SBP Staff Notes

02/20

Price Stabilization Mechanism in Pakistan's Food Market: Exploring Issues and Potential Challenges

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April 2020

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Authors are thankful to Waqas Ahmed (Lead Economist, SBP), Mazhar Khan (Senior Economist, SBP) and Muhammad Omer (Economist, SBP) for their valuable feedback.

1. Introduction[1]

This staff note aims to explore the existing structure of price control mechanism in the country for essential food items (grains and perishables), and present a preliminary assessment of its effectiveness in light of the developments that took place in the first half of FY20. The note begins by laying out some stylized facts with respect to the government's legal mandate to control prices of essential food items, and explores the toolkit at its disposal. While the underlying issues are complex and differ across food items, the note presents some thoughts on some potential weaknesses within the price stabilization mechanism, which may constrain the ability of public institutions to control prices in case of an unfavorable crop outcome.

Our findings suggest that weather-related food price pressures in Pakistan may be amplified by issues in the food supply chain, including stresses on early warning systems during extreme weather conditions, information asymmetries, infrastructure-related issues in public commodity procurement, relatively weak coordination between federal and provincial governments, and administrative challenges in containing speculative activity. Effectively, together with other factors, these issues could be making food prices increasingly susceptible to weather-driven crop outcomes. In the end, the note presents recent policy measures taken by the government to address some of these weaknesses and improve the effectiveness of price stability mechanism.

2. Stylized facts with respect to food prices in Pakistan

2.1 The Existing Legal Framework and the Government's Role in Stabilizing Prices

The present set of regulations empowers federal and provincial authorities to ensure stability in the prices of essential food items. As presented in **Table 1**, different rules and regulations are laid out at the federal and provincial levels pertaining to price controls as well as movement and distribution of food items across the country. Furthermore, provincial governments are also responsible for establishing wholesale markets at district levels to regulate the purchase of agriculture produce. The Sindh government, in this regard, made additional legislation in 2010 to promote the establishment of competitive, transparent and efficient wholesale markets in the private sector.

In addition, a separate set of regulations with respect to the registration of godowns is also in place in order to curb hoarding and ensure stable supplies and availability of essential commodities. This law also requires the maintenance of records of movement of essential commodities in and out of the godowns. Furthermore, these laws arm provincial governments with legal powers to discourage anti-competitive practices. With a legal mandate to control food prices, the federal and provincial governments follow a diverse set of practices, as laid out in the following sections.

2.2 Government Intervention in Major Food Crops

Within the major crops, wheat is the only crop where the government gets directly involved in the procurement. Before the sowing season, it announces a support price for farmers, in consultation with the federal and provincial food departments. After harvesting, Passco (the federal procurement agency which builds strategic reserves) and provincial food departments procure around 63.1 percent of marketable wheat.[2]The whole idea of commodity management is to ensure sufficient returns to farmers and to maintain adequate level of stocks with the procurement agencies, so that they can intervene to stabilize prices when needed.

In case of sugarcane, the government's involvement is limited to the announcement of minimum support prices at which sugar mills are legally bound to purchase cane from farmers. Government agencies are not involved in

[1] This Staff Note focuses primarily on perishables' and grains market in the light of developments that took place in H1-FY20. The Note draws heavily from discussions with the Ministry of National Food Security & Research (MNFS&R), Plant Protection Department, Ministry of Commerce, provincial agriculture and food departments, Passco, Office of Commissioner (Karachi Division), commercial traders of food and allied products, custom clearing and forwarding agents, market players in different vegetable markets, and commercial banks. The Staff Note does not debate or evaluate the very rationale of having an administered price control mechanism in the country; it only highlights the factors which make the enforcement of existing mechanism challenging.

[2]According to USDA report titled 'Pakistan Grain and Feed Annual' published in 2019, farmers in Pakistan retain around 60 percent of local wheat produce to meet their seed and household consumption. The remaining 40 percent of wheat is marketed and is termed as marketable surplus. During last 3 years, the government had procured in the range of 60 – 68 percent of marketable surplus whereas the private sector purchased the remaining quantum.

