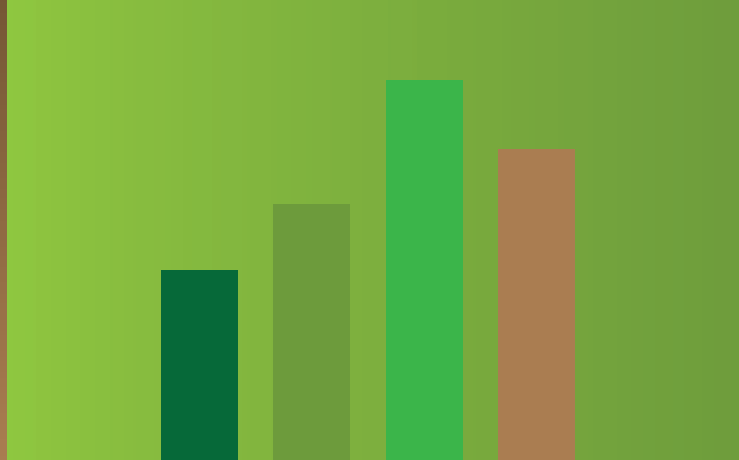


Just-in-Time Policy Note  
on Agriculture and Food  
in Pakistan



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# Food Inflation



WORLD BANK GROUP

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# JIT Policy Note on **FOOD INFLATION**

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The World Bank, working with other partners, is preparing a series of Just-in-Time (JIT) Policy Notes that aim to address pressing issues related to agriculture and food security in Pakistan, and propose improvements in the short and medium term. The specific objective of this work is to assist the government at the federal and provincial levels to move forward with the implementation of policies and reform actions that are potentially of high impact and politically critical. The overall objective is to make the agriculture sector more dynamic, efficient and climate smart, and to act as an engine of growth of rural areas.

This Note is the first in the series. It examines the features of Pakistan's food system that make it vulnerable to food price inflation and volatility. It focuses on the broader trends in supply and demand, and reviews the role of the

government in ensuring that the markets perform efficiently while fulfilling its development outcomes. Based on this, the paper provides recommendations to strengthen supply, address market and policy inefficiencies, and ensure that the population's food needs are met.

The Note points out that food inflation and volatility in Pakistan have been high and exceed those in other neighboring countries. Underlying causes of the price hikes include inappropriate policies and regulations that distort markets, inhibit competition and discourage private investment, as well as limited and poorly implemented efforts for research, innovation and technology dissemination. The lack of adequate social protection policies means that price hikes have had a severe impact on the poor and aggravates nutritional problems, especially among children.



The Note highlights key policy action recommendations and takes into account the discussions held at a webinar jointly hosted by the Consortium for Development Policy Research (CDPR) and the World Bank held on August 26<sup>th</sup>, 2021 on 'Food Inflation and Market Interventions'. The webinar focused on market distortion and its impact on food inflation and explored how the government can play a more supportive role in maintaining food price stability,

particularly in response to shocks such as those caused by the COVID-19 pandemic. The discussion highlighted the concerns of various stakeholders along the value chain including producers, traders, consumers, government, and policy researchers.<sup>1</sup> The following 6 key recommendations have also been discussed and refined based on feedback from sector specialists:<sup>2</sup>



**Recommendation No. 1. Reduce wheat market distortion through the rationalization of public procurement:** The government could gradually reduce its role in the public procurement of wheat. Its objective must be to maintain a strategic reserve with as little market distortion as possible. The strategic reserve may be used for price stabilization only if prices exceed an acceptable range.



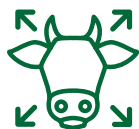
**Recommendation No. 2. Encourage competition:** The combination of import tariffs, barriers to entry, and a minimum support price has created the conditions for anti-competitive practices, especially in the sugar industry. Easing barriers to trade and paring down protection of the industry may reduce the incentives for collusion between efficient and inefficient mills.



**Recommendation No. 3. Invest in research and extension services:** Encourage high-value agriculture (HVA) through research and extension services and the removal of policies that pull resources away from HVA to low-value commodities.



**Recommendation No. 4. Strengthen global trade linkages:** Strengthen institutional capacity and improve the infrastructure required to facilitate trade, both imports and exports, and maintain linkages with traditional and non-traditional suppliers through standing emergency arrangements.



