

Food Price Policy in South Asia: Cereal Stocks, Prices and Trade

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Food Price Policy in South Asia: Cereal Stocks, Prices and Trade

- Introduction: Food Security, Incomes and Poverty
- Macro-Policy and Food Price Inflation (Money Supply, CPI)
- Short-Term Price Stabilization: Public Stocks, Import Parity and Trade
- Summary and Conclusions

Bangladesh: Food Security, Incomes and Poverty

- Sustained economic growth:
 - 6.6% annual average real GDP growth from 2015/16 to 2021/22
 - 5.6% annual per capita GDP growth
- Poverty has fallen rapidly, from 40.0% in 2005 to 18.7% in 2022 (using the upper poverty line).
 - Extreme poverty fell from 25.1% to 5.6% in the same period.
- Rice production increased from 11.0 mn tons in 1970/71 to 39.1 mn tons in 2022/23 due to increased irrigation, improved seed varieties and greater fertilizer use.
- Dietary intake, dietary diversity and child nutrition have all improved in recent years.
 - Stunting among children <5 years old declined from 60% in 1996/97 to 24% in 2022, still “alarming high”.

Source: Ahmed et al. (2024).

Country Economic and Development Indicators, 2024

	Population	GNI	GNI growth	CPI Inflation	Poverty \$2.15/day	Poverty \$3.65/day	Poverty
	(mns)	(bns USD)	(percent)	(percent)	(percent)	(percent)	Year
Bangladesh	173	1,470	4.72	9.9	5.0	30.0	2022
India	1,429	12,924	6.74	5.6	12.9	44.0	2021
Nepal	31	146	1.40	7.1	0.4	7.5	2022
Pakistan	240	1,323	-2.31	30.8	9.4	52.4	2010
Sri Lanka	22	278	-2.28	16.5	11.6	49.9	1990
PR China	1,411	29,499	3.08	0.2	13.4	33.5	2010
Indonesia	278	3,802	4.53	3.7	16.5	52.0	2010

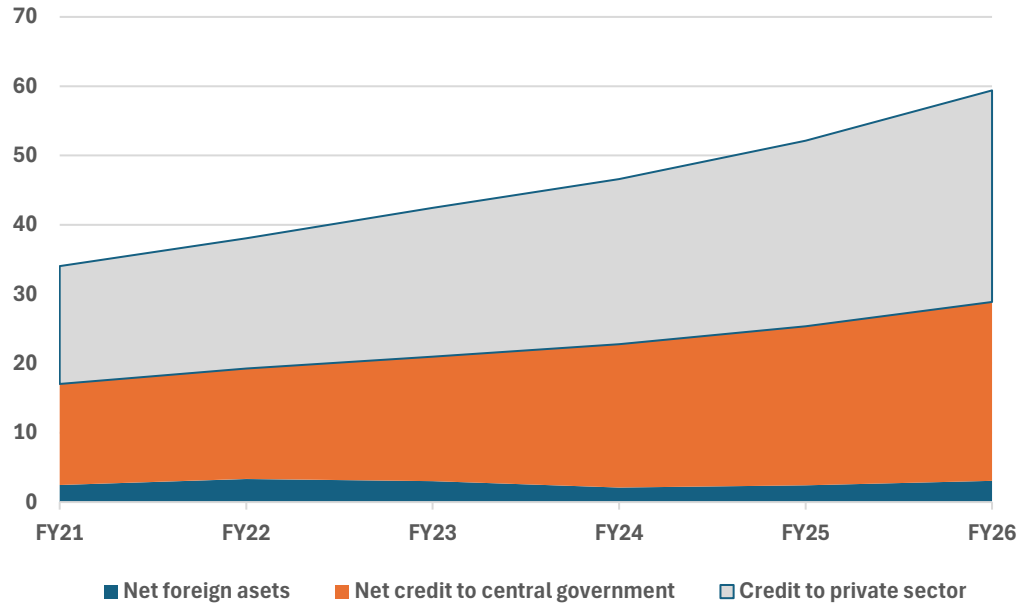
Notes: Gross National Income data for China is for 2022; all other countries are 2023 data.

Source: World Bank (2024), World Development Indicators.

<https://databank.worldbank.org/source/world-development-indicators#>

Money Growth and Price Levels in Bangladesh and India

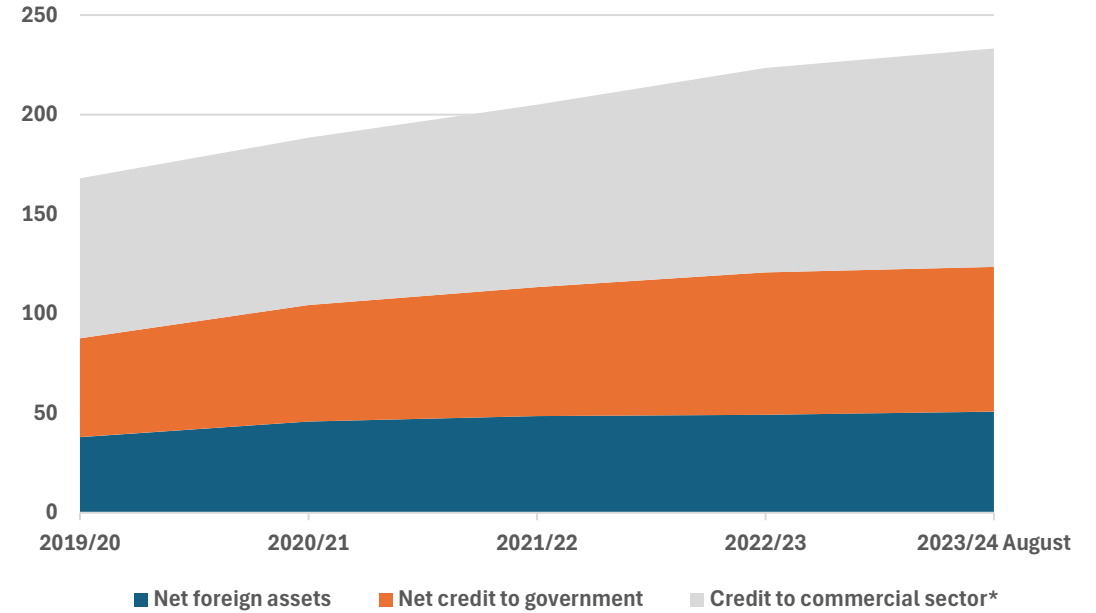
Bangladesh: Components of Money Supply , (bn Taka)
FY 21 – FY 26



Source: IMF (2023a).