Table 1: Regulatory Framework Governing Price Control in Pakistan

Legal Framework	Objectives	Area of Enactment
Federal		
The Price Control and Prevention of Profiteering and Hoarding Act, 1977	To control prices, selling and distribution, transport and movement between provinces and withholding of stocks of 'essential commodities'	Essential food commodities: Perishable (fruits and vegetables), nonperishables (wheat, pulse, ghee, sugar and rice)
Punjab		
The Food Stuff Control Act, 1958;	Control of supply, distribution and trade and commerce in foodstuffs.	Wheat, wheat flour, maida, suji, rice, paddy and sugar
Punjab Agricultural Produce Markets Ordinance, 1978	Regulate the purchase and sale of 'agriculture produce' by establishing and administering markets/mandis	Exercising control over the purchase and sale of such agricultural produce in a specific area through notification
Registration of Godowns Act, 2014	Curb hoarding and ensure a stable supply and availability of essential commodities	Registration of godowns with the Punjab Agriculture Department and requires maintenance of records w.r.t. movement of essential commodities in and out of godowns.
Sindh		
The Sindh Essential Commodities Price Control and Prevention of Profiteering and Hoarding Act, 2005:	Control the prices, selling and distribution, transport and movement and withholding of stocks of different 'essential commodities'	Prices of non-perishable essential commodities are determined on a monthly basis by the District Price Committees, whereas prices of perishable commodities are determined on a daily basis by monitoring auctions at the mandis
The Sindh Wholesale Agriculture Produce Markets (Development & Regulations) Act 2010	Establishment of private sector wholesale agricultural produce markets.	Converts agricultural markets into private limited companies and allows markets to have a regulatory role, it breaks away from the practice of price controls
The Sindh Registration of Godowns Act, 1995	Curb hoarding and ensuring a stable supply and availability of essential commodities.	Requires the registration of godowns with the Director General Bureau of supply and Prices and requires maintenance of records w.r.t. movement of essential commodities in and out of the godowns.
Balochistan		
Balochistan Foodstuffs Control Act, 1958	Broad ranging powers to the provincial government for control of supply, distribution and movement of, and trade and commerce in, food stuffs.	Wheat, wheat atta, maida, suji, rice, paddy and sugar
Baluchistan Agricultural Produce Markets Act, 199	Exercise control over the purchase and sale of agriculture produce and in a specific area through notification	
KPK		
The West Pakistan Foodstuffs Control Act, 1958	Broad ranging powers to the provincial government for control of supply, distribution and movement of, and trade and commerce in, food stuffs	Wheat, wheat atta, maida, suji, rice, paddy and sugar
Agricultural and Livestock Produce Markets Act 2007:	Exercise control over the purchase and sale of such agricultural produce and in a specific area.	

Source: Competition Commission of Pakistan, Agriculture Departments of Punjab, Sindh, Balochistan, KPK

crop procurement. In case of both wheat and sugar/sugarcane, the decision to allow export and/or import rests with the Economic Coordination Committee (ECC)upon the advice of the Ministry of National Food Security and Research (MNFS&R). If market conditions allow, the government authorizes the Trading Corporation of Pakistan (TCP) to import these commodities. However, in case of exports, private traders/mills are authorized to export wheat and sugar on their own, conditioned upon the ECC's approval.

In contrast to these major crops, no direct or indirect measures are in place to control supplies and prices of rice and maize; the markets for these crops run purely on a commercial basis. For minor food crops, such as pulses, vegetables and fruits, the government neither announces support or indicative prices, nor gets *directly* engaged in trading. Commercial traders usually import and export these items based on the demand and supply situation in

the domestic market (more on this later).[3]

2.3 A Different Mechanism to Control Perishable' Prices[4]

Unlike wheat and sugar, price setting for perishables is done at the wholesale markets (*mandi*) established by the provincial governments. Small-to-medium-sized growers sell their crops to intermediaries (Arhtis) in the local mandi (or to Beoparis, who aggregate pre-harvest crops from small farmers and then bring the produce to the main mandis). Arhtis and commission agents facilitate the auctioning of commodities on a daily basis to wholesale buyers (and some large retailers) and in return, charge a fixed commission.

This auction process is monitored by the district-level market committees (with representatives from district management, regional traders, growers and consumers), which record the proceedings of at least five auctions for every commodity. Based on the auction-determined wholesale price, the secretary of market committee calculates the retail price as per a pre-defined formula, after incorporating charges related to transport, wastage, packing and retail profits. These price committees then report the retail prices to the relevant regional authorities (for instance, city commissioners). Once the concerned authority receives the price information, it notifies the retail price list and uses its legal mandate to implement the given prices in the retail markets.

2.4 Imports have become an Important Component of Food Value-Chain

With growing housing needs, water shortages and climatic changes, the area under cultivation in Pakistan has failed to keep pace with rising food requirements (**Table 2**). Therefore, food imports (even exclusive of edible oil) have nearly doubled over the past 5 years. This trend is more pronounced in the case of minor crops (pulses, fruits and vegetables), where cultivation has also been hurt by farmers switching to major crops, especially where they are guaranteed a minimum support price.

As shown in **Table 3**, imports now fulfill almost the entire demand for *masoor* and *mash* pulses in the country. Similarly, in case of condiments such as ginger and garlic, the country's dependence on imports has increased significantly. For a number of vegetables also, including tomato, peas, cucumber, turnip, beetroot, etc., local production falls significantly short of meeting the demand. This suggests that the domestic prices of these commodities are getting increasingly vulnerable to changes in global prices, exchange rate, export policy of trading partners, and the domestic import policy.

