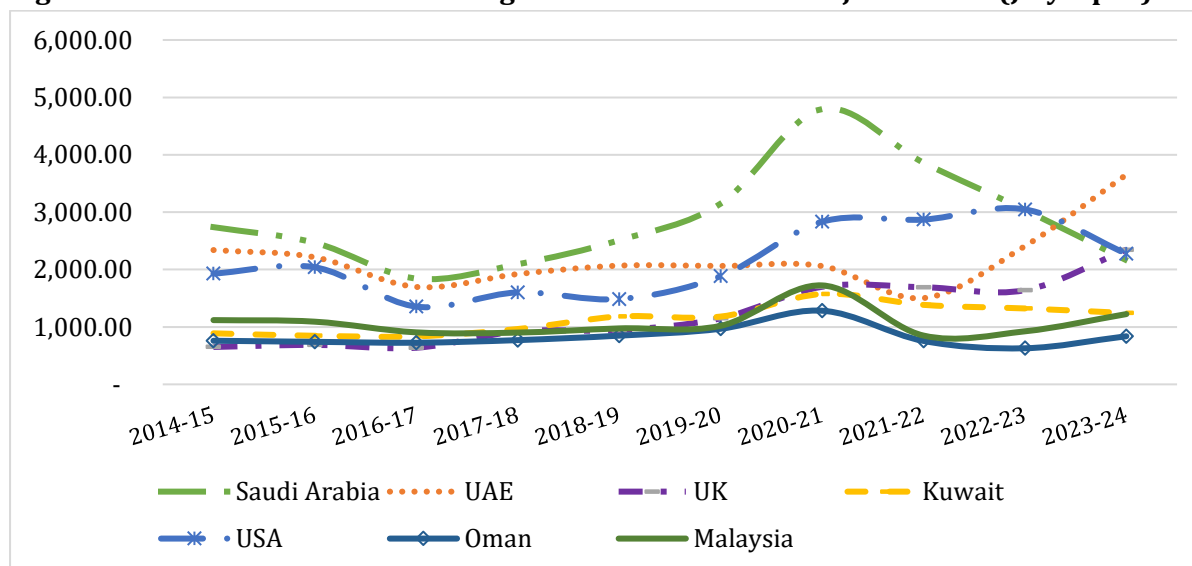
Source: Based on Bangladesh Bank.

Policymakers must look into the underlying reasons closely- why such significant degree of mis-correspondence has emerged between the two trends and (outflow of workers and inflow of remittances) why such a discrepancy has emerged. This once again, reinforces the argument that there is an urgent need to investigate money laundering, export under invoicing import invoicing and capital flight, and the working hundi-hawala syndicate to unearth the underlying drivers of this phenomenon which is having such a detrimental impact on forex reserves.

At the same time, the significant depreciation of BDT creates an opportunity for the government to gradually phase out the cash incentives it is providing on remittance flows and exports in a phased manner.

In the balance of payment, the Financial Account has continued to be the villain in the piece. While during July-March 2022 this was (+) USD 11.34 billion, the amount came down to (-) USD 2.9 billion in FY2023 and to (-) USD 9.25 billion in FY 2024. The larger part is on account of trade credit (-) USD 12.2 billion (in July-March 2024) which was (-) USD 3.92 billion in FY2023 and a positive amount (+180.0million in 2022). This perhaps reflects the high pace of private sector repayment of trade credit in the face of falling value of taka. However, what is highly discouraging is the trends in FDI (net FDI has been dismally low at less than USD 2.0 billion) and the net portfolio investment has indeed been negative (-USD 89.0 million). Bangladesh must address the factors driving such low levels of FDI and portfolio flows by restoring faith in governance, efficacy of institutions, effectiveness of dispute resolution mechanism and others.

To also warn that Bangladesh's debt repayment liabilities will be on the rise over the near-term future as the grace period of a number of significantly large infrastructure projects are coming to an end and maturity period are to start over the near term. As is known, during grace period, only interest payments have to be made, and during maturity period both interest and principal amount will need to be repaid. As may be recalled, Bangladesh's external debt repayment was less than USD 3.0 billion in FY2021 when reserves stood at USD 44.9 billion; in June 2024 debt repayment is likely to exceed USD 5.0 billion at a time when forex reserves (according to IMF's

BPM6 method) are anticipated to remain below USD 20.0 billion. Middle income graduation of Bangladesh has meant that the share of non-concessional (high interest rate with stringent terms and condition for loans) have been on the rise. Reason enough for a highly cautionary stance in incurring debt, particularly foreign debt, and to be highly selective in incurring in foreign debt.

Caution must be exercised in managing external debt, and there should be a thorough study as regards Bangladesh's debt carrying capacity over the near to medium term.

5.4 Exchange rate movement: A move in the right direction

As is known, Bangladesh has gone for significant depreciation of the BDT against major currencies. The pent-up pressure, originating from accumulated artificially appreciated taka, had to be released through significant depreciation of the BDT, from BDT 86.0 to one USD couple of years back to BDT 117.0 of a few days back. While no one can argue that the current policy of depreciation pursued by the Bangladesh Bank was long overdue, it appears that through successive spate of depreciation, the exchange rate of BDT is approaching a new equilibrium. If one examines the movement of REER and NER, it appears that the current value more or less approximates the equilibrium value, evidenced from Figure 5.4. One reckons that the exchange rate of BDT is expected to stabilise at around the current rate in near term future.

Figure 5.4: REER Vs NEER Vs NER
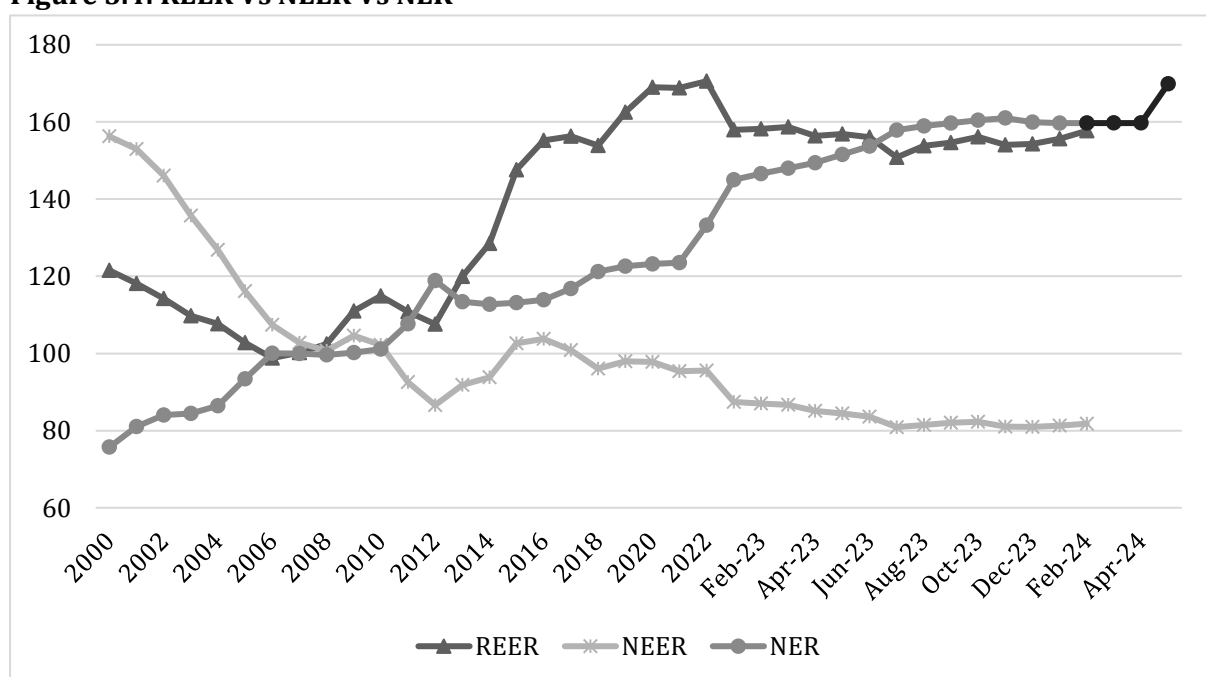
Source: Extracted from Bruegel, World bank and Bangladesh Bank.

5.5 Concluding remarks: Business-as-usual will not deliver the expected results

It was pointed out at the very outset that many of Bangladesh's macroeconomic woes originate from the way external sector was managed in the recent past years. Many of the current challenges facing the sector accumulated over the years, in areas of exchange rate management, lack of export product and market diversification, weak productivity growth, lack of technology-embeddedness of exports and external debt management. These were either not managed in a

timely fashion or were not dealt with the due seriousness and urgency that they deserved. When economy was doing good, a complacency had set in. Reforms were put in the backburner and flanking strategies were not pursued in anticipation of global shocks. The lack of proactive external sector management exposed serious vulnerabilities once the twin shocks of covid pandemic and Russia-Ukraine war hit the economy. The embedded weakness in the domestic economy only accentuated the situation.

Pursuing reforms, raising the quality of economic management and effectiveness of public service delivery institutions will need to reinforce the measures that the policymakers are now undertaking, in areas of fiscal-monetary, to stabilise the external sector. These are the preconditions if the expected results in terms of exchange rate stability, healthy balance of payments and robust forex reserves are to be restored. Going forward, Bangladesh's robust dual graduation- sustainable LDC graduation and sustainable middle-income graduation will critically hinge on the policies and initiatives pursued by policymakers in the broader area of macroeconomic management.