- Bangladesh’s total money supply (M2) increased by 53.2% between 2019/20 and 2023/24, (an average of 11.3% per year).
- Real GDP rose by 28.6% in this period, and the GDP deflator and the CPI rose by 22.8% and 38.7%, respectively.
- Since, by definition, $v = P * Q / M2$, the velocity of money increased by 3.1% (16.5% using the CPI index).

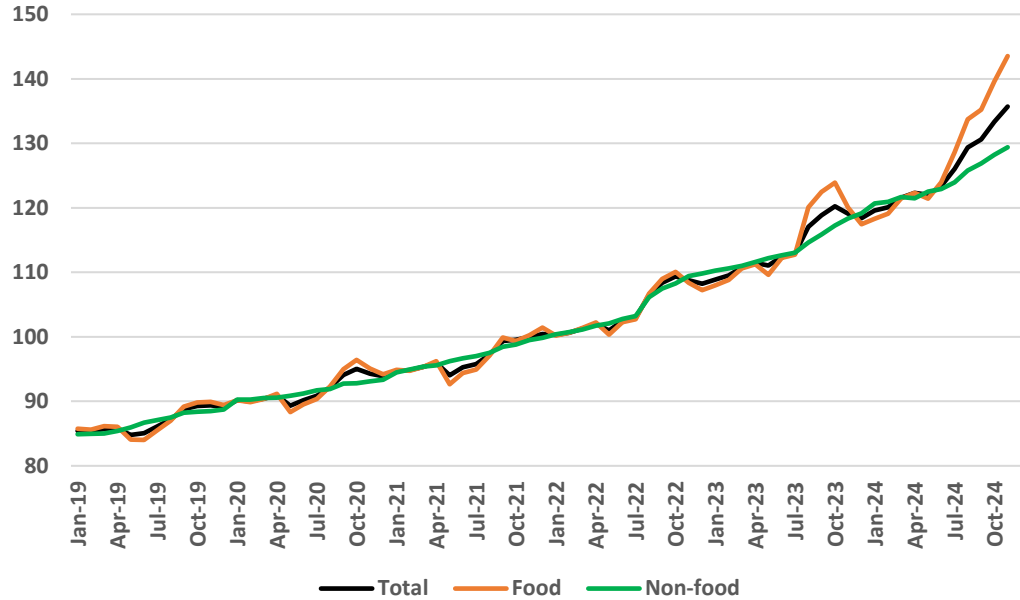
India: Components of Money Supply (bn Rs)
FY 2019/20 – 2023/24



Source: IMF (2023b).

- India’s total money supply (M3) increased by 38.8% between 2019/20 and 2023/24, (an average of 8.5% per year).
- Real GDP rose by 17.1% in this period, and the GDP deflator and the CPI rose by 27.8% and 31.1%, respectively.
- Since, by definition, $v = P * Q / M2$, the velocity of money increased by 7.9% (10.6% using the CPI index).

Bangladesh: Macro-Policy and Food Price Inflation



- On average, food prices rise fastest from May to November (from just after the boro harvest to just before the following aman harvest).
- Increases in non-food prices generally do not have a significant seasonal pattern.

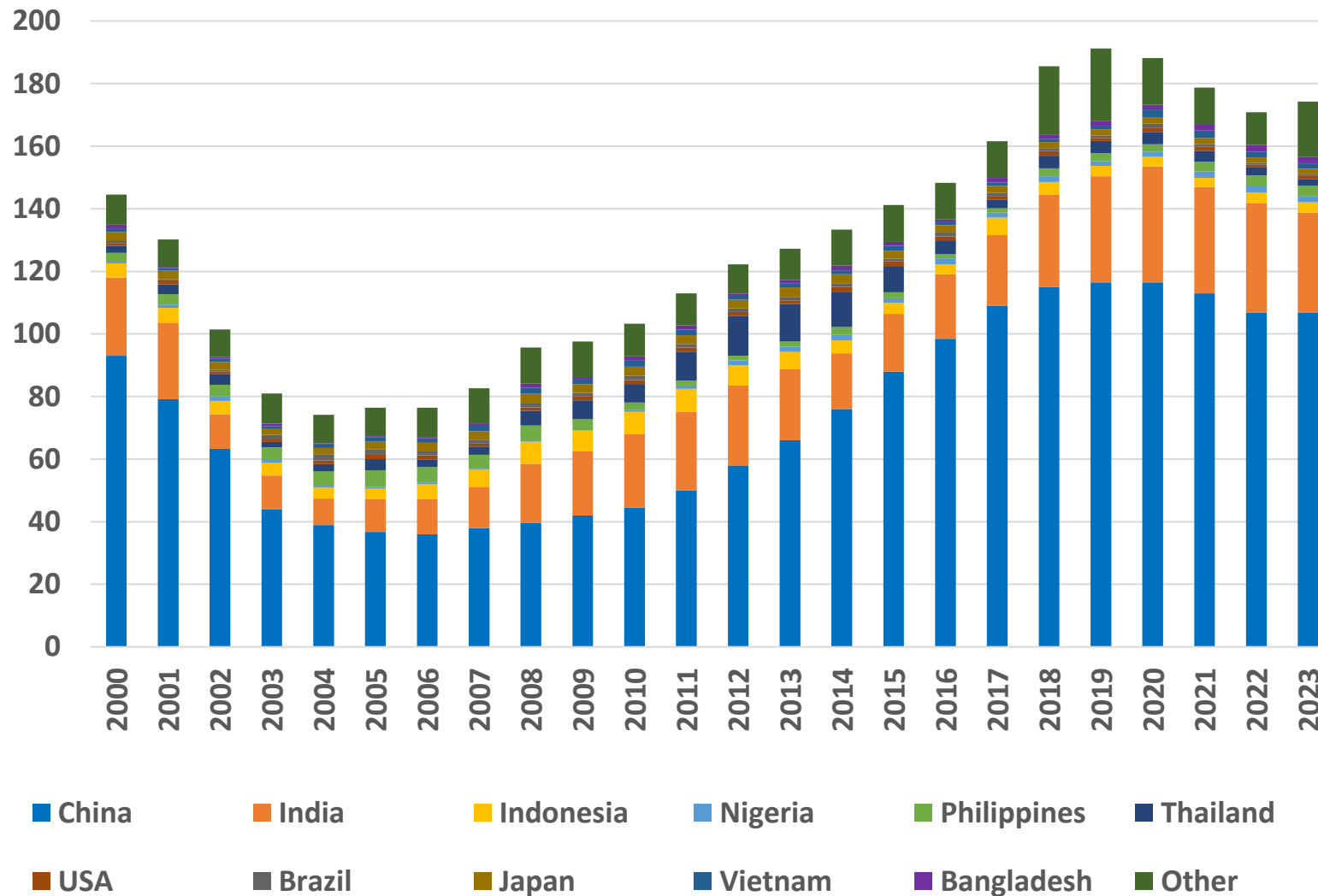
- From January 2020 through November 2024, overall inflation as measured by the Consumer Price Index was 56.1 percent.
- Domestic food prices rose by 62.7 percent, while non-food prices rose by 51.0 percent.