Table 2: Trend in Production of Minor Crops

000 tonnes	Mung	Mash	Masoor	Onion	Potato	Tomato	Garlic	Chilies	Vegs*	Fruits
2007-08	177.7	17.3	14.6	2015.2	2539.0	536.2	63.8	116.1	3136.8	7178.8
2008-09	157.4	13.6	14.4	1704.1	2941.3	561.9	67.2	187.7	3213.9	7051.5
2009-10	118.7	10.7	10.9	1701.1	3141.4	476.8	57.3	188.8	3044.8	6941.3
2010-11	76.2	11.3	13.3	1939.6	3491.7	529.6	55.3	171.8	3132.8	6926.7
2011-12	93.0	10.9	11.1	1692.3	3392.5	577.9	57.3	54.1	3108.2	6692.9
2012-13	90.0	10.9	9.8	1660.8	3785.9	574.1	60.6	147.2	2922.0	6564.7
2013-14	92.9	10.4	8.1	1740.2	2883.8	599.7	64.5	146.5	3127.8	6537.7
2014-15	98.9	9.0	7.0	1671.0	4160.1	570.6	73.1	139.9	2932.0	6795.5
2015-16	102.1	8.5	7.9	1736.5	3962.4	587.1	70.9	140.0	3255.2	6602.3
2016-17	130.2	7.2	7.6	1833.3	3831.7	569.0	73.0	142.9	3299.6	6520.1
2017-18	122.1	7.2	6.3	2115.2	4584.3	620.1	74.5	148.3	3314.0	7048.2
CAGR	-3.7%	-8.4%	-8.1%	0.5%	6.1%	1.5%	1.6%	2.5%	0.6%	-0.2%

Data source: Agriculture Statistics of Pakistan, MNFS&R

[3] In addition to this, the federal government provides subsidy on non-perishable food items (grains, sugar, edible oil and other household grocery items) through a wide network of Utility Stores Corporation (USC).

[4] The given information is based on 1) Competition Commission of Pakistan (2015), "Review of Framework Relating to Control of Pricing & Supply of Essential Food Commodities", and 2) Haq et al., (2013), "Who is the "arthi": Understanding the commission agent's role in the agriculture supply chain", International Growth Centre.

2.5 The Government has an Indirect, but Important role in Perishables' Trade

The import process of agriculture commodities involves a number of stakeholders, such as the Ministry of Commerce (MoC), MNFS&R, provincial agriculture departments and commercial traders. Although commercial traders may freely import these items, depending upon market conditions, they are required to acquire import permits, which are subject to various regulatory conditions.

Table 3: Imports as Percent of Total Supplies (Production + Import – Exports)

	FY11	FY12	FY13	FY14	FY15	FY16	FY17	FY18
Masoor	86.5	89.6	82.2	91.8	95.7	91.6	96.2	88.9
Mash	69.7	84.3	77.9	86.3	87.1	81.6	88.1	91.7
Peas	56.1	60.8	64.7	61.2	66.9	80.6	69.5	57.2
Ginger	31.8	90.5	36.8	35.6	37.7	42.1	34.6	41.1
Garlic	44.9	47.7	28.8	48.5	35.6	32.9	42.1	38.5
Cucumber	0.1	0.1	0.5	2.7	1.2	2.4	17.5	37.0
Tomatoes	23.0	27.7	32.3	33.1	28.4	29.3	29.1	8.4
Moong	14.8	8.7	9.7	5.5	1.1	4.5	1.8	2.4
Onion	3.1	9.7	8.6	4.3	4.2	6.3	2.8	3.8
Potato	0.2	0.0	0.1	2.1	4.1	0.1	0.0	0.0

Data source: MNFS&R

First, the import permit for most of the perishable commodities is conditioned upon the fulfillment of sanitary and phytosanitary conditions under the Pakistan Plant Quarantine Act 1976 and the Pakistan Plant Quarantine Rules 1967 and guidelines prescribed by the International Plant Protection Convention.[5]The MNFS&R implements these conditions through one of its attached wing i.e., Department of Plant Protection (DPP). These measures, devised to contain the spread of pests and diseases from imported crops to local crops, are considered important non-tariff barriers to agriculture trade and are used by nearly all agri-based countries. Once perishable consignments arrive at the border, the DPP applies a comprehensive checklist for cargo inspection, before allowing the produce to enter the country (**Box 1**).

Box 1: Role of Department of Plant Protection (DPP) in Food Imports

To safeguard phytosanitary measures and monitor certification of regulated export and import of commodities, the DPP is required to maintain well-equipped plant quarantine offices at all entry and exit points with neighboring countries. Regarding imports of permissible agriculture/perishable commodities, the DPP follows a set of specific rules and regulations when issuing import permits. These are:

- Pest Risk Analysis (PRA): In order to import plants and plant materials, the DPP conducts a Pest Risk Analysis to evaluate the phytosanitary risks associated with the import of a particular commodity from a specific country. To mitigate the potential risks, the DPP formulates import conditions (based on the PRA outcome), and issues the Import Permit to the exporting country.
- For certain advanced countries like Australia, Canada, USA etc., the DPP accepts the certificate issued by the countries of origin given that these countries ensure phytosanitary imports conditions through quarantine inspection and treatment. The DPP also demands a valid 'phytosanitary certificate' from the exporting country's National Plant Protection Organization (NPPO) that ensures the particular consignment is pest-free and fulfills specific import conditions. However, for many other countries (especially LDCs), the DPP itself conducts the Pest Risk Analysis after visiting and auditing the exporting country's NPPO.
- The import permits notify the exporting country about market access in Pakistan for a particular commodity after fulfilling specific phytosanitary conditions. For some items having high phytosanitary risks, specific handlings such as fumigation, hot treatment, and cold treatment are required.
- Once the consignment arrives at the border, it is subject to quarantine, and will be inspected as per the specific conditions in the import order. After careful analysis, the DPP officers decide whether to release, destroy, treat, or return the imported consignment. Once the department is assured about the required characteristics, it issues the Plant Protection Release Order (PPRO) for entry of permitted and compliant shipments and notifies Pakistan Customs to release the consignment.