**Recommendation No. 5. De-cap milk and meat prices:** While this measure may not reduce retail prices in the short run, it would reduce the pressure on farmers to sell their produce at low prices. This could incentivize more investment in production and storage facilities at the farm level that could, in the medium run, help bring down prices.



**Recommendation No. 6. Make information accessible for research and decision-making:** Develop a harmonized platform for federal and provincial governments to monitor the food system. The platform should track changes in global supply and demand, currency exchange rates, local production and consumption, carry-forward stocks, private sector stocks, production and public procurement in all provinces/areas, as well as trade. Improve the accessibility of farmers to market information, in order to help them make informed cropping decisions based on weather patterns, pest infestation and future prices.

1 The webinar was co-chaired by Mr. Najy Benhassine, World Bank Country Director for Pakistan, and Dr. Ijaz Nabi, Chairperson of the Consortium for Development Policy Research (CDPR) and Country Director of the International Growth Centre (IGC) Pakistan. Panelists included Mr. Asad Rehman Gilani, Secretary of Agriculture, Punjab; Dr. Iqra Shoaib, Member, Consumers Association of Pakistan; Ms. Namesh Nazar, Agricultural Economist, World Bank; Mr. Omar Hayat Gondal, Ph.D. Candidate at the University of Washington, former Civil Servant; Mr. Shariq Vohra, President, Karachi Chamber of Commerce and Industry; and Mr. Shaukat Mukhtar, General Secretary and Spokesperson of the Dairy Farmers' Association. The webinar was facilitated by Ms. Amina Bajwa, Member of the Prime Minister's Strategic Reforms Unit.

2 Discussed at the Agriculture Development Partners Coordination Forum organized by FAO on June 9<sup>th</sup>, 2021.



### 1. Pakistan has experienced both high inflation and volatility of food prices over recent years highlighting the need to strengthen its food system.

Food price inflation is driven by the interaction of demand and supply factors influenced by diverse actors in the system.<sup>3</sup> These interactions often do not result in optimal outcomes due to challenges like uncompetitive market conditions (e.g. faster pass-through of global surges in food prices to domestic prices than global falls<sup>4</sup>) and market failures (e.g. higher food inflation in rural areas compared to urban areas, possibly due to higher margins in urban markets). To better manage food price inflation policymakers must understand the role played by the different nodes of the food system and steer it towards desired outcomes with minimum distortions and unintended consequences.

3 Money supply, inflation expectations, foreign inflation, trade, exchange rates, agriculture credit and subsidies.

4 Jaffri, Mirza and Bashir (2014), Is Pass-through of Global Food Inflation to Food Inflation in Pakistan Symmetric?, *Pakistan Economic and Social Review*; Sarwar, Hussain, and Maqbool (2020), Pass-through effects of oil price on food and non-food prices in Pakistan: A nonlinear ARDL approach, *Resources Policy*, Volume 69, December 2020.

5 FAO, UNICEF, WFP, WHO (2020). Asia and Pacific Regional Overview of Food Security and Nutrition.

6 In terms of quantity, the richest and poorest quintiles consume the same amount of wheat per capita; however, the richest quintile consumes about three times more milk, four times more meat, five times more fruits, and 1.5 times more vegetables. The poor, therefore, draw most of their calorie requirements from a diet concentrated on wheat, with insufficient nutritional diversity.