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SECTION VI. AGRICULTURAL COMMODITIES: PRODUCTION, INPUTS AND MARKETING

6.1 Introduction

Stable production of major agricultural commodities including rice, vegetables, livestock and fisheries, is the most important instrument for ensuring domestic food security over the last decades. With the rise in income and changes in demand for agricultural commodities, the sector has experienced major changes in cropping patterns, land use, input use, and composition of agricultural commodities. Rapid urbanisation and climate change have made further changes in land use patterns, which has adverse effects on agriculture. Along with domestic production import of specific crops is getting important for selected products. This section presents an overview of the state of production and import of agricultural commodities, including crop and non-crop, livestock, and fisheries, to explore the scope for a rise in domestic production.

6.2 Land use in agricultural production

Bangladesh has about 21,891 thousand acres of arable land, which includes both cropped and fallow areas (BBS, 2023). Table 6.1 presents the distribution of land for different usages in the country. A total of 19,972 acres of net cropped area is available which is slowly declining. The majority are the double-cropped area (50.9 per cent) followed by single cropped area (26.3 per cent). Even the quadruple-cropped area, though still with a minuscule share, is slowly rising. The declining share of fallow land (about 3.1 per cent of the total land area) indicates its growing use for non-agricultural purposes. A large share of 'area which is not available for cultivation' (22.7 per cent) portrays how agriculture is getting pressurised by rising cropping intensity. Due to rapid urbanisation, arable land has been declining in the country (Titumir, 2021). Considering the long-term food security of the country, the current fallow and cultivable waste, which amounts to 1118 acres (8.3 per cent of total land), needs to be ready for cultivation. Similarly, cropping intensity needs to be enhanced - land currently used for single crops needs to be used for double crops and those are double crops to turn to triple crops.

Table 6. 1: Land use pattern (in '000'acres)

Year	FY2019	FY2020	FY2021
Total	36465	36465	36465
Forest	6363	6363	6363
Not available for cultivation	8364	8284	8312
Culturable waste	639	671	700
Current fallow	1126	1066	1118
Single cropped	5271	5216	5260
Double cropped	10065	10194	10166
Triple cropped	4594	4613	4594
Quadruple Cropp	43	56	53
Net cropped	19973	20081	19972
Gross cropped	39357	39678	39493

Source: BBS (2023).

6.3 Production of agricultural commodities

Despite the stagnant land use in production, agricultural production has steadily improved during the last three decades. The crop production index has risen four times from 32.1 in 1973 to 119.1

in 2022, mainly due to the rise in the production of rice, wheat, tobacco, fibres, vegetables, and potatoes (Al Mamun, *et al.*, 2021).

Rice: During FY2023, total rice production in Bangladesh was 39.1 million m.ton, which was 2.5 per cent higher than in FY2022. This rise in rice production is attributed to a slow rise in yield in production. Land use for rice cultivation did not increase rather, it maintained a stagnant situation. Figure 6.1 presents changes in rice cultivation and high production of boro rice happened at a smaller share of land, attributed to higher yield. The poor acreage and production of aus rice cultivation, which is only 9.1 per cent of total rice cropped land, indicates the scope for enhancing acreage and yield of aus rice. There are scopes for rise in acreage and yield of aman rice as well. The self-sufficiency in rice production is yet to be achieved – the domestic demand shortfall of 2-3 per cent has been met through imported rice (FPMU, 2024).

Figure 6.1: Growth rate in production and area of cultivation of rice (yearly % changes)
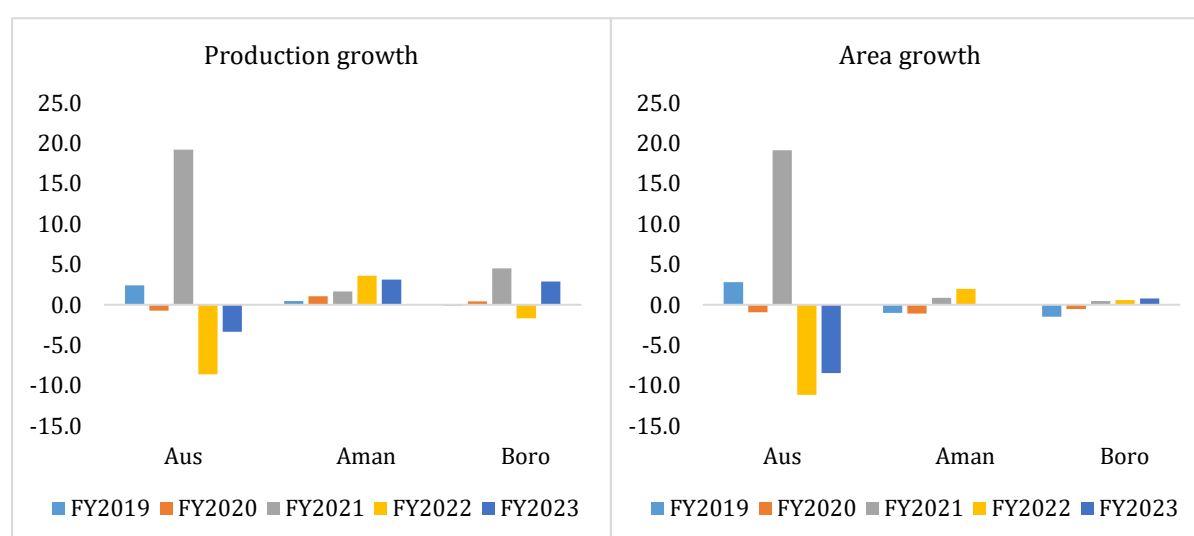
Source: FPMU (2024).

Wheat: During FY2023, total wheat production was 1.2 million m.ton, which is 7.7 per cent higher than FY2022 (Table 6.2). The acreage under wheat cultivation has experienced a decline (-1.9 per cent per year), though average yearly production and yield have increased. The rising demand for wheat has been increasingly met by import, though the amount of import has varied in different years. Given the higher demand for wheat, domestic production of wheat should get more attention.

Table 6.2: Wheat production

Fiscal Year	Area ('000 acres)	Production ("000 m ton)	Import ('000 m ton)	Yield (ton/acre)	Share of import of total domestic production
FY18	865	1098	4575	1.27	416.3
FY19	816	1017	5629	1.25	554.0
FY20	821	1029	6435	1.34	317.2
FY21	878	1299	5343	1.48	492.4
FY22	778	1086	4012	1.40	369.4
FY23	783	1170	1912	1.49	
Average changes in five years	**-1.9**	**1.3**	**-11.6**	**3.5**	

Source: FPMU (2024).

Pulses: During FY2023, lentils production reached 200,000 metric tons, followed by grass pea (khesari) 130,000 metric tons and mung dal 50,000 metric tons (Table 6.3). Other pulses include maskalai, arhar, motor, and felon dal have experienced negative growth. The import of lentils and garlic has shown a significant decline over the years (Table 6.4), which portrays a rise in domestic capacity to meet local demand through increased production.

Table 6. 3: Production of different types of pulses (in lakh MT)

Crops	Production of pulses in lakh MT				Annual Average Growth Rate
	FY20	**FY21**	**FY22**	**FY23**	
Lentil (Masur)	1.8	1.9	1.9	2.0	2.7
Grass pea	1.2	1.3	1.3	1.3	2
Mung bean	0.4	0.4	0.4	0.5	5.7
Vigna mungo	0.3	0.4	0.4	0.4	4.9

Source: BBS (2023).

Table 6. 4: Import of lentil, onion, and garlic (lakh MT)

Fiscal Year	Lentil	Onion	Garlic
FY2020	6169	6409	942
FY2021	4957	7806	974
FY2022	4798	7559	595
Annual Average	-7.4	6.0	-12.3

Source: BBS, (2023).

Spices: A soaring demand for spices has yet to be considered as an opportunity for the rise in domestic production (Figure 6.2). Other than onion, none of the spices have a strong domestic production base. A large part of the domestic demand for these spices is met through import. During 2022, 54 different types of spices were imported. During 2023, about USD 297 million worth of spices were imported (IBEF, 2024), which is an added pressure to the depleted forex reserve.

Figure 6. 2: Production of spices (in lakh MT)
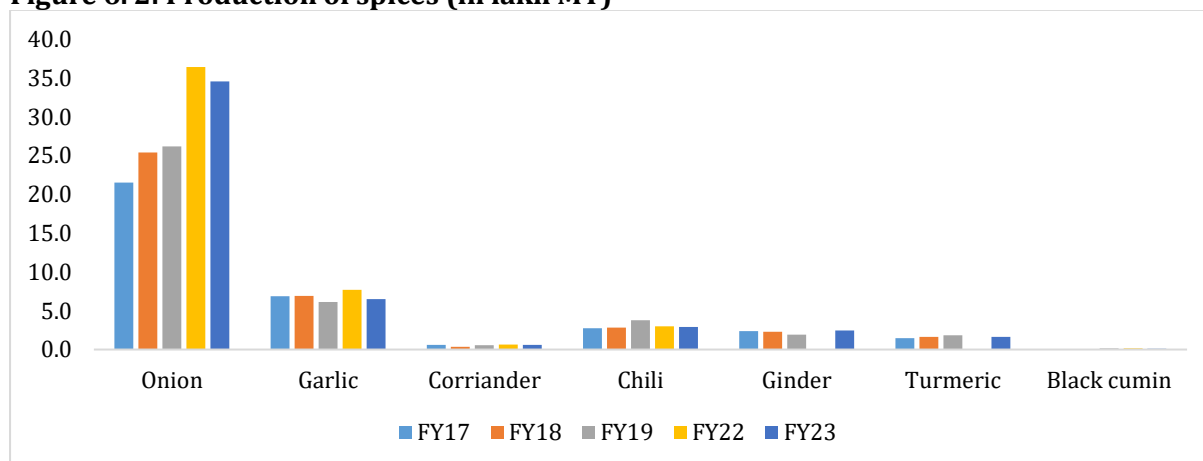
Source: DAM (2023).