Two points are worth highlighting here. First, the application of non-tariff barriers is flexible. This means that the requirements with respect to import permits can be relaxed if the situation warrants. Second, even if the importing conditions are relaxed, getting perishable food items imported into the country and having them supplied to major markets across the country remains a time-consuming process. This is because heavy pesticides need to be applied on consignments by the quarantine staff at the entrance point. This underscores the need for a

[5] The Agreement on the Application of Sanitary and Phytosanitary Measures (SPS Agreement) provides the basic framework within which states set their standards for human, animal, and plant health. SPS measures are steps to avoid introduction into the domestic environment of a pest or disease, or health concerns arising out of the presence of a particular substance in the imported good.

proactive early warning system with respect to crop failure and price pressures in order to ensure uninterrupted supplies in the market.

3 Potential Challenges Faced by the Government in Implementing Food Price Controls

While the underlying issues are complex, multi-faceted and varied across food items, the following section aims to present a tentative assessment of some of the potential pitfalls in the food supply-chain management and their impact on price fluctuations in case of crop delays or failures.

3.1 Early Warning Signals and Import Decisions

During times of temporary commodity shortages, timely decisions on imports (especially when they are subject to regulatory approvals) may stave off the buildup of inflationary pressures in the market. These decisions are premised on the appropriate early warning systems, which can help regulatory agencies preempt shortages. Importantly, provincial agriculture departments are responsible for providing the information on crop arrival time and size; in case of any shortage or delay, the MNFS&R takes the decision to relax non-tariff barriers and allow smooth import of the commodity. Therefore, accurate and timely information about harvest is instrumental to avoid commodity crisis. Typically, in normal seasons, the provincial agriculture departments give reasonably accurate crop estimates based on the data they collect on area under cultivation and expected yields; however, in extreme weather conditions (or other adversities), these departments lack precision in identifying and foreseeing the *extent* of unfavorable outcomes. Getting such information entails conducting and repeating wide-ranging surveys through all the major steps of crop development including sowing, crop growth, fertilizing, harvesting, etc. However, the information flow can sometimes lag behind due to limited capacity. (The 187.1 percent increase in prices of tomatoes in urban markets during Q2-FY20 is a case in point).

In addition, three factors may have been important with respect to the policy environment during the recent episode. First, as part of its import compression policy, the government had tightened non-tariff barriers on the import of major food items in FY18 (including tomatoes), and made these conditional to valid import permit, phytosantiary certificates and plant protection release orders.[6]Second, Pakistan had imposed a ban on the import of disease-prone tomatoes from India in FY18, which was Pakistan's traditional bulk supplier.[7]Third, informal imports from India were also not forthcoming, as its own crop faced damages from rain, and political tension between the two countries led to a complete halt in cross-border trade. This halt meant that in case of a shortage (either due to crop losses or delays), commercial traders would need fresh regulatory approvals to arrange the commodity from an alternative, non-traditional supplier.

Therefore, when the tomato crop from Sindh (which accounted for over 35 percent, on average in FY15-FY19, of national supply) got delayed, commercial traders could not import the commodity. Prices began to surge from mid-October (around the time the crop was due) and touched the peak of Rs 227 per kg by the third week of November 2019. Supplies from Afghanistan (also a traditional, but low-volume supplier) made up for some shortages, but volumes were not sufficient and the lack of quarantine staff at the Torkham border delayed arrivals. [8] A major opportunity was visible in case of Iran, but no pest risk analysis (PRA) was conducted, which was mandatory before opening the border. It was only in mid-November 2019 that the government permitted local importers to bring tomatoes from Iran for a period of three weeks – till the time the local crop was expected to become available in the market. This permission meant that Pakistani authorities would accept the certificate of the Iranian quarantine department for the release of tomatoes at the Taftan border, instead of waiting to conduct their own PRA. Furthermore, given the urgency of the situation, the government also decided to make special arrangements for the presence of Pakistan's quarantine department at the Taftan border.

[6] Ministry of Commerce and Textile, SRO No. 1067 (I)/2017, dated 20th October 2017.
[7] India had supplied around 80 percent of tomatoes imported by Pakistan between FY13 and FY17. However, in FY18 and FY19, there was a complete suspension of (formal) tomato imports from India into Pakistan. (Source: Pakistan Bureau of Statistics)
[8]As explained earlier, the Department of Plant Protection (operating under MNFS&R) is responsible to inspect the quality parameters of food imports; however, the department is facing human resource shortage and is working with limited staff to deal with food imports at borders.

It may be noted that with rains pushing forward the crop sowing, the delayed tomato arrival was imminent. Arguably, if the provincial departments had appropriate human resource and financial capacities to initiate early warnings, they may have been able to stay ahead of the curve by sending a timely advisory to the MNFS&R to make arrangements for imports. As it turned out, however, the decision to allow imports from Iran was taken only after excessive profiteering had taken hold.

3.2 Resource Constraints in Public Procurement Agencies

With respect to the stabilization of wheat/wheat flour prices, one issue may be a relatively weak centralized strategy guiding the government's commodity operations. With limited capacities in terms of fiscal space and human resource, the procurement departments seem to face constraints in developing accurate demand and supply estimates of the commodity, and in building capacity to manage market sentiments in times of crop shortfalls.