### 2. Both affordability and availability constrain access to a healthy diet.

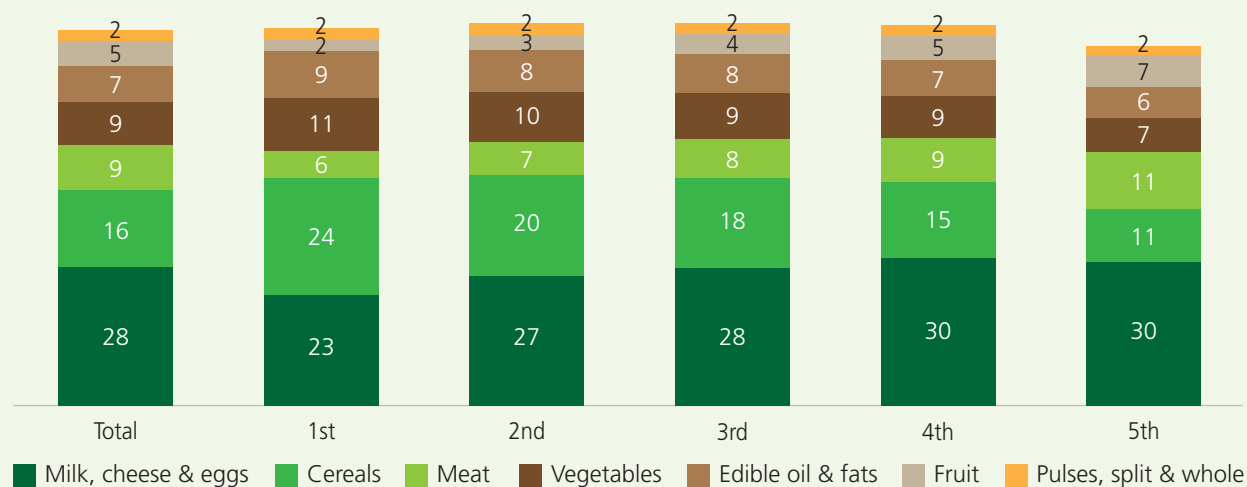
According to a recent FAO report on food security, 68% of Pakistan's population cannot afford a healthy diet.<sup>5</sup> On average, a Pakistani household spends 36% of consumption expenditure on food (1st quintile - 47%; 5th quintile - 28%). More than half of the household's food expenditure is spent on three categories - cereals, meat, and dairy (see figure 1). However, when comparing the poorest quintile to the richest one, there are significant differences in dietary patterns with the poor spending more on cereal and vegetables and the rich spending more on fruits and meat.<sup>6</sup> With higher incomes and urbanization, there is an increasing demand for a diversified package of foods, but inefficient markets do not convey these demand signals to producers to in-

centivize changes in the production mix. Direct interventions like incentives (cash transfers) and behavior change messages can be used to influence the affordability and consumer choice demand forces.<sup>7</sup>

**3. On the production side, insufficient productivity, market distortions, and limitations of trade result in market rigidities that push prices.** With little improvement in productivity (see figure 2) and an increasing population size, the per capita production of major commodities is barely keeping supply up to meet the country's requirements (see figure 3). Pakistan remains a net food importer and thus exposed to international price volatility and exchange rate fluctuations.<sup>8</sup> Distortive and reactionary policies that disregard the cost of policy uncertainty and their ripple effects on the food system make the market vulnerable to shocks and manipulation and result in a

suboptimal production mix, the inefficient use of scarce resources, low private sector participation, and low integration in the global value chains.<sup>9</sup> As the sector becomes weaker, it is unable to compete with other ones for resources like land, skilled workforce, and inputs such as water and credit. The rapid browning of green fields due to unchecked urbanization and the unwillingness of educated youth to enter the agriculture sector demonstrates the sector's inability to compete due to low productivity and returns. Improving supply side flexibility will require interventions that (i) increase competition in the market through greater private sector participation in strengthening value chains (reduced government role), (ii) empower producers through improved extension services to increase productivity, (iii) invest in research to modernize the agriculture sector and make evidence-driven policy decisions,<sup>10</sup> and (iv) expand agriculture production especially in areas

**FIGURE 1. Distribution of monthly household expenditure on major food items by quintiles, 2018-19**



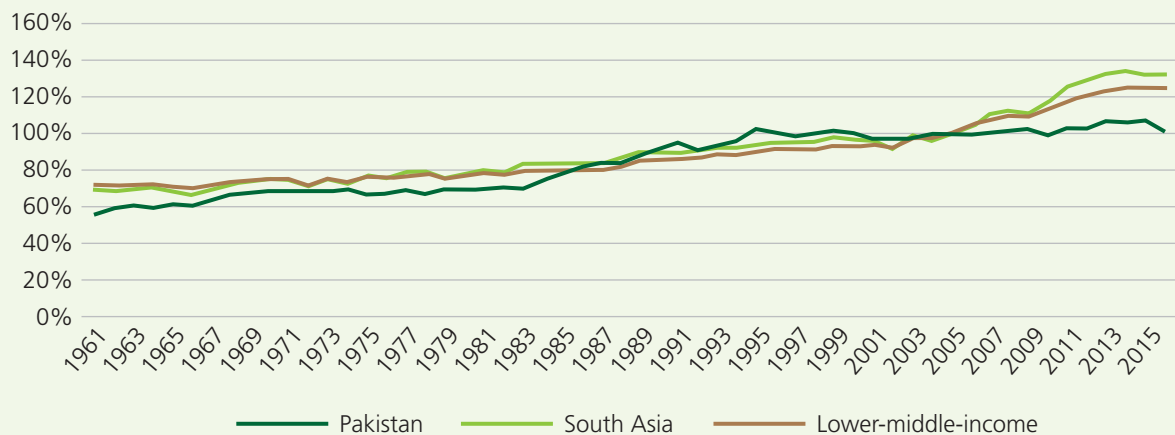
Source: Household Integrated Economic Survey (HIES) 2018-2019.