Vegetables: The production of summer and winter season vegetables has been increasing over the years (Table 6.5). Annual average vegetable production over the last five years has increased by 6.5 per cent during the summer season and by 4.3 per cent during the winter season.

Table 6. 5: Vegetables that are produced in the summer season (in lakh MT)

Fiscal Years	Vegetables (summer)	Vegetables (winter)
FY20	13.5	31.3
FY21	14.0	32.7
FY22	15.5	34.5
FY23	17.0	36.7
Annual average growth	6.5	4.3

Source: BBS (2023).

Fruits: The majority of temporary and permanent fruits have experienced growth in production. Temporary fruit production is highly dominated by the production of bananas, followed by watermelon and pineapple, while the permanent fruit basket is dominated by the production of mango, jackfruit, coconut, guava, and others. During the last four years (FY2020-FY2023), higher growth in fruit production is observed in case of watermelon, strawberry, water fruit, and lime and lemon. On the other hand, some of the crops experienced negative or low growth in production, which include pineapple, green coconut, banana, and jackfruit.

Table 6. 6: Production of fruits (temporary) (in Lakh MT)

Types	Fruits	FY20	FY21	FY22	FY23	Annual average growth rate
Temporary	Banana (Ripe)	8.2	8.3	8.0	8.4	0.7
	Watermelon	2.5	3.5	5.5	5.6	29.5
	Pineapple	2.2	2.1	2.1	2.0	-2.4
	Melon	0.4	0.5	0.5	0.5	6.1
	Water Fruit	0.0	0.0	0.0	0.0	19.2
	Strawberry	0.0	0.0	0.0	0.0	28.7
Permanent	Mango	12.2	12.1	12.1	14.8	5.3
	Jackfruit	10.0	11.0	10.5	10.6	1.5
	Green Coconut	4.5	4.4	4.6	4.6	0.6
	Guava	2.3	2.4	2.4	2.6	3.3
	Ripe Papaya	1.3	1.3	1.5	1.5	2.8
	Lichi	0.8	0.9	0.9	1.0	7.3
	Lime & Lemon	0.6	0.8	1.0	1.0	17.7

Source: BBS (2023).

Livestock and Poultry: The livestock population is increasing, and the data shows a steady rise in all listed livestock species over the last five years. This positive increase in livestock has led to an increase in dairy and meat products. During FY2019-FY2023, the annual average growth rate is higher among chicken and duck production.

Table 6. 7: Livestock population of Bangladesh (in lakh number)

Fiscal Year	Cattle	Buffalo	Sheep	Goat	Chicken	Duck
FY19	242.4	14.9	35.4	262.7	2893	578
FY20	243.9	14.9	36.1	264.4	2966	597
FY21	245.5	15.0	36.8	266.0	3041	617
FY22	247.0	15.1	37.5	267.7	3118	638
FY23	248.6	15.2	38.3	269.5	3197	660
Annual Average Growth Rate	**0.5**	**0.4**	**1.6**	**0.5**	**2.1**	**2.9**

Source: DSL (2024).

Production of meat has steadily increased over the years, though it has slightly decreased in 2023. Meat production has a slower rise (3.2 per cent) compared to that of eggs (7.3 per cent) and milk (8.4 per cent). Given the growing demand for protein, a further rise in the production of meat, milk, and eggs is necessary. A bulk-level import of these items would further create pressure on the external balance.

Table 6. 8: Production of milk and meat

Products	Milk (Lakh Metric Ton)	Meat (Lakh Metric Ton)	Egg (Crore number)
FY19	99.2	75.1	1711.0
FY20	106.8	76.7	1736.0
FY21	119.9	84.4	2057.6
FY22	130.7	92.7	2335.4
FY23	140.7	87.1	2337.6
Annual Average Growth Rate	8.4	3.2	7.3

Source: DSL (2024).

6.4 Costs of production of agricultural commodities

Over the last five years, there has been a steady rise in the per-unit production cost across all major crops (Table 6.9). This has happened because of the growing cost of agricultural inputs. Such a rise in input costs, as well as production costs, would weaken the competitiveness of local agricultural production and would push for more imports.

Table 6. 9: Per unit production cost of major crops

Production Cost/KG	FY2019	FY2020	FY2021	FY2022	FY2023	Average % Change over the Years
Boro Rice	24.7	24.8	26.0	26.5	28.4	3.00
Aman Rice		24.2	25.3	25.8	27.6	3.57
Wheat	25.2	25.3	26.9	26.9	32	5.40
Potato	7.8	8.3	9.7	10.3	10.5	6.85
Tomato		7.9		9.4	9.5	5.16
Eggplant	8.8	9.0		9.9	12.2	7.65

Source: DAM (2023).

Rice: For Boro rice, the total production cost per kilogram rose from Tk.24.7 in FY2019 to Tk.28.4 in FY2023 (Table 6.10). Seed costs fluctuated slightly, decreasing from Tk.1100 per acre to Tk.975 per acre, while fertiliser costs substantially increased from Tk.4480 per acre to Tk.7015 per acre. Pest management costs also rose significantly from Tk.1000 per acre to Tk.2300 per acre. Irrigation costs remained stable at around Tk.8000 per acre, with land cultivation costs fluctuating between Tk.4500 and Tk.7000 per acre.

Table 6. 10: Sector wise production cost for rice

Description of Materials	Boro Rice				
	FY2019	FY2020	FY2021	FY2022	FY2023
Seed	1100	1000	800	800	975
Fertiliser	4480	6185	5685	5685	7015
Pest Management	1000	1000	1900	2200	2300
Wages of Labor	28000	28800	37000	25000	27500
Land Cultivation/Power Tiler	6000	4500	4500	6000	7000

Description of Materials	Boro Rice				
	FY2019	FY2020	FY2021	FY2022	FY2023
Irrigation	7000	8000	8000	8000	8000
Threshing Cost			3000	5000	6000
Interest Payment	1650	817	748	1219	1209
Rent/Lease of Land	8000	8000	7500	8000	8000
Total Production Cost	57230	58503	69633	70904	77899
Production Cost per kilogram	24.7	24.8	26.0	26.5	28.4

Source: DAM (2023).

For Aman rice, the production cost per kilogram increased from Tk.24.2 in FY2020 to Tk.27.64 in FY2023. Seed costs slightly decreased from Tk.840 per acre to Tk.800 per acre, while fertiliser costs increased from Tk.5048 per acre to Tk.5450 per acre. Pest management expenses grew from Tk.1200 per acre to Tk.1500 per acre, and irrigation costs increased from Tk.1500 per acre to Tk.2100 per acre. Land cultivation costs stayed within Tk.3000 to Tk.5100 range.

Wheat: Wheat production costs per kilogram rose from Tk.25.2 in FY2019 to Tk.32.0 in FY2023. Seed costs increased from Tk.3000 per acre to Tk.3480 per acre, and fertiliser costs rose from Tk.4880 per acre to Tk.9505 per acre. Pest management costs varied, peaking at Tk.1300 per acre in FY2023. Irrigation costs initially decreased but later increased to Tk.3000 per acre, with land cultivation costs generally stable around Tk.4500 per acre.

Potato: For potatoes, the cost per kilogram rose from Tk.7.83 in FY2019 to Tk.10.5 in FY2023. Fertiliser costs for potatoes increased sharply from Tk.12,072 per acre to Tk.19,262 per acre, and pest management costs rose from Tk.4656 per acre to Tk.27877 per acre.

Tomato: Tomato production costs increased from Tk.7.95 per kilogram in FY2020 to Tk.9.59 in FY2023, with significant rises in fertiliser and pest management expenses.

Eggplant: Eggplant production costs rose from Tk.8.84 to Tk.12.22 per kilogram, driven by notable increases in land cultivation and pest management costs.

The production costs for these major crops have generally increased over the observed years, with significant contributions from fertiliser and pesticide expenses. Fertiliser costs have consistently risen across all crops, indicating either increased application rates or higher input prices. Pest management costs also showed an upward trend, suggesting a growing emphasis on pest control. Land cultivation costs generally trended upward, reflecting higher expenses associated with land preparation. Labour costs exhibited variability but generally increased, indicating changes in labour demand and wage rates. Irrigation costs remained relatively stable but showed slight increases, underscoring the importance of water management in agriculture. Seed costs fluctuated, with some crops experiencing peaks followed by stabilisation, reflecting variability in seed prices or usage.

6.5 Agricultural input market

Seed Market: The seed production and distribution data for Bangladesh from FY2018 to FY2023 highlight key aspects of the agricultural market's efficiency (Table 6.11). For rice, meeting demand improved from 44.3 per cent in FY2019 to 63.8 per cent in FY2023, though persistent

deficits of around 160,000 metric tons suggest ongoing inefficiencies (BBS, 2022). Wheat showed inconsistent trends, with demand met decreasing from 50.4 per cent to 43.3 per cent, and rising deficits indicating reliance on imports and market issues. Maize saw a dramatic improvement in FY2021, reaching 97.94 per cent, but this was not sustained, showing volatility in supply chains. Jute data reveals overproduction in some years, like FY2021, followed by deficits, suggesting a misalignment between production and demand. Vegetables and potatoes experienced severe fluctuations, with occasional overproduction in vegetables and large, consistent deficits in potatoes, highlighting issues in supply and demand alignment.

Table 6. 11: Percentage of seed demand met

Name of Seeds	Percentage of Demand Seed Met (% of total demand)				
	FY2019	**FY2020**	**FY2021**	**FY2022**	**FY2023**
Rice	44.33	44.18	60.03	65.60	63.75
Wheat	50.36	29.01	41.58	44.89	43.34
Maize	62.62	97.94	55.54	73.69	66.73
Jute	99.69	115.28	110.14	87.56	82.50
Pulse	8.85	7.93	12.36	12.83	11.90
Oil	7.02	9.46	15.30	17.37	20.96
Vegetable	58.91	81.26	106.31	110.98	102.51
Potato	14.82	15.46	16.06	16.38	13.07
Total	25.20	25.32	30.35	64.24	29.85

Source: MOA (2022).