Presently, wheat procurement targets for each year are set by the federal government (with input from the provincial governments), whereas the responsibility to *implement* the procurement targets rests with the provincial food departments. These departments can over-procure or under-procure, depending upon the prevailing financing cost, expected release price and available storage capacity. At the same time, the decision for trade-related matters rests with the federal authority, MNFS&R, in coordination with the provincial departments.

For the 2019 wheat crop, the combined procurement target for all government agencies was set at 6.25 million tons, keeping in view the crop size of 26 million tons, carryover stocks of 3.8 million tons and estimated demand of 26.9 million tons for the year. However, this target could not be achieved, primarily because production remained lower than the target (**Table 4**). Furthermore, the Sindh government – which contributed over 21 percent to the overall public procurement during the last 3 years – could not procure the commodity, keeping in view the size of estimated available stocks and the prevailing interest rates. It is important to mention here that the province recorded a 5.6 percent higher wheat production than last year, and had agreed to the procurement target of 750,000 tons for the year. Nonetheless, the private sector picked up all of the fresh marketable wheat. Making commodity management more challenging, official carryover stocks from previous years also faced spoilage; the available grain proved significantly undersized compared to the intervention requirements when prices began to move north. The cities in Sindh experienced the steepest increase in prices of wheat and wheat flour during the quarter.

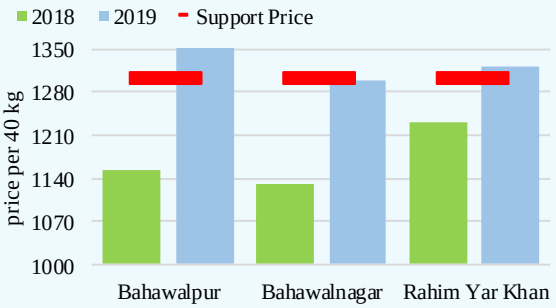
Table 4: Wheat Procurement Targets vs Actual for 2019 Crop (million tons)

	Targets	Actual
Punjab	4.00	3.32
Sindh	0.75	0.00
KP	0.30	0.04
Balochistan	0.10	0.00
Passco	1.10	0.68
Total	**6.25**	**4.03**

Data source: MNFS&R

Besides this, another factor that may be weakening the capacity of procurement agencies to intervene effectively in times of crop shortages is the prevalence of negative market sentiments. Specifically, in case of a crop shortfall, private wholesalers take positions during the harvest season, which reduces the spread between the government support price and the prevailing wholesale prices. Under such circumstances, farmers and intermediaries prefer to sell the fresh produce in the wholesale market rather than to the government agencies (to avoid time and cost required to acquire gunny bags and visit procurement centers). Limited stocks held by these agencies further fuels speculative activity in the market. For 2019 crop also, the news of a 6.3 percent decline in wheat production, additional demand coming from the poultry sector and delays in the initiation of public procurement, led to a surge in the wholesale prices in Punjab. At the time of harvest, the spread between the support price and the wholesale price of wheat shrank sizably as compared to the last year. In fact, in three of the top-5 wheat producing districts (Bahawalpur, Bahawalnagar and Rahim Yar

Figure 1: Comparison of Government Support Price (GSP) with Regional Wholesale Prices (WSP) during the Procurement Season*



*Procurement season generally starts in Punjab around mid-April and ends in July.
Data source: Agriculture Marketing Information Services, Punjab

Khan), the wholesale price of wheat became almost equivalent to the government support price (GSP) during these procurement months (mid-April to July) (**Figure 1**). In case of Bahawalnagar, prevailing wholesale prices even surpassed the GSP.

It is important to note that around this (procurement) time, the country was exporting nearly 40,000 MT of wheat every month, and an explicit ban was imposed on the import of the commodity. While the export quantities were not large enough to influence local availability, the fact that the country *was* exporting wheat (especially given the lower procurement by government agencies and fewer stocks available) was sufficient to send a bullish price signal in the market. In mid-September, the ECC formally banned wheat exports, but the decision to open imports came much later in January 2020. Furthermore, reports circulating in the media with respect to restriction of inter-provincial movement of the commodity put additional pressure on wheat prices.

Given the situation, a proactive strategy seems to be required to avoid building up of speculative pressures in the market. Decisive actions and clear communication would arguably go a long way toward arresting inflationary pressures in essential food items.

3.3 Inefficiencies at Distribution and Retailing Stages Create Price Gaps

As already mentioned, the operations of wholesale markets (or mandis) play a crucial role in perishables marketing; prices are determined here under the supervision of price committees. The determination of these wholesale prices is an important step in the computation of retail prices, which the district price committees are required to notify and implement. However, as detailed below, these wholesale markets have failed to grow overtime. While fewer markets were established over the past decades, the presence of too many marketing intermediaries (and their service charges) has compromised true price discovery at the wholesale level in a transparent manner. Quality dimensions are also, by and large, discounted. Ultimately, this compromises the enforceability of the notified retail prices. Effectively, fixing just one (retail) price cannot deliver; the competent authorities may also need to address administrative weaknesses across the entire value chain.