Bangladesh: Consumer Price Inflation				
	General	Food	Non-food	Food/NF
May '20 - Nov '20	5.5%	7.6%	2.4%	5.0%
Dec '20 - Apr '21	-0.3%	-2.5%	3.3%	-5.7%
May '21 - Nov '21	6.3%	8.2%	3.4%	4.6%
Dec '21 - Apr '22	1.1%	0.1%	2.6%	-2.4%
May '22 - Nov '22	7.7%	8.0%	7.2%	0.7%
Dec '22 - Apr '23	2.1%	1.1%	2.6%	-1.4%
May '23 - Nov '23	7.2%	9.5%	5.4%	3.9%
Dec '23 - Apr '24	2.5%	1.1%	3.6%	-2.3%
May '24 - Nov '24*	11.2%	18.2%	5.6%	12.0%
May-20 - Nov '24	51.9%	62.4%	42.4%	14.1%

Short-Term Price Stabilization: Public Stocks, Import Parity and Trade

- Rice is a major staple in all South Asian countries. Although Bangladesh, India and Pakistan all hold public stocks of rice, only India consistently intervenes in its domestic rice market.
- India maintains the largest rice stocks in South Asia; Pakistan has significant wheat stocks.
- Private sector rice imports, including imports from India in some years, have helped to stabilize Bangladesh domestic rice prices.

World Rice Stocks, 2000-2023 (mn tons)

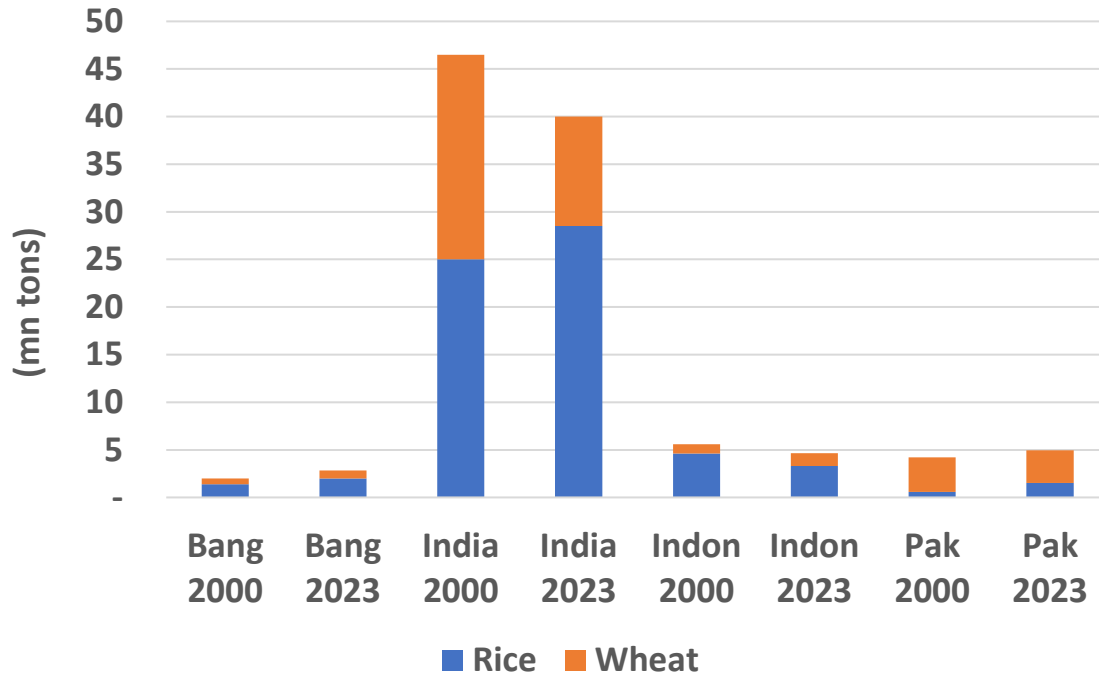


Source: USDA (2023), authors.

- World rice stocks grew steadily from 69 mn tons in 2004 to a peak of 187 mn tons in 2019.
- Average world rice stocks from 2019 to 2023 were **173 million tons**.
- **China and India held over 80 percent of world rice stocks in this period.**
- China's rice stocks increased from an average of 51 mn tons in 2000-09 to 111 mn tons in 2020-23 (64 percent of the total).
- India accounted for 20 percent of world rice stocks in the same period.

Public Cereal Stocks in Selected Large Asian Countries

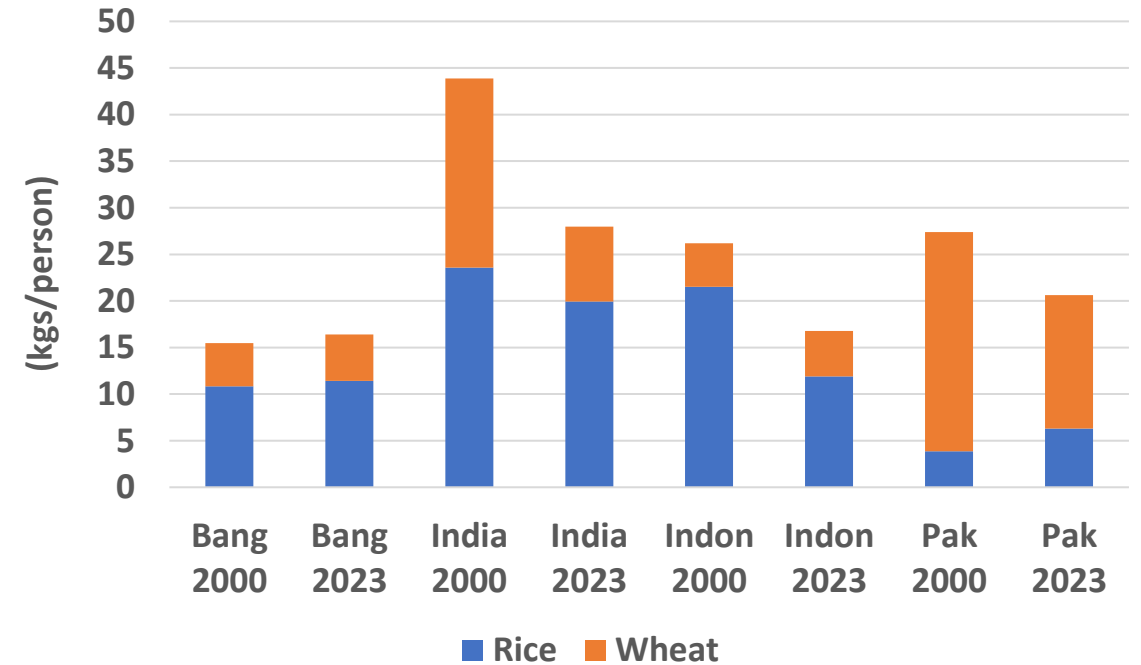
Cereal Stocks, 2000 and 2023 (mn tons)