These trends suggest various challenges that exist within the markets for agricultural inputs. Persistent deficits in rice and wheat indicate potential inefficiencies in production and distribution, possibly exacerbated by rent-seeking behaviours or speculative trading. The volatility in maize and jute points to misalignment between production and market demand, potentially due to poor market intelligence or speculative activities. Fluctuations in vegetables and large deficits in potatoes underscore the difficulties in managing perishable goods and market inefficiencies. These factors collectively suggest that while there are improvements, significant inefficiencies remain that could be addressed through improved production planning, and enhanced distribution systems.

Fertiliser Market: Chemical fertiliser usage in Bangladesh has shifted significantly, particularly between urea and non-urea fertilisers (Table 6.12). Over the last eight years, total fertiliser use has increased, peaking at 6,825.55 thousand metric tons in FY2022. The share distribution between urea and non-urea fertilisers changed dramatically, with urea decreasing from 48.4 per cent of total use in FY2016 to 38.9 per cent in FY2022, while non-urea increased to 61.0 per cent. This shift perhaps reflects changes in crop preferences.

Table 6.12: Change in the composition of chemical fertilisers

FY	Total Use in Thousand MT	Proportion of Urea	Proportion of Non-urea	Urea (kilogram) Used per Acre	Non-Urea (kilogram) Used per Acre	Total Fertiliser Used per Acre
FY2016	4738.40	48.35	51.65	58.21	62.18	120.40
FY2017	4926.77	48.02	51.98	60.12	65.07	125.18
FY2018	5093.45	47.66	52.34	61.68	67.74	129.42
FY2019	5422.00	47.84	52.16	65.38	71.27	136.65
FY2020	5457.00	45.90	54.10	63.43	74.75	138.18
FY2021	6073.00	40.56	59.44	62.37	91.41	153.774
FY2022	6825.55	38.99	61.01	67.38	105.45	172.829
FY2023*	5913.31	38.66	61.34	57.88	91.85	149.731

Source: MOF (2023); Note: Data available for FY2023* is from July 2022 to February 2023.

Fertiliser use per acre also evolved, with urea rising from 58.2 kg in FY2016 to 67.4 kg in FY2022 and non-urea increasing more sharply from 62.2 kg to 105.5 kg (Figure 6.3). Consequently, total fertiliser use per acre grew from 120kg to 173kg. Despite higher fertiliser application, agricultural yields did not rise proportionally, indicating potential issues like declining soil productivity or inefficiencies in fertiliser use. The substantial rise in non-urea use by 22.3 per cent in FY2021 and 15.4 per cent in FY2022, alongside changes in urea use, may reflect subsidy policy changes, price fluctuations, or availability constraints.

Figure 6.3: Composition of production and import share of urea and non-urea fertilisers
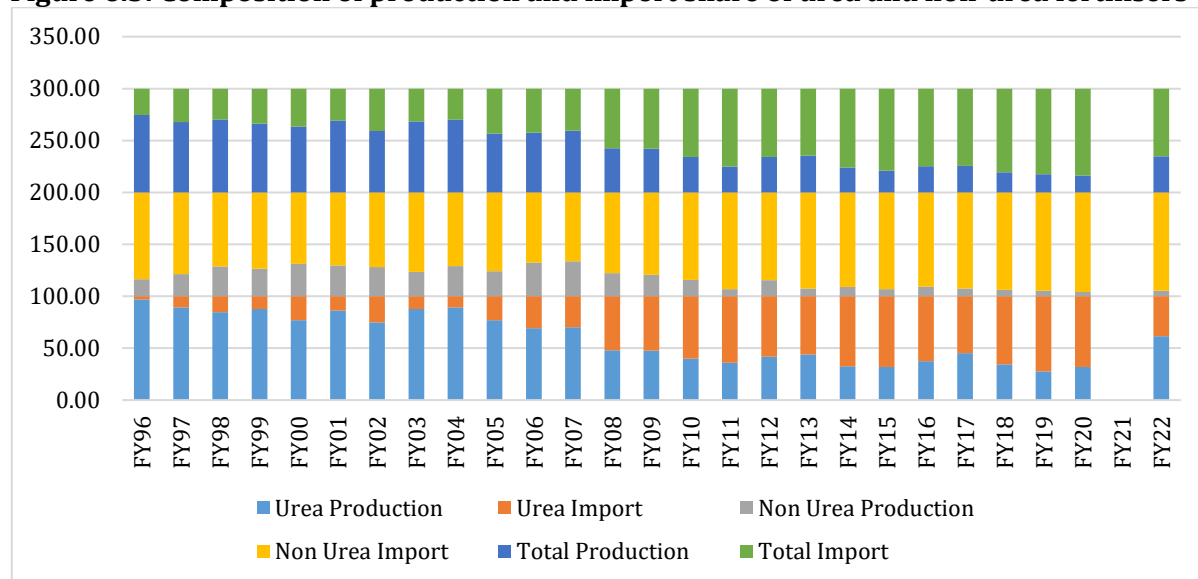
Source: FPMU (2024).

Bangladesh's fertiliser supply has increasingly relied on imports (Figure 6.4). Initially, local production met most urea demand, with imports playing a minor role. Over time, imports of both urea and non-urea fertilisers have grown. In FY1996, urea imports were minimal, but by FY2022, reliance on imports had increased significantly. Non-urea fertilisers followed a similar pattern, with imports rising to a substantial portion of the supply. This shift suggests challenges in domestic production or a strategic preference for imports due to less availability of gas to be supplied in fertiliser factories for urea production. The reliance on imports with poor foreign reserves necessitates a rise in domestic production, which would be difficult without ensuring a sufficient supply of gas.

Figure 6. 4: Imported fertilisers between 2011 to 2022 (in million USD)

Bar chart showing imported fertilisers in million USD:
- 2011: 1983
- 2012: 1107
- 2013: 956
- 2014: (no data)
- 2015: 1256
- 2016: 664
- 2017: 707
- 2018: 915
- 2019: 882
- 2020: 666
- 2021: 1891
- 2022: 3455
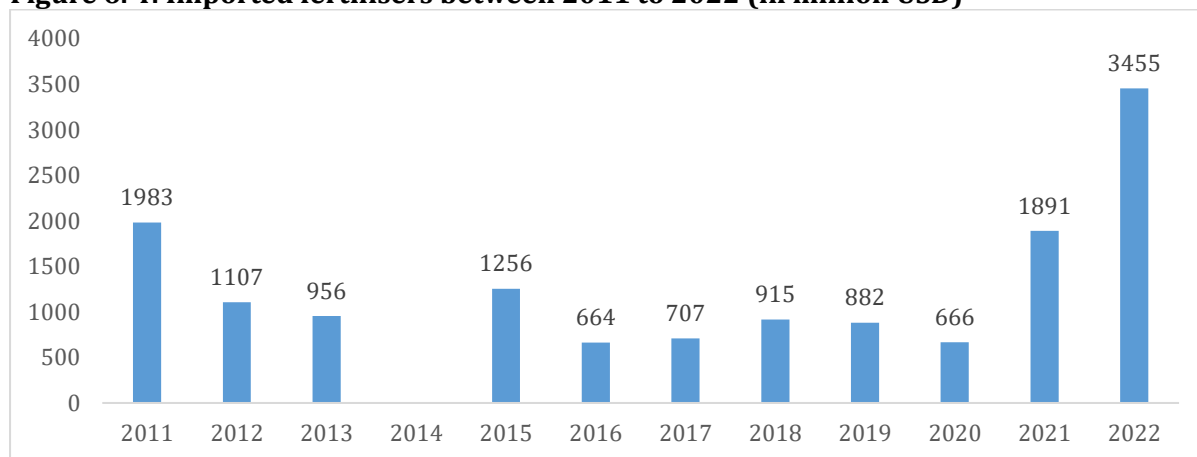
Source: ITC Trade Map (n.d.).

Pesticide Market: Total pesticide consumption in Bangladesh, encompassing insecticides (granular, liquid, powder), matricides, fungicides (general, sulphur), herbicides, and rodenticides, has generally increased despite minor fluctuations (Table 13). In 2019, total pesticide usage was 38,062 metric tons/kilolitres across 39,357 thousand acres, resulting in a usage rate of approximately 0.967 kilograms per acre. By 2020, usage slightly decreased to 37,563 metric tons/kilolitres over the same area, translating to 0.95 kilograms per acre. In 2021, pesticide consumption rose to 39,543 metric tons/kilolitres over 39,678 thousand acres, with the usage rate rebounding to 1.001 kilograms per acre. In 2022, there was a slight reduction in the usage rate to 0.99 kilograms per acre. Additionally, the total value of pesticide imports has shown a steady upward trend, further supporting these observations.

Table 6. 13: Total consumption of pesticides over the years

Year	Total Consumption of Pesticides (MT/KL)	Gross cropped Area in Thousand Acre	Pesticide Used KG/ KL per Acre
2019	38062.2	39357	0.97
2020	37562.81	39357	0.95
2021	39542.75	39678	1
2022	39083	39493	0.99

Source: BBS (2023).

Irrigation: The irrigation sub-sector of Bangladesh's agricultural sector has remained relatively unchanged over the years, with the total irrigated area increasing from 55.3 lakh hectares in FY2017 to 57.2 lakh hectares in FY2023 (BBS, 2023) (Figure 6.5). This growth is mainly due to the expanded use of shallow tube wells and LLP methods, which rose 30.8 lakh hectares and 13.3 lakh hectares, respectively. Deep tube wells and other irrigation methods remained steady at around 10.5 and 2.7 lakh hectares, respectively. Crop irrigation patterns have remained skewed towards non-traditional methods, particularly for key crops like Boro and Aman rice. Non-traditional cultivation areas for Boro increased from 11.1 lakhs acre to 11.32 lakhs acre, and for Aman from 2.65 lakhs acre to 3.33 lakhs acre, while traditional methods remained stable (BBS, 2023). Despite these changes, the sector has largely maintained its core practices, incorporating modern technologies to improve water use efficiency and crop yields.