At the wholesale markets also, where middle-sized farmers and Arhtis take the produce for auctioning, prices are determined in an opaque manner. At first, the wholesale markets have become overcrowded over the years with lack of basic physical infrastructure; under such circumstances, it is extremely difficult to monitor the auction process.[9]Furthermore, politically appointed committees are responsible to run the management of public markets (the committees should rather include representatives from growers and consumers).[10]Since auctions in these markets predominantly involve commission agents and Arhtis, prices are not determined based on the standardized formula (i.e., adding up the freight factor, packaging, and wastage cost over the farm-gate price) prescribed by the food departments. Rather, a significant amount of intermediaries' profit/service charges are embedded in the produce's value.[11]Effectively, it is a common understanding across retailers, wholesalers and commission agents that the quoted wholesale prices do not represent prices at which the actual transactions are executed.

Therefore, price commissioners face serious challenges when it comes to 'enforcing' the retail prices, which are theoretically built on wholesale prices. In a status report submitted upon the advice of the National Price Monitoring Committee in 2015, the Competition Commission of Pakistan had noted that the retailers' most common excuse for not abiding by the official price list is that wholesalers are selling to them at higher prices(compared to what was fed into the calculation of the official retail price).[12] Similarly, another common excuse is with respect to difference in the product quality: the product they are selling is of better quality

[9] For instance, the total number of mandis in Punjab increased from 169 in 1962 to only 233 in 2016 – an addition of 64 mandis, which is quite small in comparison to the increase in Punjab's agriculture volume in this 54 year period (1962 to 2016). (Source: Punjab Agriculture Policy 2018)

[10] Source: Punjab Agriculture Policy 2018 document.

[11] As noted by the Punjab Agriculture Policy 2018 document, "a long supply chain dominated by cartel of middleman captures 60-70 percent of value to the detriment of growers. Manipulated auctions with no true price discovery are accompanied by a host of malpractices aimed at growers viz.-a-viz overcharging, illegal deductions, delay payments and under weighment".

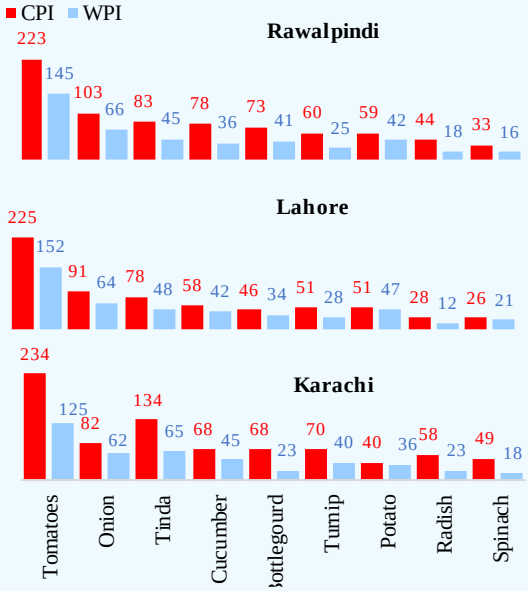
[12] "Review of Framework Relating to Control of Pricing and Supply of Essential Food Commodities." Sectoral Competition Assessment Studies, Competition Commission of Pakistan, September 2015.

compared to what was referenced to in the official rate list.

Figure 2 presents a comparison of retail and wholesale prices of selected vegetables in Karachi, Lahore and Rawalpindi. With few exceptions, retail prices were found to be higher by 50-100 percent than the wholesale prices in all the cities (for which the data was available for the month of November 2019).

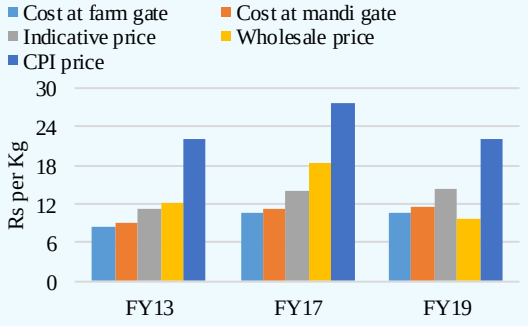
The fact that the benefit of this increase in retail prices does not go to the farming community is most disturbing. For instance, potato growers did not fetch any investment returns this year; most of them had sold their produce at prices below their cost of production (**Figure 3**). Farmers' access to wholesale markets is quite limited, primarily because small landholders and growers dominate perishable production. A major issue appears to be the absence of adequate storage and marketing facilities at the farm level; growers do not have the needed resources to invest in warehouses and/or cold storages, which weaken their ability to wait for favorable prices before they could sell their produce. Furthermore, transportation costs and weak market access also force them to sell their produce at throwaway prices to Beoparis/Arhtis at the time of harvest.[13][14]

Figure 2: Citywise CPI and Wholesale Prices of Different Vegetables During Novemeber 2019



Data Source: AMIS, PBS, Commissioner Karachi website

Figure 3: Price at Different Hubs of Supply Chain of Potato Crop



Whole sale price shows average of December till April after harvesting season
Data Source: AMIS, PBS

3.4 Assessment Parameters and Decision Making

The basic premise for proactive price management in any food market is information with respect to consumption size, formal and informal trade, crop patterns, weather forecasts, and market functioning, etc. Incomplete and/or misleading information compromises decision-making, which seems to be an issue in Pakistan's commodity market. The stability in market dynamics could be enhanced with improved accessibility of market information to farmers, so their expectation about weather pattern, pest infestation and future prices would be well anchored. This would allow them to make more informed decisions about crop choices and investment in land management in a particular season.