Source: USDA (2023), author.

- **India's public stocks decreased 36%** from 47 to 40 mn tons between 2000 and 2023.
- India's stocks in 2023 were more than 8 times those of Pakistan or Indonesia.
- **Bangladesh increased total stocks by 42%.**

Per Capita Cereal Stocks, 2000 and 2023 (kgs/person)



Source: USDA (2023), author.

- India's stocks per capita decreased by 36% between 2000 and 2023, from 44 to 28 kgs/capita.
 - India's stocks per capita in 2023 were similar to those of Indonesia and Pakistan in 2000.
- In contrast, Bangladesh increased per capita stocks of both rice and wheat. Total per capita stocks rose by 6%.

World Rice Stocks, 2019 – 2023 (mn tons)

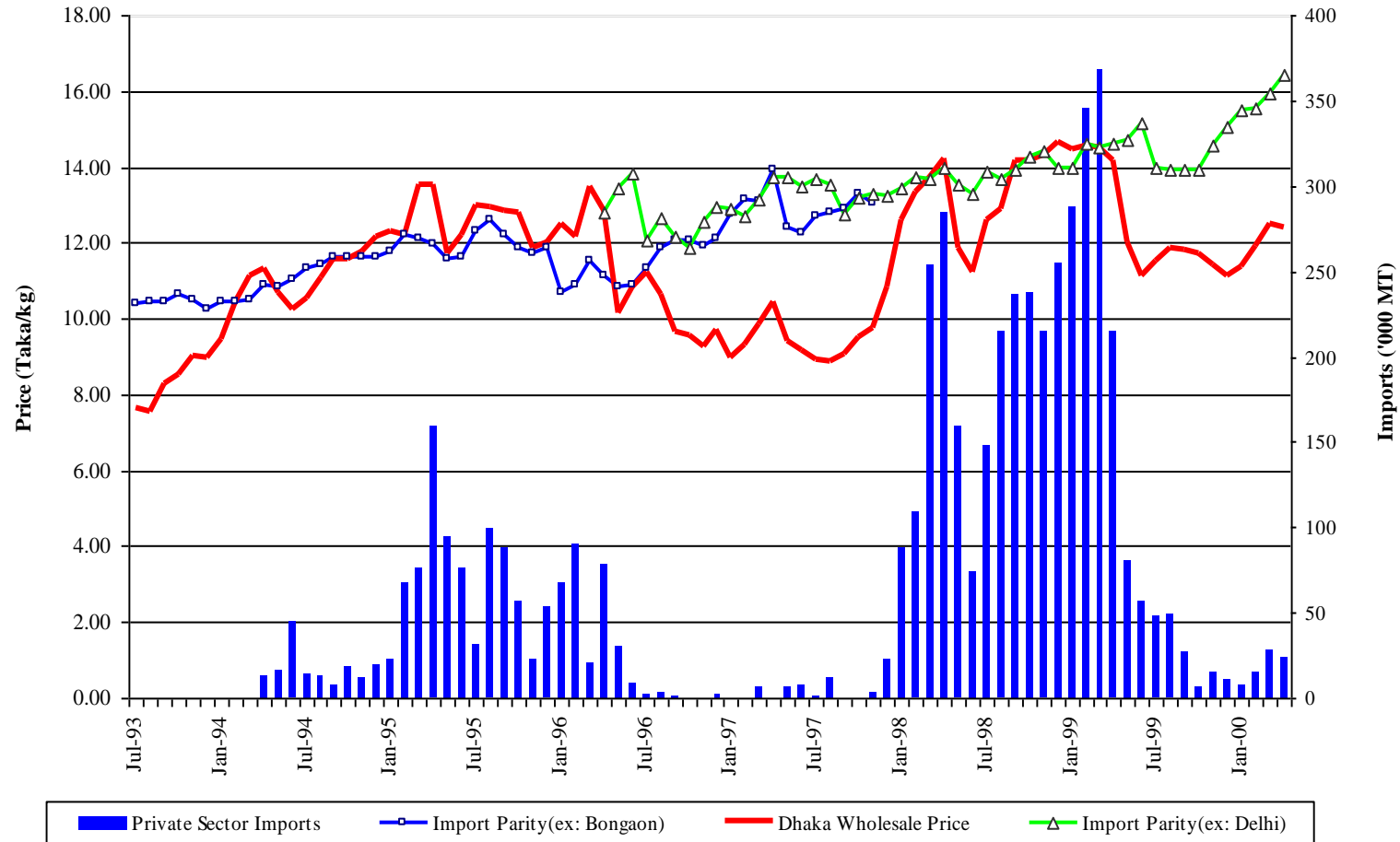
	End Stocks 2019/20 (mn tons)	End Stocks 2023/24 (mn tons)	Production 2023/24 (mn tons)	Net Trade 2023/24 (mn tons)	End Stocks / Net Supply* 2023/24 (percent)	End Stocks / Net Imports 2023/24 (ratio)
China	116.5	106.8	149.0	3.0	77.9%	35.60
India	33.9	32.0	134.0	-23.0	32.8%	-1.39
Thailand	3.9	2.2	19.7	-7.5	21.5%	-0.29
Indonesia	3.3	3.3	34.5	0.7	10.4%	4.71
Philippines	2.5	3.4	12.6	3.8	22.5%	0.90
Vietnam	1.2	1.8	27.0	-6.7	10.0%	-0.26
Japan	2.0	1.6	7.5	0.7	21.8%	2.35
Pakistan	0.9	1.6	9.0	-4.5	44.8%	-0.36
Bangladesh	1.6	2.0	37.0	1.0	5.8%	1.98
United States	0.9	1.0	6.1	-1.1	21.8%	-0.87
ROW	20.4	14.6	84.2	33.6	13.3%	0.43
Total	187.2	170.2	520.5	55.8	32.5%	3.05

• Net supply is calculated as gross production of milled rice less 10% for seed and losses, plus net imports.