Figure 6. 5: Proportion of irrigation methods used
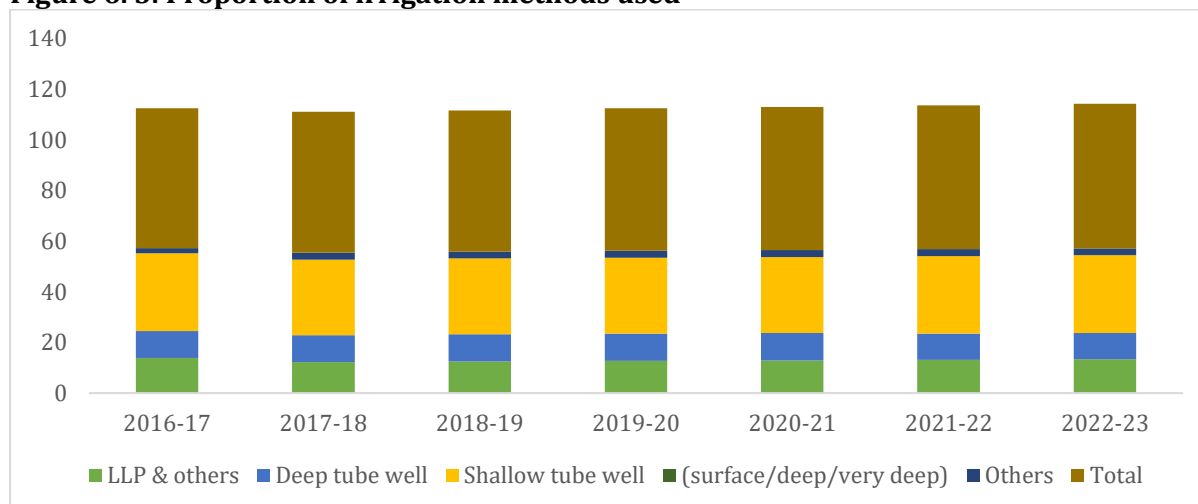
Source: MOF (2023).

Agricultural Machinery: As of 2021, Bangladesh's agricultural sector utilises a vast array of machinery, including 2.8 million engines, 760,000 power tillers, 60,000 tractors, and 1.5 million sprayers (Table 6.14). Significant numbers of deep tube well pumps (1.76 million), shallow tube well pumps (500,000), and threshers (600,000) are also in operation, alongside 200,000 seeders, 150,000 grader drum ploughs, 50,000 manual weeders, and 30,000 fruit cutters (MOA, n.d.). Mechanisation rates for land preparation, irrigation, threshing, and pesticide application exceed 90 per cent while planting and harvesting rates remain below 2 per cent. Manual planting requires 123-150 man-hours per hectare, whereas mechanical transplanting reduces this to 9-11 man-hours. Delays in transplanting can cause significant yield reductions, with a one-month delay reducing yields by 25 per cent and a two-month delay by 70 per cent (MOA, n.d.). Further mechanisation with seed planters, transplanters, and harvesting machines can cut operational costs by at least 50 per cent, demonstrating significant efficiency gains from modern machinery.

Table 6. 14: Number of agricultural machines in Bangladesh (Up to 2021)

Name of Agricultural Machinery	Number of Machines	Name of Agricultural Machinery	Number of Machines
Engines used for agricultural work	2,800,000	Combine Harvester	6,000
Power Tiller	760,000	Seeder	200,000
Tractor	60,000	Drum Seeder	8,000
Rice Transplanter	1,120	Grader Drum Plow	1,50,000
Reaper	30,000	Grader Drum Planter	2,00,000
Bed Planter	8,000	Floating Weeder	48,500
Granular Urea Applicator	1,800	Manual Weeder	50,000
Granular Fertiliser Applicator	18,000	Thresher	600,000
Sprayer	1,500,000	Dryer	500
Deep Tube Well Pump	1,763,485	Cutter (Rice, Wheat, Corn, Lentil, Oilseed, Spice)	30,000
Shallow Tube Well Pump	500,000	Straw Chopper	3,50,000

Source: MOA (2021).

6.6 Financing agricultural production

Agricultural Credit: Between FY2015 and FY2023, disbursement of agricultural credit grew significantly, with targets rising from Tk.16,400 million in FY2016 to Tk.30,911 million in FY2023

(Figure 6.6). Disbursements consistently exceeded targets, and recovery amounts increased from Tk.17,056 million to Tk.33,010 million, indicating effective loan mechanisms.

From 2019 to 2023, the allocation of agricultural loans shifted, with the crop sub-sector's share decreasing from 52.9 per cent to 44.6 per cent, while livestock and poultry loans increased from 13.6 per cent to 22.9 per cent. Loans for fisheries remained stable, and those for poverty alleviation and other purposes showed minor fluctuations, suggesting a focus on diversifying agricultural activities to boost productivity and resilience.

Figure 6.6: Purpose of agricultural loans (In proportion of total loans)
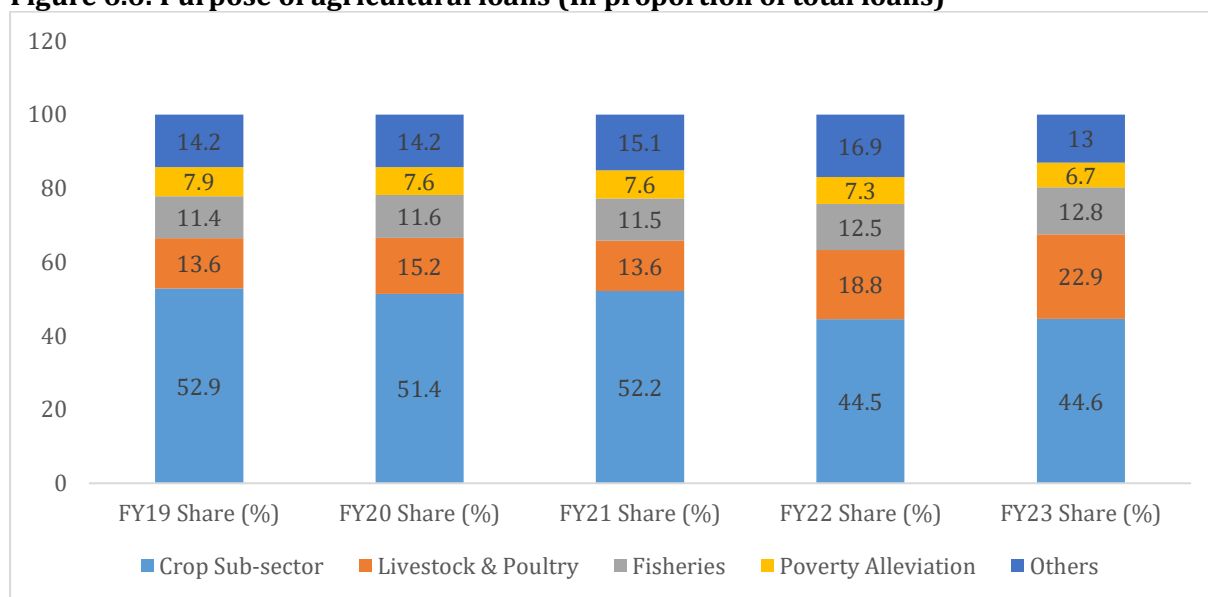
Source: BB (2024).

Subsidy: From FY2015 to FY2020, the Bangladeshi government used subsidies to stabilise fertiliser prices (Table 6.15). The urea subsidy per kilogram peaked at Tk.12.7 in FY2019 before decreasing to Tk.11.8 Taka in FY2020, while the retail price of urea remained fixed at Tk.16 per kilogram despite fluctuating international prices. Non-urea fertiliser subsidies also varied, with the highest subsidy at Tk.16 per kilogram in FY2016, decreasing to Tk.12.7 in FY2020. DAP prices fell slightly from Tk.27 to Tk.24 per kilogram, even as international prices peaked at Tk.31.7 in FY2019. MOP prices remained steady at Tk.15 per kilogram despite international price fluctuations. These subsidies helped maintain stable domestic prices for fertilisers, cushioning farmers from international market volatility.

Table 6. 15: Market price, international price and subsidy paid in fertiliser

Fertilisers	Indicators	FY2016	FY2017	FY2018	FY2019	FY2020
Urea (Tk./ KG)	Subsidy	10.2	5.0	7.0	12.7	11.8
	Domestic price	16.0	16.0	16.0	16.0	16.0
	Global price	18.6	16.5	18.9	22.2	19.4
Non-Urea	Subsidy	16.1	8.3	12.0	14.8	12.7
	DAP Domestic Price	27.0	27.0	27.0	25.0	24.0
	DAP Global Price	29.5	25.8	29.7	31.7	23.2
	MOP Domestic Price	15.0	15.0	15.0	15.0	15.0
	MOP Global Price	23.7	17.8	18.0	19.6	21.3

Source: FPMU (2023); WB (2023); MOA (2022).

From FY2017 to FY2020, the electricity rebate for irrigation increased – it peaked in FY2019 with the highest subsidy per hectare at Tk.37.7. By FY2020, the total subsidy decreased to reducing the subsidy per hectare to Tk.28.3 Taka. This variability reflects adjustments in electricity prices for irrigation from time to time.