On the public side, provincial agriculture extension departments have mandates to disseminate relevant information in timely and cost effective manner to growers[15]. These extension departments deal with comprehensive and diverse objectives including agricultural research, plant protection, agricultural marketing, horticulture, farmers' training etc.; however, limited human resource[16] and other fiscal challenges limit their capacities to reach

[13] Source: Government of Punjab, and MNFS&R.
[14] Similarly, the document "National Food Security Policy" prepared by the MNFS&R notes "Smallholders are mostly isolated from markets and are dependent upon middlemen to harvest and sell their produce, and as a result are often exploited".
[15] After 18th amendment, most of the agriculture related activities of MNFS&R had devolved to provincial agriculture departments including research, policymaking, crop forecast and estimation, soil surveys, planning and work force training etc.
[16] The shortage of human resources is affecting smooth functioning of concerned authorities, for example in agricultural marketing department KPK, all posts including Deputy Director, Marketing Economist, Assistant Directors at head quarter and at divisional headquarters were abolished and the whole working is being performed by the Director Marketing with no any supporting staff. Similarly, Sindh agriculture extension department is also facing work force shortages, for 6881 farmers there is only one extension agent to disseminate agriculture information.

concerned stakeholders specifically small growers. Government of Punjab has launched an information-based system known as AMIS, providing comprehensive one-step market price information services including commodity intelligence to wider audience. Sindh has also established ICT Agricultural Extension Services Centre under Sindh Agricultural Growth Project (SAGP) to provide ICT agricultural extension services to the farming community. On the federal level, MNFS&R has shown commitments to support provinces in improving market intelligence for informed decision-making and promoting the use of ICTs to transfer market information to producers.[17]

Furthermore, the informal trade with neighboring countries seems to be a serious challenge faced by the authorities responsible to stabilize food prices in Pakistan. Inward and outward movement of goods remains mostly undocumented through porous borders; while personnel of different agencies are deployed on the check posts, there is little or no coordination among them in terms of database or sharing of information. The lack of data on informal imports and exports makes it extremely difficult to gauge the overall supply conditions in the market not just in real time, but also two to three weeks down the road. In some cases, such as onions, a consistent practice of informal imports has made it challenging to estimate the data as basic as local per capita consumption (see **Box 2**).

Box 2: The Curious Case of Per Capita Onion Consumption in Pakistan

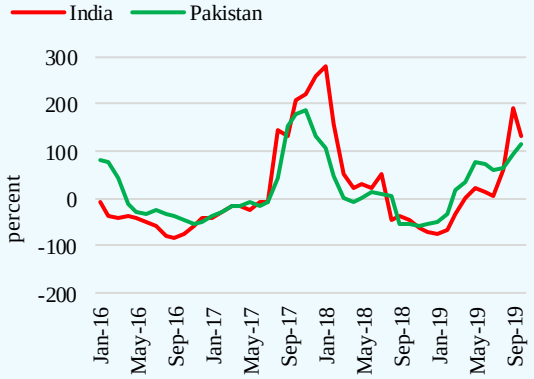
In Jul-Feb FY20, onion prices increased by more than 100 percent on YoY basis and reached Rs75.3 per kg in October 2019, despite one of the record-high levels of domestic production. As detailed below, the market for this particular commodity is characterized by grossly underestimated levels of per capita consumption and informal trade.

According to the MNFS&R, the country's per capita onion consumption stands at 9.5 kg per annum (putting the total domestic demand around 2.1 million MT per annum). The bulk of this demand is met through domestic production (5-year average of 1.9 million MT), and official imports account for only 2-8 percent of the estimated demand (as also noted in **Table 3**). The problem here is that these assumptions are not incontestable: a report produced by the Punjab Agriculture Marketing Information Service (AMIS) in 2014 had estimated Pakistan's five-year average domestic per capita consumption at 20 kg per annum (4.4 million MT) – exactly double the official estimates. These estimates do not appear overstated, keeping in view the per capita onion consumption of 13.5 kg in India, 22 kg in Turkey, and 24 kg in Iran. And if we go by these estimates, Pakistan produces only half of its domestic demand. However, mostly stable prices of the commodity suggest that imports are sufficient to plug the supply gap. But as noted earlier, official imports are minimal.

Anecdotal evidence suggests that informal imports from India account for the bulk of the unmet onion demand in Pakistan. A strong positive correlation between onion inflation in India and Pakistan – at a time when there was no formal trade of the commodity between the two countries – supports this phenomenon. These dynamics played out prominently in increasing onion prices in Jul-Feb FY20 **(Figure 4).**

In FY20, India faced serious damages to its onion crop, and put in place an explicit export ban. Since India is a major exporter of the commodity in Asia, regional onion prices began to increase. Pakistani onion traders found an opportunity, and began exporting onions to Malaysia, China and Bangladesh. Pressure on domestic prices was aggravated by the fact that the Indian product was not flowing in. Since domestic demand is underestimated, and the contribution of informal imports from India is not factored in, the institutions involved in ensuring price stability could not respond to the situation in an effective and timely manner.