7 In 2019, Agha Khan University (AKU) in the Thatta and Sajawal Districts in Sindh Province conducted a study that showed the viability of stunting-prevention interventions combining unconditional cash transfers and specialized nutritious food with Social and Behavior Change Communication (SBCC) activities.

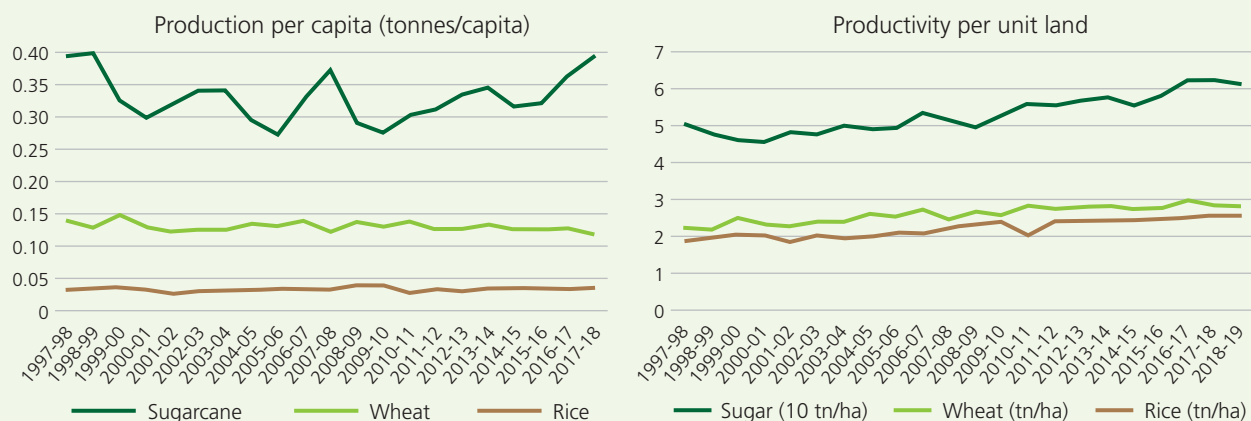
8 Prices of edible oil in Pakistan surged in early 2021 due to increasing global prices. This had ripple effects in other areas such as the poultry sector which also experienced high prices due to more expensive feed.

9 The government influences the market through various tools including public procurement, the monopoly on several produce markets (only recently removed in Punjab and yet to be operationalized), and trade policy.

10 Between 2000 and 2012, full-time equivalent researchers per 100,000 farmers fell from 18.5 to 14.4. Long-term recruitment restrictions have left many federal and provincial research agencies with aging pools of researchers. Investments in staff training are critical to counteract the imminent loss of senior researchers to retirement. (ASTI)

**FIGURE 2. Agriculture Total Factor Productivity Index**

Source: USDA.

**FIGURE 3. Productivity of major commodity crops**

Source: Authors with information from the Pakistan Economic Survey.

with low competition for land, far from urban centers, and with appropriate agro-climatic conditions. This includes, for example, encouraging production of low-value crops like wheat in cheaper rainfed areas while promoting HVA in more expensive irrigated areas.

**4. An analysis of price monitoring indices in Pakistan indicates that food price inflation has historically been supply driven.**<sup>11</sup> The Consumer Price Index (CPI) is used to measure inflation across different categories.