Note: The amount shown for Total World Net Trade is the quantity of total exports.

Source: USDA (2023) and author's calculations.

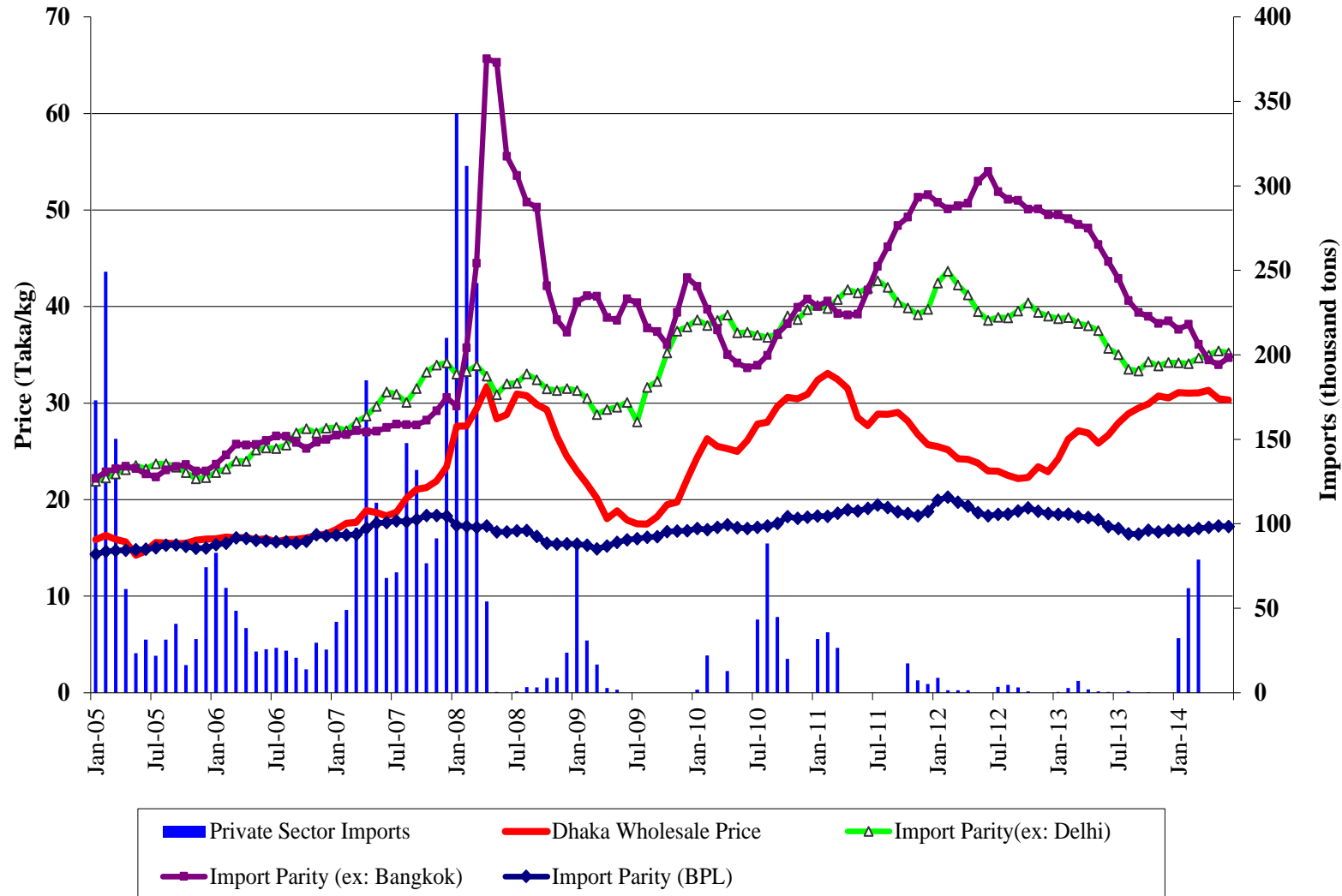
Bangladesh: Trade Liberalization and Private Sector Rice Imports, 1994-2000



- Bangladesh liberalized its import trade in rice in the early 1990s.
- In years of relatively poor harvests in the mid- to late 1990s, import parity prices provided a price ceiling for Bangladesh domestic market prices.
- Following the 1998 flood, private sector imports exceeded 200 thousand tons/month for seven consecutive months, stabilizing domestic prices at import parity (based on India **wholesale market** prices plus transport and marketing costs).

Source : Dorosh (2001).