The Agricultural Machinery Technology Innovation and Expansion Project, launched in 2010, provides substantial subsidies for farm machinery. As of April 19, 2023, the Ministry of Agriculture announced a 70 per cent subsidy for farmers in the Haor region and a 50 per cent subsidy for those in other regions on essential machinery such as combine harvesters, rice transplanters, reapers, seeders, threshers, dryers, sprayers, weeders, potato diggers, carrot washers, and various spare parts. Additionally, around 2,000 farmers and mechanics receive annual training on agricultural machinery.

Table 6. 16: Government subsidy in fertiliser and irrigation

Fiscal Year	Subsidy in Fertiliser			Subsidy in Irrigation			Total Subsidy Paid (Crore Taka)
	Urea (Subsidy Paid in Crore Taka)	Non-Urea (Subsidy Paid in Crore Taka)	Per Acre Fertiliser Subsidy (Taka per Acre)	Total Irrigated Area (lakh hectares)	Electricity Rebate (Subsidy Paid in Crore Taka)	Per Hectare Irrigation Subsidy	
FY2016	2337.28	3928.85	1592.13	55.14	152.1	27.56	6418.23
FY2017	1182.14	2127.42	840.91	55.27	161.38	29.20	3470.94
FY2018	1694.67	3191.29	1241.45	55.57	168.28	30.28	5054.24
FY2019	3298.83	4174.11	1883.40	55.87	210.67	37.71	7683.61
FY2020	2954.16	3762.12	1700.63	56.27	159.31	28.31	6875.59

Source: MOA (n.d.).

6.7 Marketing of agricultural commodities

6.7.1 Distribution of Margin at Retail Market

Rice and Crops: The rice market has seen fluctuations in the margin at the retailer's end, where retail margins surged from 7 per cent in 2018 to 54 per cent in 2020, though margins have stabilised in the following years (5-6 per cent in 2021 and 2022) (Table 6.17). In contrast, Rice (Medium) and Rice (thin) displayed relatively stable margins, consistently hovering around 5-6 per cent. A higher margin for rice (coarse) at the retailers' end forces poor and low-income people to buy rice, leading to a higher financial burden.

Wheat has experienced a slight upward trend in retail margins, peaking at 12 per cent in 2020 before reducing 8-11 per cent in subsequent years, indicating increasing retail markups. Conversely, eggplant margins reveal significant volatility, ranging from 18 per cent to 28 per cent, with a peak in 2022 suggesting supply constraints driving up retail margins. This volatility points to underlying instability, possibly due to seasonal production variations or inadequate storage facilities.

Table 6. 17: Distribution of margin at retail market and wholesale market (in %)

Name of item	Market	2018	2019	2020	2021	2022
RICE						
Rice (Coarse)	Retail	7	9	54	5	6
Rice (Medium)	Retail	5	6	6	6	5
Rice (Thin)	Retail	6	6	-7	6	5
CROPS						
Wheat	Wholesale	8	7	4	-7	-21
	Retail	9	8	12	11	5
Eggplant	Wholesale	18	8	18	3	7
	Retail	21	27	18	23	28
Maize Crop	Wholesale	9	0	4	-16	0
	Retail	16	17	21	14	9
Tomato	Wholesale	40	19	2	2	8
	Retail	24	23	23	26	25
Lentil	Wholesale	29	21	32	32	22
	Retail	11	11	7	6	8
Potato	Wholesale	5	5	7	11	-14
	Retail	25	27	17	19	22
SPICES						
Onion	Wholesale	5	5	7	11	-14
	Retail	17	13	12	12	15
Garlic	Wholesale	10	-21	25	32	-36
	Retail	24	16	15	11	21
Ginger	Wholesale	7	-2	37	14	-33
	Retail	18	15	2	15	23
Dried Chilli	Wholesale	8	-11	5	12	-22
	Retail	11	9	11	10	12
Turmeric	Wholesale	7	9	9	11	-3
	Retail	13	10	11	11	10
Coriander	Wholesale	11	9	8	10	-7
	Retail	24	16	16	15	25
Mustard (Oil Seed)	Wholesale	4	1	7	-9	1
	Retail	18	23	18	17	8

Source: DAM (2022).

Spices: The agricultural spice market demonstrates a mix of stability and volatility. Onion margins fluctuate, peaking at 17 per cent in 2018 following 12-15 per cent margins, indicating supply chain disruptions or production issues. Garlic margins show significant increases, peaking at 24 per cent in 2018 and 2022, suggesting supply constraints. Ginger exhibits wide volatility, with margin changes from 2 per cent to 23 per cent, and a peak in 2022 indicating severe supply disruptions. Dried chilli margins show moderate fluctuations, peaking at 12 per cent in 2022, reflecting consistent supply. Turmeric remains stable at around 10-13 per cent, suggesting balanced supply and demand. In contrast, coriander shows significant volatility, peaking at 25 per cent in 2022, indicating supply constraints, with high markups pointing to production or distribution challenges. Since the majority of spices are imported, the volatility at retailers' margins is partly explained by high import costs due to the devaluation of BDT against the dollar.

6.7.2 Wholesale Price, Imported Price, and Import Quantity

Analysing the data from 2018 to 2022, we observe intriguing patterns in the wholesale prices, imported prices, and import quantities of various commodities in Bangladesh (Table 6.18). The relationship between the price differences and import quantities provides significant insights into the market dynamics and strategies employed by importers. This narrative explores these trends in detail, highlighting the key findings and their implications.

Table 6. 18: National wholesale average market price (Tk./ kg), Imported Price (Tk./ kg) and Import Quantity (in Tons)

Name of item	Price	2018	2019	2020	2021	2022
Rice	Wholesale Price	52	45	52	57	63
	Imported Price	38	59	97	36	39
	Import (Tons)	995,210	55,075	21,708	2,644,282	908,087
Wheat	Wholesale Price	23	25	25	27	37
	Imported Price	19	19	20	26	32
	Import (Tons)	4,839,307	6,879,079	6,014,980	7,162,222	4,197,787
Maize Crop	Wholesale Price	19	18	19	22	32
	Imported Price	17	16	18	24	30
	Import (Tons)	1,710,501	1,313,750	2,218,941	1,898,786	2,265,460
Tomato	Wholesale Price	38	44	35	39	53
	Imported Price	31	36	37	36	27
	Import (Tons)	1,294	33,391	42,676	45,571	38,758
Onion	Wholesale Price	37	49	58	37	34
	Imported Price	20	36	23	25	19
	Import (Tons)	262,562	253,789	687,594	571,290	712,334
Garlic	Wholesale Price	44	90	98	65	53
	Imported Price	44	85	60	71	48
	Import (Tons)	65,056	81,967	102,717	61,606	71,152
Ginger	Wholesale Price	87	127	146	78	76
	Imported Price	31	36	37	36	27
	Import (Tons)	81,648	109,189	128,030	158,780	97,903
Turmeric	Wholesale Price	130	127	125	126	126
	Imported Price	86	86	79	96	95
	Import (Tons)	4,206	15,671	51,250	28,376	28,807

Source: ITC Trade Map(n.d.), DAM (2023).

Rice: Over the years, rice has shown considerable fluctuations in both wholesale and imported prices. In FY2018, the wholesale price of rice was Tk.52/kg, while the imported price was significantly lower at Tk.38/kg. This price disparity likely encouraged higher import quantities, as evidenced by the substantial import quantity of 995,210 tons. However, in FY2020, when the imported price surged to Tk.97/kg, far exceeding the wholesale price of Tk.52/kg, the import quantity dropped dramatically to 21,708 tons. This trend underscores a direct relationship between price advantage and import quantities: lower imported prices relative to wholesale prices incentivise higher imports, while higher imported prices discourage them. By FY2022, the wholesale price rose to Tk.63/kg, and the imported price decreased to Tk.39/kg, resulting in a notable import quantity of 908,087 tons, reaffirming this pattern.

Wheat: The data for wheat also reveals compelling insights. In 2018, both wholesale and imported prices were relatively close at Tk.23/kg and 19 Taka/kg, respectively. The substantial import quantity of 4,839,307 tons suggests that even a slight price advantage in imported wheat can drive high import volumes. By FY2021, the wholesale price increased to Tk.27/kg, while the imported price remained lower at Tk.22/kg, corresponding with an import quantity of 7,162,222 tons, the highest in the observed period. This trend highlights that a consistent price advantage in imports significantly boosts import volumes, supporting the need to import to meet domestic demand at a lower cost.

Maize Crop: For maize, the imported price remained consistently lower than the wholesale price across the years. For instance, in FY2020, the wholesale price was Tk.19/kg compared to the imported price of Tk.18/kg, resulting in a high import quantity of 2,218,941 tons. This marginal price difference still prompted significant imports, indicating that importers take advantage of even minimal cost savings. By FY2022, the wholesale price rose to Tk.32/kg, while the imported price was Tk.30/kg, with the import quantity reaching 2,265,460 tons. This suggests that as long as the import price is lower, import quantities tend to remain high, reflecting cost-saving measures by importers.

Tomato: Tomato prices exhibit a unique pattern where the wholesale prices often exceed the imported prices. In 2019, the wholesale price was Tk.44/kg, while the imported price was lower at Tk.36/kg, leading to an import quantity of 33,391 tons. Despite the lower price of imports, the quantities remained relatively moderate, possibly due to the perishable nature of tomatoes and logistical challenges. However, in 2022, when the wholesale price increased to Tk.39/kg, and the imported price dropped to Tk.27/kg, import quantities rose to 38,758 kg. This suggests that significant price differences can overcome logistical hurdles, driving higher imports.