The comparison of the CPI and the Wholesale Price Index

<sup>11</sup> The Pakistan Bureau of Statistics (PBS) publishes 3 price indexes:

- Consumer Price Index (CPI) - Measures price changes nationally and disaggregated by urban and rural estimates at the retail level as well as inflation on a monthly basis
- Wholesale Price Index (WPI) - Measures price changes at the wholesale level on a monthly basis
- Sensitivity Price Index (SPI) - Measures price changes of essential items on a weekly basis

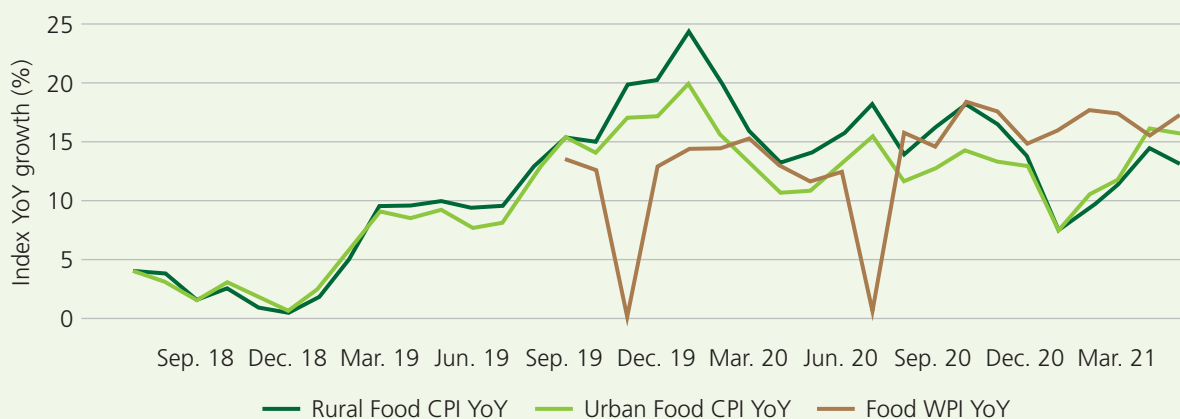
(WPI) provides useful insights into the overall food value chain (see figure 4).<sup>12</sup> A two-way causation between the two indices would indicate effective pass-through of demand and supply signals to determine a market clearing price. An analysis of the WPI and CPI between 1971 and 2016 suggests that while the two are linked by two-way causation for most categories, that is not the case for food. In the case of food, evidence shows a one-way relationship with the WPI causing CPI indicating supply driven inflation and weak market integration.<sup>13</sup> A flexible supply chain, particularly through ease of trade, is therefore crucial to protect against supply shocks.

**5. Food prices are also volatile, triggered by different market and non-market factors and exacerbated by systematic weaknesses like market fragmentation and information asymmetry.** Market factors include speculative behaviors like hoarding that can drive up prices, and non-market factors include events like a pandemic or climate change. Pakistan is one of the most

vulnerable countries to the impact of climate change and has experienced an increased frequency of shocks like floods, locust attacks, and droughts. However, with agriculture as a devolved subject, there are insufficient synergies across provinces to increase resilience against shocks. Insufficient coordination across federal and provincial governments and across institutions constrains the government's ability to forecast production and make timely and least-distortive policy choices (including public procurement, support prices, trade policy, etc.).<sup>14</sup> Therefore, the sector is unable to reduce its losses from leakage,<sup>15</sup> post-harvest losses,<sup>16</sup> and pest attacks.<sup>17</sup> A resilient food system requires investments in (i) research on making crops and livestock resilient to disease, (ii) infrastructure to efficiently produce, process, store, and supply produce to consumers, and (iii) early warning systems for timely decision making.

**6. When looking at the composition of the CPI and the distribution of food expenditure by households,**

**FIGURE 4. Year-on-year inflation**



Source: Pakistan Bureau of Statistics (PBS).

12 The WPI not only includes intermediate goods but also some finished goods, it has a greater proportion of imports (mostly raw materials), and does not include services (which are included in the CPI)

13 <https://www.sbp.org.pk/publications/staff-notes/SN-3-16-WPI-CPI-Relationship.pdf>

14 <https://tribune.com.pk/story/2271118/centre-sindh-fail-to-break-wheat-price-impasse>

15 A variety of agricultural and non-agricultural commodities is traded illegally at the Pakistan-Afghanistan and the Pakistan-Iran borders.