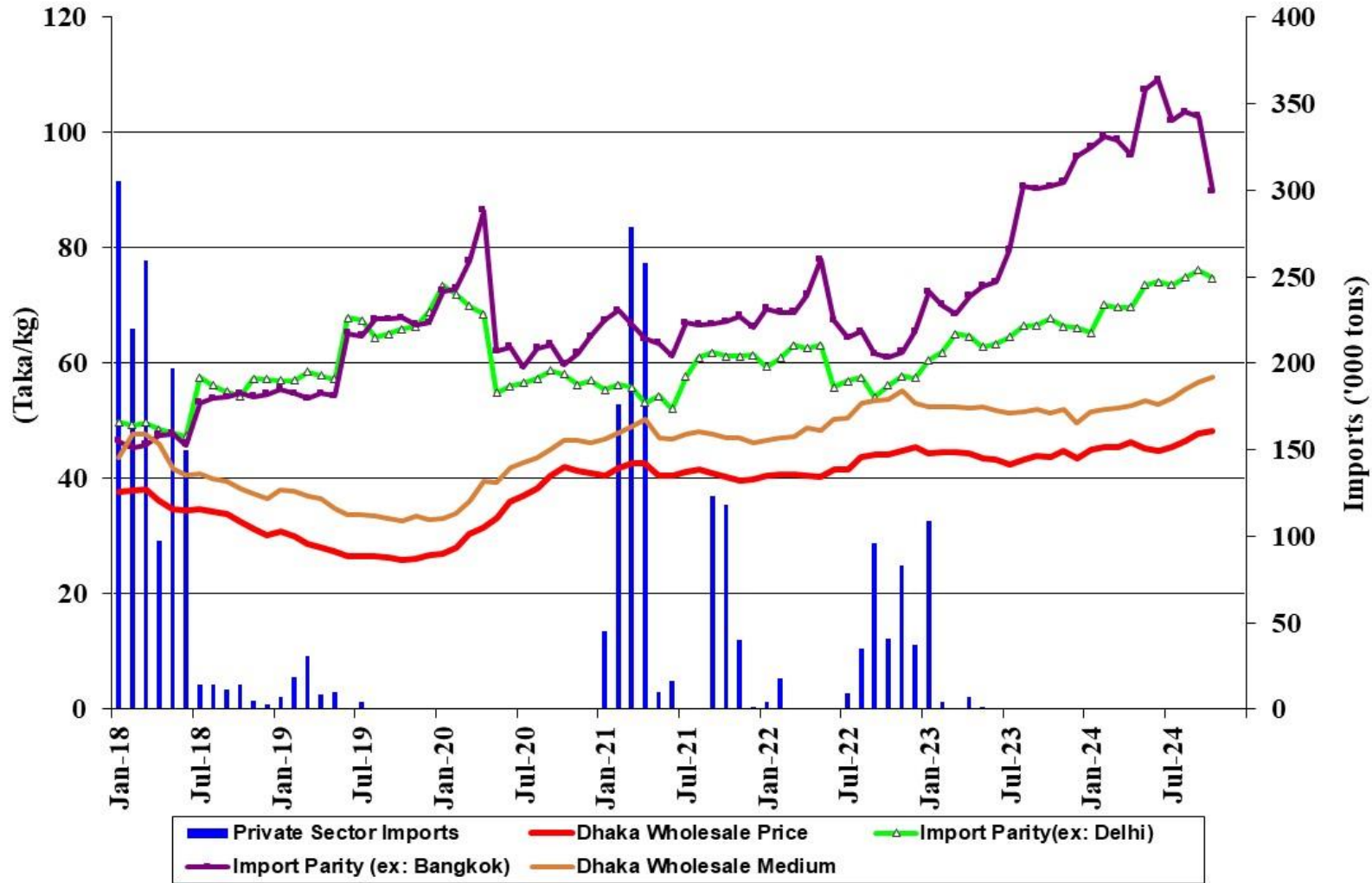
Bangladesh: Price Stabilization through Subsidized Trade: 2002/03 to 2006/07



- In 2000/01 and again from 2002/03 to 2006/07, Bangladesh prices tracked import parity based on BPL sales prices.
- A specific Indian government program existed in 2002/3 for subsidized exports of rice obtained from FCI stocks at BPL prices.
- There were no explicit policy statements regarding export subsidies in later years. Econometric analysis shows that there was a statistically significant co-movement of wholesale and import parity prices in this period.

Source: FPMU data and author's calculations.

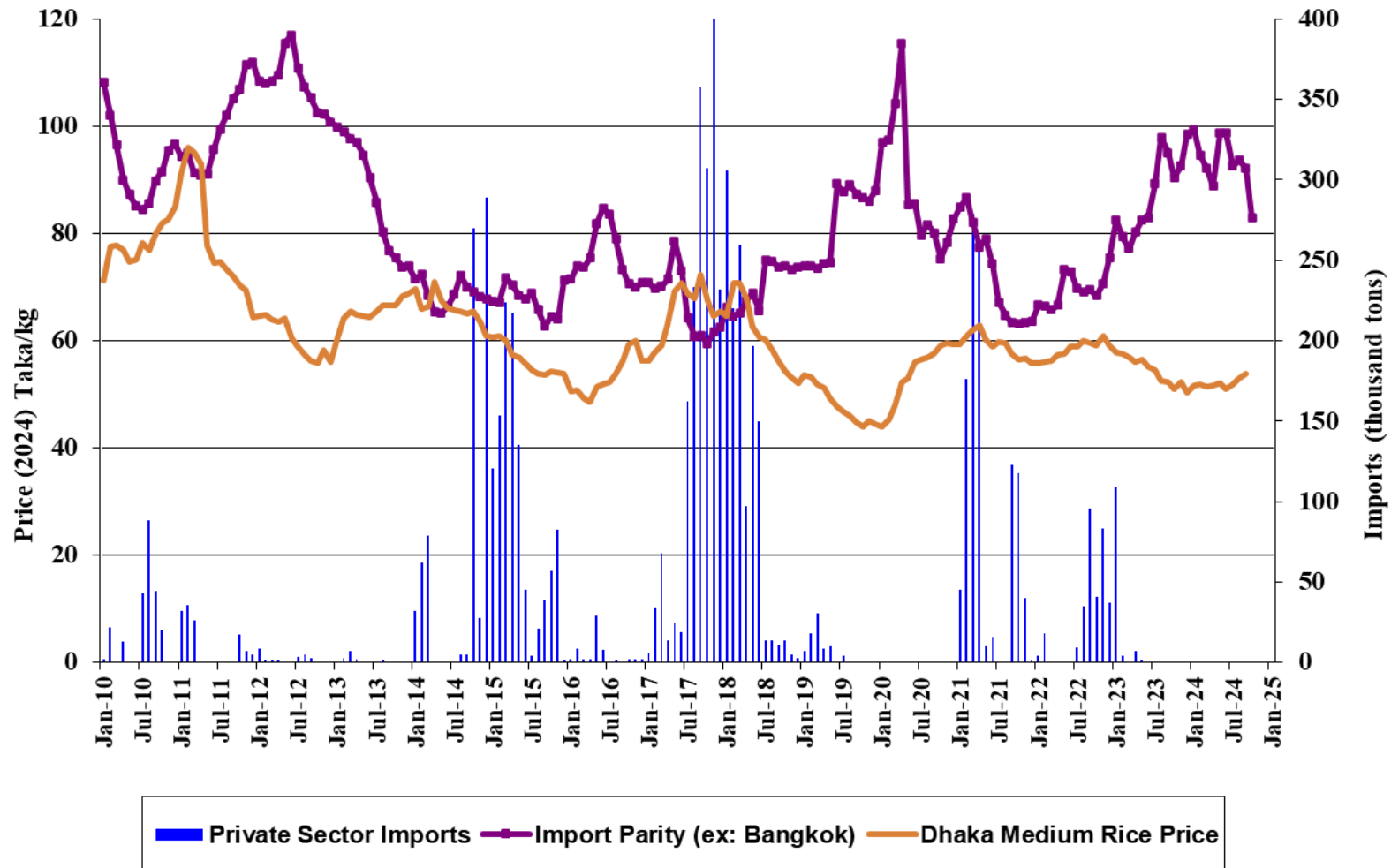
Bangladesh: Domestic and World Rice Prices, 2018-24



- Dhaka wholesale prices of rice were close to import parity levels in 2018 and from 2021 to mid-2023, making private imports profitable in these periods.
- For most of the 2018 to 2024 period, however, domestic prices of rice have been above import parity prices, making private imports unprofitable.
- Import parity from Bangkok has been consistently above import parity from India.