Onion: The onion market experienced sharp price fluctuations. In FY2019, the wholesale price was Tk.49/kg, significantly higher than the imported price of Tk.36/kg, resulting in an import quantity of 253,789 tons. The high import quantity aligns with the substantial price advantage of imported onions. However, in FY2022, when the wholesale price decreased to Tk.37/kg and the imported price was Tk.24/kg, the import quantity soared to 712,334 tons. This substantial increase indicates that lower imported prices relative to wholesale prices can drastically boost import quantities, highlighting the market's sensitivity to price changes.

Garlic: Garlic prices present another interesting case. In FY2018, both wholesale and imported prices were identical at Tk.44/kg, with an import quantity of 650,656 kg. This suggests a baseline import requirement regardless of price advantage. In FY2021, the wholesale price rose sharply to Tk.98/kg, while the imported price was lower at Tk.65/kg, resulting in a decreased import quantity of 61,606 tons. By FY2022, with the wholesale price at Tk.53/kg and the imported price at Tk.48/kg, imports were at 71,152 tons. The fluctuating import quantities despite price advantages suggest that other factors, such as better domestic supply, influence garlic imports.
Ginger: Ginger prices and quantities show a clear correlation with price advantages. In FY2019, the wholesale price was Tk.127/kg, while the imported price was significantly lower at Tk.36/kg, leading to an import quantity of 190,189 kg. The substantial price difference drove high import volumes. By FY2022, the wholesale price increased to Tk.76/kg, and the imported price was Tk.72/kg, with imports at 97,903 tons. This decrease in import quantity despite a lower import price reflects that significant price advantages are more influential in driving high import volumes.

Turmeric: Turmeric also demonstrates the impact of price differences on import quantities. In FY2018, the wholesale price was Tk.130/kg, while the imported price was Tk.86/kg, with an import quantity of 4,206 tons. In FY2021, the wholesale price rose to 126 Taka/kg, and the imported price decreased to Tk.96/kg, resulting in a higher import quantity of 51,250 tons. By FY2022, the wholesale price was Tk.126/kg, and the imported price was Tk.95/kg, with imports at 28,870 tons. These trends suggest that significant price advantages in imported turmeric can drive higher import quantities, particularly when domestic prices remain high.

6.8 Conclusion

The review of the agriculture markets, including production, inputs and marketing of different crops, non-crops, livestock and fisheries, indicates that despite the consistent rise in production, competitiveness of domestic production remains a challenge. This is due to the rising costs of

production, particularly those of fertiliser, labour, and irrigation, despite having a subsidised supply of these inputs. The majority of crops need at least a part to be imported, and the share of imports is increasing. In other words, domestic food security is increasingly dependent on part of import – self-sufficiency in food production is not yet achieved. However, there are scopes for further enhancement of domestic production of cereal and non-cereal crops through higher cropping intensity and increasing net cropped area covering fallow and wastelands. At the same time, it is also important to supply agricultural commodities at competitive market prices.

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SECTION VII. ENERGY AND POWER DEMAND PROJECTION FOR 2041: IEPMP VS. CPD

7.1   Introduction

In November 2023, the Ministry of Power, Energy, and Mineral Resources (Mopar) approved the new Integrated Energy and Power Master Plan (IEPMP). The Government of Bangladesh (Gob) has embarked on an ambitious journey to forecast and strategise the nation's energy needs up to 2050 through this plan. The IEPMP envisions a comprehensive roadmap to address the increasing demand for power, considering the rapid pace of urban development, industrial growth, and the necessity for environmental sustainability and social equity.

However, the current IEPMP relies heavily on optimistic GDP growth rates, which may have led to over-inflated estimations of power and energy demand. Additionally, the forecasting methods utilised in the IEPMP are based on simplified models, with the most recent data point being from 2019. This approach fails to account for significant events like the COVID-19 pandemic, which has had profound impacts on energy consumption patterns. Accurate forecasting is crucial, not only for urban and industrial planning but also for ensuring environmental sustainability and social equity.

Given these potential shortcomings, the CPD aims to provide a revised and more accurate forecast of future electricity consumption in Bangladesh. By employing a comprehensive time series modelling approach that incorporates long-run historical data and the most recent observations, we strive to develop a more realistic and reliable estimate of the country's energy needs. These forecasts extend to 2050, marking 2030, 2041 and 2050 as benchmarks, and serve as a critical tool for government officials, energy sector executives, and planners, helping to ensure that the nation's energy infrastructure can meet rising demands without compromising environmental and social objectives.

7.2   Summary of the energy demand forecast in the IEPMP

The IEPMP employs an econometric methodology for forecasting energy demand, utilising a technological assessment model based on a bottom-up approach, alongside econometric modelling techniques such as OLS regression analysis and micro-level demand forecasting. The key assumptions underlying these models include GDP, population, energy prices, previous demand, energy efficiency, and CO_2 intensity, with metrics such as total energy consumption per GDP and total CO_2 emissions per GDP. However, the actual econometric model used in the IEPMP simplifies this by including only three primary variables: price, previous demand, and GDP.
The formula for Final Energy Consumption in the IEPMP is expressed as:

Energy Demand =f [income (+), energy price (-), previous demand (+)]

The IEPMP considers three scenarios for its projections: the Reference scenario (business as usual), the Advanced Technology Scenario (ATS), and the Net Zero scenario, although the latter is ignored in the final analysis. Additionally, three GDP growth cases are examined: the PP2041 scenario, the In-between case, and the IMF Extended case. These scenarios and cases are designed to capture a range of possible future states, allowing for flexibility and adaptability in planning.

According to the IEPMP's estimations, energy demand in Bangladesh is projected to increase significantly from 2019 to 2050. Specifically, energy demand is expected to rise by 1.64 times to

67.65 million tonnes of oil equivalent (MTOE) by 2030, by 2.39 times to 98.59 MTOE by 2041, and by 3.14 times to 129.53 MTOE by 2050, from a base level of 41.25 MTOE in 2019. These projections underscore the need for a strategic approach to energy planning, ensuring that future demand is met sustainably and efficiently.

7.3   Summary of the power demand forecast in the IEPMP

The Integrated Energy and Power Master Plan (IEPMP) primarily adopted the PP2041 strategy for its power forecast, leveraging the government's previous successful strategies, as highlighted in the IEPMP Interim Report of 2022. However, the success of a few strategies does not necessarily justify the wholesale integration of this power strategy into the IEPMP. One key method used to measure electricity demand in the IEPMP is the GDP elasticity method, with an elasticity value of 1.27, indicating a strong relationship between GDP growth and electricity demand growth. This approach aligns with the Power System Master Plan (PSMP) of 2016.

A critical shortcoming of the IEPMP's electricity demand forecast is the assumption of a constant relationship between GDP growth and electricity demand growth, which lacks consideration for potential changes in efficiency and other influencing factors. Notably, no efficiency parameters were included in the forecast model. This constant relationship assumption simplifies the complexity of real-world dynamics, potentially leading to inaccuracies in the forecast.

According to the IEPMP's estimations, electricity demand in Bangladesh is expected to rise dramatically from 2019 to 2050. Specifically, demand is projected to increase by 2.26 times to 206.1 terawatt-hours (TWh) by 2030, by 4.5 times to 411 TWh by 2041, and by 7.38 times to 673.7 TWh by 2050, starting from a base level of 91 TWh in 2019. These projections emphasise the necessity for a more nuanced and flexible forecasting approach that can adapt to evolving economic conditions and incorporate efficiency improvements to ensure a sustainable energy future. Table 7.1 illustrates the summary of energy and power demand forecast illustrated in the IEPMP 2022.

Table 7. 1: Summary of the forecast of energy and power demand in the IEPMP

Year	Forecast of Primary Energy Demand (toe)[2]	Forecast of Power Demand (Tw-H)
2030	67.7	206.1
2041	98.6	411.1
2050	129.5	673.7

Source: Authors' compilation and calculation based on the IEPMP.

7.4   Methodological issues in the IEPMP and the advantage of VECM

The IEPMP has several methodological issues that undermine the reliability of its energy demand forecasts. One significant issue is the use of non-stationary data in Ordinary Least Squares (OLS) regression, which can lead to spurious regression results. When data is non-stationary, it means its statistical properties, such as mean and variance, change over time, making traditional OLS methods unreliable. Additionally, autocorrelation in the data can result in biased and inefficient

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[2] In the IEPMP, energy demand is measured using the Final Energy Consumption. However, in the CPD's forecast, the measure has been calculated using Primary Energy Consumption. Since the IEPMP has assumed a constant systematic loss of conversion, the conversion from Final Energy Consumption to Primary Energy Consumption was calculated for the IEPMP.

estimates, as past values influence current values, violating the assumption of independence in OLS.

Another critical issue is the inability of OLS to capture long-term relationships among variables due to the lack of cointegration. Cointegration allows for the identification of a long-term equilibrium relationship between non-stationary variables, which OLS cannot adequately address. This limitation leads to endogeneity bias, where the omission of relevant variables and complex interdependencies among existing variables invalidate the assumption of exogeneity. In the IEPMP, the electricity demand forecast assumes a constant relationship between GDP growth and electricity demand growth, a simplification that fails to reflect real-world dynamics. Moreover, GDP is treated as an exogenous variable, which is an unrealistic assumption according to existing literature.

To overcome these methodological shortcomings, we utilised the Vector Error Correction Model (VECM). VECM addresses the issues of non-stationary data by allowing for cointegration, thus capturing the long-term equilibrium relationships among variables. This model also accounts for autocorrelation, providing more reliable and efficient estimates. By incorporating endogeneity, VECM acknowledges the complex interdependencies among variables, offering a more accurate and realistic forecast. Our analysis used data spanning from 1977 to 2022 for energy demand and from 1985 to 2022 for power demand, ensuring a comprehensive examination of trends and patterns.