16 Due to a lack of cold storage and proper marketing of perishable goods, if there is an increase in demand or a shortage in supply, prices will increase.

17 Recent locust attacks resulted in major losses of agricultural produce. Early warnings of attacks and better coordination mechanisms across provinces to act quickly could help minimize such losses in the future.



milk, wheat products, vegetables, meat, and sugar are the most important commodities that drive the CPI and household consumption (figure 5). With different value chains, each of these products is differently impacted by various factors.

**FIGURE 5. Year-on-year growth of the food price index (%) with 1.5+ weight in urban and rural CPI (thickness of line indicates weight in CPI)**



Source: Pakistan Bureau of Statistics (PBS).



## Impact of public procurement and support prices on food price inflation (Focus: Wheat and sugar)

**7. The government has historically carried out huge public procurement of wheat and set support prices for wheat and sugar to help farmers; however, little evidence exists that this benefit actually reaches the producers.** Yearly, the government sets procurement targets and support prices for wheat in a mechanical manner based largely on precedent. Estimates of marketable surpluses of wheat in various farm-size categories show that farms of <12.5 acres either do not produce a marketable surplus or their surplus is not large enough to justify the

hassle of selling to the government,<sup>18</sup> so they sell to middlemen instead. As a consequence, the government ends up buying mainly from middlemen and large farmers at the support price, while small producers rarely get paid the support price due to their limited bargaining power with the middlemen, who are often also their main source of credit and to whom they deliver most or all of their harvest to settle their outstanding debts.<sup>19</sup> The government then sells subsidized wheat to flour mills on a capacity-based quota, which is problematic because it does not reward efficiency.<sup>20</sup> Further, the millers must still procure wheat for their remaining capacity from the wholesale market and therefore use the wholesale price plus cost and margin to negotiate the flour price with the government. While 95%

18 For example, the government requires that all wheat sold to public sector centers must be packaged in jute bags. Their supply is controlled by the government and can therefore be manipulated to exclude small-scale farmers from selling their surplus wheat to the government.

19 The farm-gate prices received by farmers within two months of harvest in Punjab were found to be substantially lower than the procurement support price in 2018 and 2019. In wheat producing districts, wholesale prices were up to 109% of the harvest prices in 2019 indicating the range of the middlemen's margins and incidentals.

20 By releasing wheat to flour mills at a price lower than its cost, the government subsidizes itself each year due to its high incidental costs compared to the private sector.

of the subsidized quota is issued to mills, 2/3 of consumers buy their flour from local chakki instead.<sup>21</sup> As a result of this operation, managed by the Food Department and the Pakistan Agricultural Storage & Services Corporation (PASSCO), that incurs huge costs to the government, causes significant losses during storage, and does not reward efficiency at any stage of the value chain, the consumer ends up paying a price for wheat that has little to do with the production volume or cost and more with signals sent by major players including the government and international prices. Another consequence of this operation is the crowding out of credit to the private sector as the government (finance departments) borrows heavily to finance its procurement.

**8. While little evidence exists of public procurement benefiting farmers, there is a lot of evidence of public procurement being used as a signal to other actors to speculate and manipulate markets through uncompetitive behavior.** The procurement price and targets are often set based on precedent instead of actual carry-forward stocks, the international price of wheat and/or currency exchange rates (which affect import and export parity prices). Since these factors affect the willingness of farmers to sell to the government, and therefore the government's ability to reach its procurement targets, this sends a distortive signal to the market of a potential shortage if the procurement price isn't high enough to motivate farmers to sell to the government.<sup>22</sup> This is one of the factors that led to a price hike of wheat in 2019. An inquiry by the government concluded that the cause of the price hike was insufficient procurement, with "insufficient" defined as a lesser amount than the target set based on previous years. This creates a dangerous expectation that the procurement volume must always be higher than in the previous years and makes the government, either compete with the market to fulfill its target, risking price hikes by creating a shortage, or miss the procurement target, also risking price hikes but now due to panic buying (perceived

shortage due to insufficient procurement). Similarly, since support prices can only go up due to political reasons, any reduction in production costs or prices due to a good harvest does not get transferred to the consumers since the support price sets the benchmark on which middlemen add their mark-ups.