Source: FPMU data and author's calculations.

Bangladesh: Import Parity Prices (2024 Taka/kg) and Rice Imports 2010-24

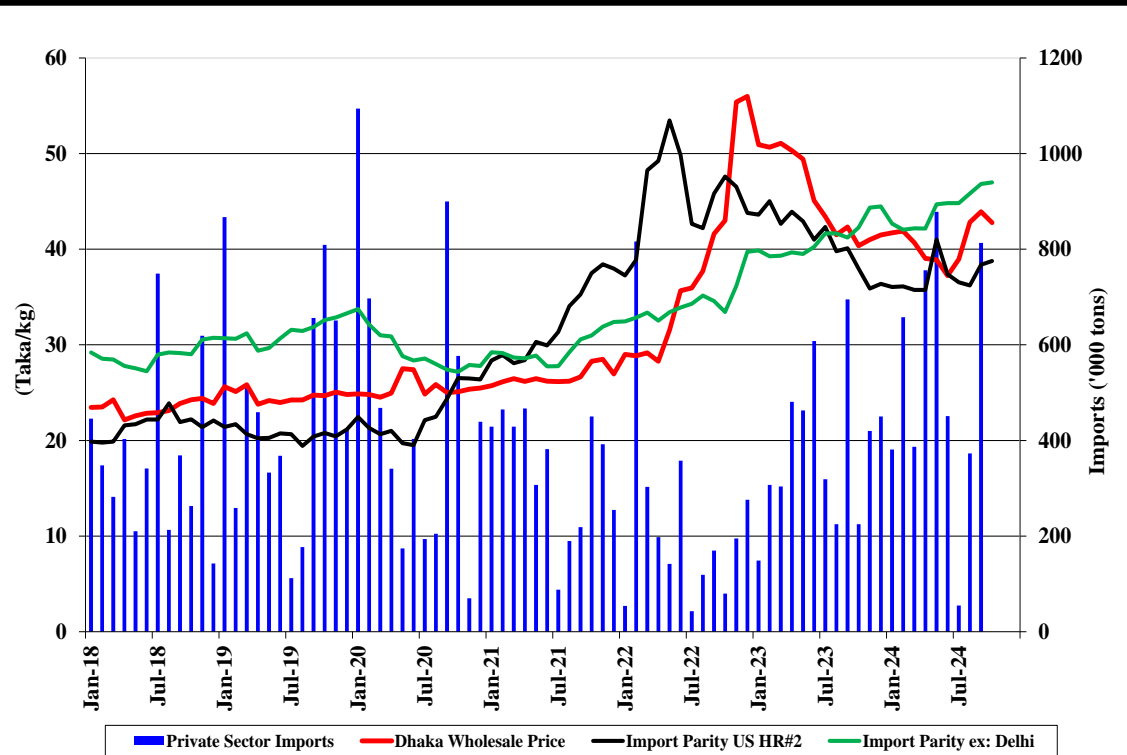


- Adjusting for inflation using the CPI as a deflator shows that real wholesale price of medium quality rice trended downwards between 2010 and early 2020.
- Average real prices in 2021 and 2024 were 35 and 18 percent higher than in January 2020.
- Consumers benefit from lower real rice prices, but lower real prices contribute to lower real incomes for producers.
- However, other factors also influence real rice incomes including yields and input costs.

Source: FPMU data and author's calculations.

Bangladesh: Domestic and World Wheat Prices, 2018-2024

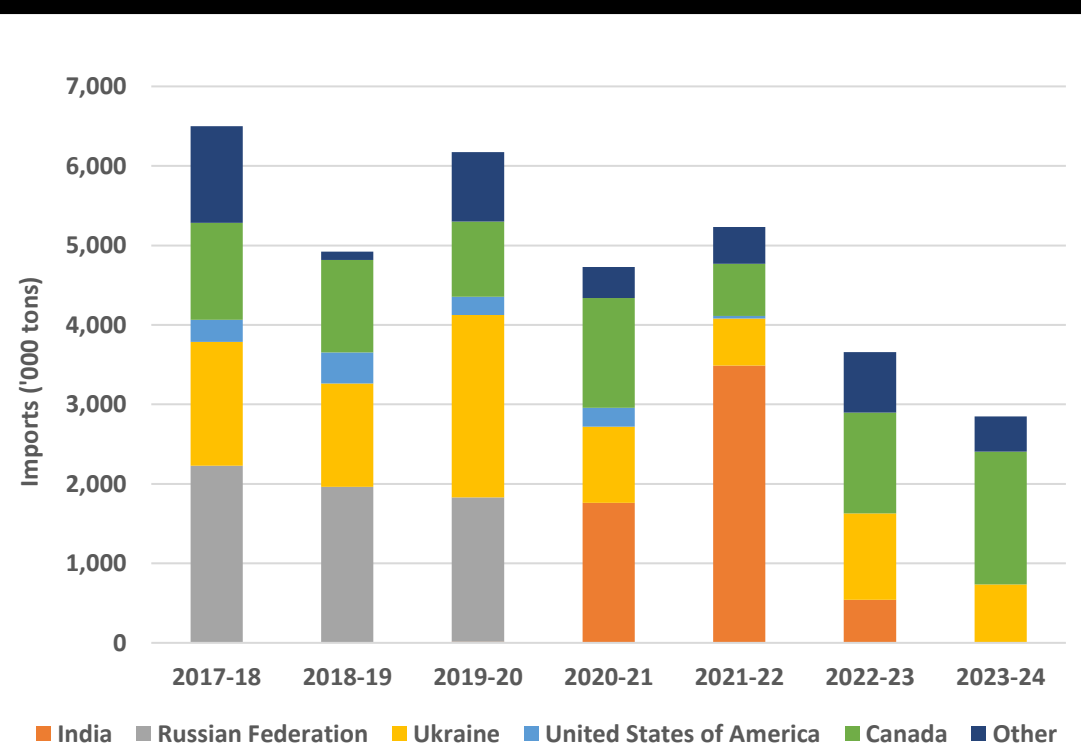
Bangladesh Wheat Import Parity Prices



- From late 2020 to mid-2023, the import parity price of wheat from Delhi has been equal to or lower than the import parity price from U.S. Gulf ports.
- As a result, India became a major source of wheat imports by Bangladesh in 2020-21 and 2021-22.