Figure 4: YoY Growth in Onion Prices



Data Source: PBS and Ministry of Agriculture and Farmers Welfare India

4. Recent Measures Taken by the Government to Stabilize Prices

It is important to control food inflation in the country not just from the political and macroeconomic perspective, but also to maintain food and nutrient security in the country. While the role and extent to which the government should directly regulate food prices remains debatable, it is clear that the existing price control mechanism faces challenges. Structural weaknesses are quite large throughout the agriculture value chain, and information flow across various government departments remains weak. Nonetheless, some recent policy measures seem to be steps in right direction.

The MNFS&R has recently taken up the task of designing a model on Early Warning System for the management

[17] Source: Draft of National Food Security Policy

of food inflation. . The early warning system for agriculture products and especially for food items may prove to be a useful tool in gauging the expected demand and supply gap in a timely manner. The flexible trade policies may work best in tandem with Early Warning System since timely foreign trade measures prior to supply shortages may reduce the likely imbalance in markets. In addition, the use of remote sensing technology and satellite imaging for crop monitoring at different growth stages may help in monitoring and forecasting the scale of output and will subsequently facilitate evidence-based decision making. The establishment of Early Warning System will also require capacity development in federal and provincial food departments (including strengthening of human resource) and extensive coordination among stakeholders including MNFS&R, Ministry of Finance, Commerce Ministry, Provincial Agriculture and Food Departments, Procurement Agencies and Central Bank. Similar setups have recently been put in place in India and Turkey[18].

Furthermore, the Punjab government is in the process of establishing farmer markets/dedicated platform for farmers in 77 fruit and vegetable markets and model bazars throughout the province to minimize the role of intermediaries. In these dedicated platforms, farmers can avoid market fee and commission and directly sell their commodities to the consumers. These dedicated platforms will also facilitate consumers with availability of fresh items at reasonable prices.[19]

Moreover, federal and provincial governments are now resorting to digital solutions to disseminate price information and control profiteering in essential food items. For instance, the National Information Technology Board (NITB) developed "DurustDaam" application in October 2019, which would update consumers about the daily prices of food items as approved by district administrators. The app also features home delivery system for fruits and vegetables at official retail prices. Initially this app was available only for Islamabad-based consumers, but now it is available also for Faisalabad and Balochistan based consumers. On similar lines, Punjab government with the help of Punjab IT Board, has also launched "Qeemat" app.[20]

Another important development is the formulation and approval of National Anti-Smuggling Strategy at the federal level. As per the details shared so far, the newly established Customs Authority would replace Customs Directorate under this strategy. This Authority has been made the lead agency for anti-smuggling efforts, and all the associated departments will be bound to support it. Under this Authority, coordination is likely to increase among different agencies including Customs Intelligence, FBR, FIA, IB and MI on the customs check posts, especially on the borders of merged districts of KP and Balochistan along with Iran and Afghanistan. This Authority would *'mainstream'* trade on borders and build a central database based on the latest technology, and according to international best practices. The timely sharing of this information with the authorities that are responsible to control domestic prices will be instrumental in addressing periodic supply disruptions.

Moreover, provincial agriculture departments in Punjab and Sindh have started to utilize ICT in their existing extension frameworks, which includes information dissemination through call centers, help lines, electronic media, online services, and mobile applications. Punjab provincial department also provides free access to comprehensive one-stop market price information to farmers and other stakeholders. Recently, the leading telco firms including Mobilink and Telenor have launched different applications to inform farmers about agriculture advisories, weather updates, use of modern technologies, market rates of crops, government schemes and other agricultural news.

Finally, the government launched an effective crackdown against hoarding of wheat, flour and sugar during the third quarter of FY20 after their prices touched almost decade-high levels. Confiscation of stockpiles by the government, as well as the decision to allow import of these commodities, has eased pressures on prices. Furthermore, the government has also increased its subsidies' outlay that would be spent through the existing chain of Utility Stores Corporation across the country. The government is also deliberating upon increasing their outreach by opening new stores.

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[18] Detailed information on FAPMMEC can be viewed on CBRT's website

[19] Source: Directorate of Agriculture, Government of Punjab.

[20] Till date, over 500,000 users have downloaded Qeemat app and over 10,000 users have downloaded each Durust Daam and Karachi Price List app.

In the medium-to-long-term, price stability in agriculture commodities would also require investment in supportive physical infrastructure. In this regard, the existing state of food supply chain in the country represents propitious investment opportunities for the private sector in the areas of cold chain managements (for perishables), grain storage silos (for wheat, rice, etc.) and on-farm processing facilities. Investment in these areas may not only keep prices stable but will also help stabilize farmers' returns and reduce the extent of post-harvest losses. To promote private sector participation, the government had announced a three-year income tax holiday for new industrial undertakings engaged in operating warehousing or cold chain facilities for the purpose of storing of agriculture produce. Investors can also benefit from traditional as well as *shariah*-compliant financing facilities for establishing silos, warehouses and cold storages; SBP has floated these schemes to help develop the market for agriculture produce and storage capacities.