VECM's advantage lies in its ability to model both short-run and long-run dynamics, capturing historical inter-period changes under the Business as Usual (BAU) scenario. This makes VECM a more flexible and robust tool compared to OLS. Post-estimation tests for the robustness and stability of the VECM model have yielded satisfactory results, with the short-run and long-run interrelationships among variables consistent with previous literature. The electricity demand was measured using the GDP elasticity method, with an elasticity value of 1.27, aligning with the Power System Master Plan (PSMP) 2016. Despite the absence of an efficiency parameter in the IEPMP, VECM's comprehensive approach ensures a more reliable forecast by addressing the methodological flaws inherent in the IEPMP's OLS-based model.

By utilising VECM, we provide a more dynamic, robust, and realistic modelling approach, significantly improving the accuracy of future energy and power demand forecasts for Bangladesh. This method not only corrects the methodological issues present in the IEPMP but also offers a clearer and more actionable insight into the country's future energy needs.

7.5   Revised forecast of energy demand

In our model, the primary variables include Primary Energy Consumption, Real GDP, Total CO_2 Emissions, Population Growth Rate, and the Global Energy Price Index. The data spans from 1974 to 2022, allowing for a thorough analysis of historical trends and future projections. The VECM approach not only captures historical inter-period dynamics under the business-as-usual scenario but also ensures the robustness and stability of the model post-estimation. The short-run and long-run interrelationships among the variables are consistent with previous literature, and the optimal rank of the model is determined to be 2, with an optimal lag of 1. This comprehensive approach provides a more realistic and reliable forecast of Bangladesh's future energy demand compared to the initial IEPMP methodology. The data is sourced from Our World in Data, World Development Indicators, and IMF.

Table 7. 2: Comparison of VECM forecast of energy demand with that of IEPMP

Year	Primary Energy Consumption (mtoe)		Changes in Forecasted energy consumption (folds)	
	According to the **IEPMP**	According to the **VECM**	**IEPMP** Forecast of Energy Demand	**VECM** Forecast of Energy Demand
2019	41.3	41.25	-	-
2030	67.7	56.1	1.64 folds	1.36 folds
2041	98.6	72.6	2.39 folds	1.76 folds
2050	129.5	85	3.14 folds	2.06 folds

Source: Authors' Calculation, 2024.

Table 7.2 compares the primary energy consumption forecasts between the IEPMP and our VECM approach, showing significant differences in the projected energy demand. According to the IEPMP, primary energy consumption is expected to reach 67.65 MTOE by 2030, 98.59 MTOE by 2041, and 129.53 MTOE by 2050. In contrast, the VECM forecasts lower consumption levels of 57.71 MTOE by 2030, 75.14 MTOE by 2041, and 96.51 MTOE by 2050. The changes in forecasted energy consumption indicate that the IEPMP predicts much higher growth rates, with energy demand increasing by 1.64 times by 2030, 2.39 times by 2041, and 3.14 times by 2050. The VECM, however, forecasts a more moderate increase of 1.40 times by 2030, 1.82 times by 2041, and 2.34 times by 2050.

The discrepancy can be attributed to several factors, including the IEPMP's last data observation point being 2019, which did not account for the economic impacts of the COVID-19 pandemic. This structural break likely led to overestimated future energy demand in the IEPMP forecasts. Additionally, both the IEPMP and VECM assumed constant systematic loss and conversion costs from primary to final energy, which further emphasises the differences arising from the underlying methodological approaches. The VECM's more conservative estimates suggest a need for revising the IEPMP's forecasts to better reflect recent economic changes and more robust modelling techniques.

7.6   Revised forecast of power demand

For the VECM-based electricity demand forecast, we used variables such as total electricity consumption, GDP growth rate, total CO_2 emissions, domestic retail electricity price, and electricity intensity. According to our diagnostics, using Johansen cointegration and selection order criteria, we determined that the optimal rank for both models is 2, and the optimal lag is 1. This approach ensures a more accurate and adaptable forecast, reflecting the complex and changing nature of the factors influencing electricity demand.

Our estimates, illustrated in Table 7.3, use data ranging from 1985 to 2022, which includes adjustments for the COVID-19 pandemic. According to the IEPMP, power demand is projected to reach 206.1 TWh by 2030, 411 TWh by 2041, and 673.7 TWh by 2050. In contrast, our VECM forecasts significantly lower power demand: 182.9 TWh by 2030, 278.1 TWh by 2041, and 368.3 TWh by 2050.

Table 7. 3: Comparison of VECM forecast of power demand with that of IEPMP

Year	Power Demand (Tw-H)		Changes in Forecasted Power Demand (times)	
	Power Demand (Tw-H) according to the **IEPMP**	Power Demand (Tw-H) according to the **VECM**	**IEPMP** Forecast of Power Demand (Times Changed)	**VECM** Forecast of Power Demand (Times Changed)
2019	91.0	91.0	-	-
2030	206.1	135.6	2.26 times	1.49 times
2041	411.1	191.1	4.50 times	2.10 times
2050	673.7	239.3	7.38 times	2.63 times

Source: Authors' Calculation, 2024.

The IEPMP's forecasts imply power demand increases of 2.26 times by 2030, 4.5 times by 2041, and 7.38 times by 2050, while our VECM forecasts show more moderate increases of 2.01 times by 2030, 3.06 times by 2041, and 4.05 times by 2050. Notably, in 2041, our forecast predicts a power demand of 27,345 MW compared to the IEPMP's estimate of 58,410 MW. Considering the 25% reserve margin proposed in the IEPMP, our projected capacity for 2041 would be 34,181 MW.

This significant difference highlights the VECM's more conservative and realistic approach, which accounts for recent economic disruptions and provides a more feasible scenario for future electricity demand.

Table 7.4 compares the actual power consumption from 2020 to 2022 with the forecasted power demand under two scenarios: one without considering the COVID-19 pandemic and one reflecting the actual scenario that includes the impact of COVID-19. The actual power consumption values are indicated, while the forecasted values are marked with an asterisk (*) to denote that they are estimates.

Table 7. 4: Comparison of actual and forecast power consumption with and without COVID-19

Year	Actual Power Consumption (Tw-H)	Forecast of Power Demand (Tw-H): without COVID-19	Forecast of Power Demand (Tw-H): actual scenario
2019	91.3	91.3	91.3
2020	85.5	106.8*	85.5
2021	92.21	114.6*	92.2
2022	97.6	123.2*	97.6
2023	-	130.1*	102.3*

Source: Authors' Calculation based on the IEPMP.

The table illustrates that the absence of the COVID-19 incident would have led to significantly higher power demand for the years 2020, 2021, and 2022. For instance, the forecasted power demand without considering COVID-19 was 86.9 TWh for 2020, 94.8 TWh for 2021, and 102.2 TWh for 2022. In reality, the observed power demand was 72.2 TWh in 2020, 75.3 TWh in 2021, and 81.8 TWh in 2022, which are considerably lower than the non-COVID forecasts.

This discrepancy highlights the impact of the COVID-19 pandemic on power consumption, leading to lower-than-expected demand. Furthermore, it demonstrates a significant divergence from the IEPMP's forecast, which did not account for the pandemic. Although the IEPMP was finalised in 2022, it failed to align with the realised values from recent years, explaining why its power consumption demand forecast is higher than what was actually observed. This underscores the importance of incorporating unforeseen events and economic disruptions into energy demand forecasting models to ensure more accurate and reliable predictions.

7.7 Recommendations

The analyses reveal that significant flaws in the energy and power demand projections for 2041 within the IEPMP. These overestimations suggest an inflated need for power, which could lead to substantial and potentially unnecessary investments in infrastructure development, particularly for fossil-fuel-based energy generation, transmission, and distribution. Such investments not only strain financial resources but also pose a significant barrier to the country's transition towards sustainable energy solutions.

With the re-estimated projected demand, it is feasible that 40 per cent of the total power generation capacity by 2041, approximately 14,000 MW, could be sourced from renewable energy. This includes solar energy (through rooftop installations and solar parks) and wind energy (both onshore and offshore). Emphasising renewable energy not only aligns with global trends towards sustainability but also reduces dependence on fossil fuels, thereby mitigating environmental impacts and enhancing energy security.

Therefore, it is imperative to prioritise industry-scale renewable energy generation and adopt innovative approaches such as net metering, which allows consumers to generate their own electricity and feed surplus energy back into the grid. Such measures would encourage the adoption of renewable energy at both the individual and industrial levels, promoting a decentralised and resilient energy system. By focusing on these sustainable strategies, Bangladesh can better manage its energy needs while advancing its goals for environmental sustainability and economic efficiency.

SECTION VIII. CONCLUSIONS

The performance of the Bangladesh economy during the first ten months of FY2024 indicates that the remaining months of the FY2024 will continue to face the ongoing challenges despite some positive policy measures taken by the Bangladesh Bank. This is because it takes a while to see the outcome of any policy. However, the effectiveness of any policy also depends on complementary polices in other areas.

In the backdrop of formidable economic challenges, the new Finance Minister will present the national budget for FY2025. This and the previous IRBD reports of FY2024 by CPD have made both broad and specific measures needed for the economic recovery. CPD has emphasised that while restoring macroeconomic stability should be the main focus of the policymakers, they must also offer concrete measures for proving respite to the inflation-afflicted common people with limited income.

Therefore, the macroeconomic framework for the upcoming FY2025 should continue to focus on curbing inflation and stabilising the exchange rate. Instead of GDP growth, protecting the interests of vulnerable and disadvantaged groups should be the priority of the policymakers. Issues such as enhancing fiscal space, prioritising expenditure, and prioritising foreign financing ought to guide the public finance management in FY2025. For positive outcomes of policy measures and improving macroeconomic performance, complementarity between the fiscal and monetary policies must be ensured.

Along with the immediate and short-term measures, the government should also work towards addressing the structural problems such as establishing good governance and strengthening institutions through reforms. Given that reforms are unpopular and painful, these require strong political commitment.