Source: FPMU data and author's calculations.

Bangladesh Wheat Imports by Source



- Since August 2023, wheat import parity prices (ex: U.S. Gulf) have been below import parity prices of wheat (ex: India) and imports from India have fallen sharply.
- Domestic prices in Bangladesh in the first half of 2023 far exceeded import parity prices from both India and the U.S., suggesting that disruptions in international transport may have limited Bangladesh imports.

Source: COMTRADE, author.

India's Rice Trade Policy

- September 2022: Increased export duties on non-basmati rice in order to keep domestic supplies high and prices down.
- Early 2024: Export ban on non-basmati white rice (except parboiled rice), minimum export price for basmati rice.

India: Rice Exports, 2022-24

■ Broken rice (10064000)
 ■ Non-Basmati ex parboiled (10063090)
 ■ Parboiled (10063010)
 ■ Basmati (10063020)
 ■ Other

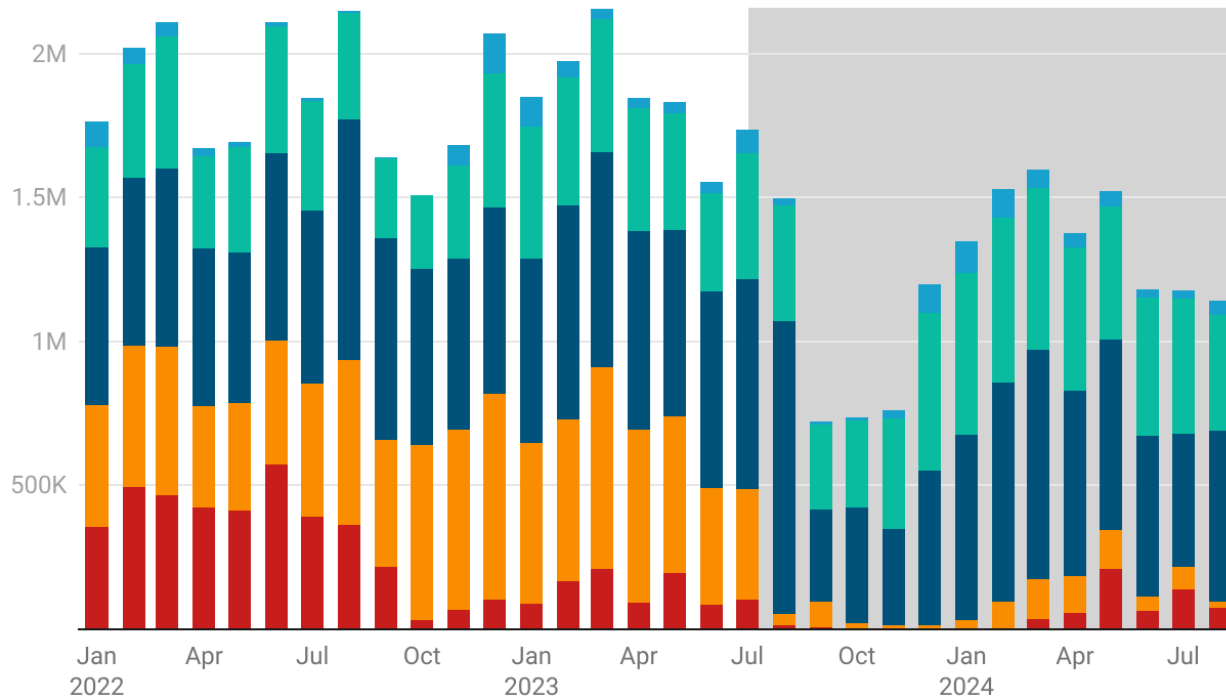


Chart: Joseph Glauber • Source: TDM

- Trade restrictions helped to reduce India's exports between September 2023 and August 2024 by about one-third to only 14.3 million tons (compared to 21.3 million tons one year earlier).
- Exports of non-basmati white rice (excluding parboiled rice) were down 5.4 million MT (a decline of 87%); exports of broken rice were down 775,000 MT (a decline of almost 57%).
- By contrast, the basmati rice min export price had a negligible impact on sales. From September 2023 to August 2024, basmati exports rose 885 '000 tons, an increase of 18%.
- India's 2023/24 rice crop was better-than-expected and in September 2024, the export ban on non-basmati (excluding parboiled) rice was replaced with a min. export price. Other trade restrictions were also reduced.

Source: Glauber and Mamun, (2024).

Summary and Conclusions

- International trade disruptions related to Covid-19 and the Ukraine war contributed to large fluctuations in international cereal prices.
- Cereal price and trade policies in Bangladesh and India have partially insulated their domestic markets from these shocks.
 - Domestic monetary policies have helped to limit both food price and total inflation.
 - World rice stocks fell from 187 to 170 mn tons from 2019/20 to 2022/23, mostly due to lower stocks in PR China.
 - From 2000 to 2023, India drew down public wheat stocks; Bangladesh built up rice stocks.

Summary and Conclusions (2)

- Since the mid-1990s, private sector imports of rice (mainly from India) have prevented large spikes in Bangladesh rice prices.
 - Since early 2023, however, domestic rice prices have been below import parity => private imports = 0
 - India substantially reduced its exports of both non-parboiled and non-basmati rice in 2022-23 to limit price rises in their domestic market.
 - The real price of rice in Bangladesh fell between 2010 and 2020, but has changed little since that time.
- In most years, there has been relatively little trade in wheat between Bangladesh and India.
 - Almost all Bangladesh wheat imports are by the private sector; public sector imports are minimal.
 - Shifts in the relative prices of wheat in India and the broader international market spurred sizeable imports from India that are less expensive than imports from many other suppliers in 2021-22 and 2022-23.

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Thank You

অনেক ধন্যবাদ