#### **Recommendation No. 1:**

**The government may consider gradually reducing its role in the public procurement of wheat to not inadvertently send market signals that create panic.** It can adjust the support price (ideally close to the market price) to only procure as much or as little as it needs instead of just progressively increasing the procurement prices and/or targets. The objective would be to maintain a strategic reserve (estimated at a level easily projected by the market so that less procurement isn't misconstrued as a shortage) with as little market distortion as possible. The strategic reserve may be used for price stabilization only if prices exceed an acceptable range.



**9. The sugar sector has historically been a highly uncompetitive sector controlled by a few major actors with political power to influence policymaking in their favor.** The government influences the sugar market through instruments like a minimum support price, notification of the catchment area for each mill for the procurement of sugarcane, import tariffs, and licensing of sugar mill capacity. Setting up a sugar mill or expanding capacity requires government permission which is discouraged (although not entirely banned) to prevent the excessive cultivation of sugar.<sup>23</sup> The result is a sector dominated by a few industrial groups that makes farm-

21 The [2018 Rolling District Study](#) conducted with the support of DFID in four districts of Punjab and the [2017 FACT Survey](#), conducted by the Ministry of Planning, Development, and Special Initiatives with the support of USAID, found that a large proportion of the population is consuming wheat flour produced by the chakki mills. However, the limited quota allocation to chakki mills by the provincial governments and the unfriendly mechanism of issuance is a bottleneck to expanding the role of these small-scale chakki mills. ([CCP policy note on the wheat sector](#)).

22 There is a tension between setting the price and setting the procurement target. As soon as the target is met, the government stops procuring and farmers sell their remaining produce at market rates. When the price is set high, farmers compete to sell to the government and small producers cannot compete with bigger ones or middlemen. If the price is set low, the government uses administrative means to force farmers to sell at a lower price to meet the procurement target (e.g. 2019 and 2020).

23 [CCP policy note on the ban of sugar cane capacity increase](#).

ers vulnerable to exploitation, for instance, by delaying procurement till they are desperate to sell at lower than the minimum support price and/or delaying payments to farmers.<sup>24</sup> On the consumer side, the concentration of the industry allows for collusion and speculation to drive up retail prices to maximize profits. This is made possible through the role of the Pakistan Sugar Mills Association (PSMA) which has become a platform for collective decision making on the procurement, crushing, supplying, and export of sugar, as well as setting sales quotas across mills to reduce competition.<sup>25</sup>

### Recommendation No. 2:

The combined protection resulting from import tariffs, barriers to entry, and a minimum support price has created the perfect conditions for collusion and cartelization in the sugar industry. **Easing these measures would add some competition to the sector through increased capacity and availability of imports** that could compete out inefficient mills. The Pakistan Sugar Mills Association has been acting as more than a representative of the sector, which gives space to more collusion and requires government action to restore the balance of power and competition in the sugar market.



<sup>24</sup> Post-harvest, cane is rarely stored, as high tonnage requires large storage areas, while storage for longer duration causes water content to dry out, lowering gross weight.

<sup>25</sup> Using the platform of the PSMA, sugar mills constantly strived to limit the supply of sugar in the market in an attempt to achieve the price levels they desired. ([CCP inquiry on the sugar industry - October 2020](#)).



## Impact of trade and high-value agriculture (Focus: Vegetables)

**10. The potential of high-value agriculture (HVA) has yet to be realized as it competes with major commodities which are favored through distortive government policies.** Due to this competition, Pakistan remains an importer of vegetables with supply often coming from informal trade, making estimations of consumption and demand harder. Therefore, the price of vegetables experiences more variation than other food products as seen in figure 5 due to the combined impact of fluctuations in the domestic supply,<sup>26</sup> exchange rates, international prices, and trade policy decisions.<sup>27</sup> The range of variation in prices is also an indicator of the difficulty with which traders supply vegetables from international markets to ease inflationary pressures. In the

absence of quality and timely information on domestic supply and demand, non-tariff barriers can significantly constrain the government's ability to import much needed produce to manage prices.

**11. The perishability of fruits and vegetables and the lack of investment in reducing post-harvest losses discourage farmers from transitioning to these products, making Pakistan increasingly reliant on imports.** The more perishable the commodity, the lower the share of the retail price that is received by the farmer. Limited profit margins for farmers greatly reduce resource availability for investment in on-farm measures to reduce harvest losses. Farmers could increase returns through the use of high-yielding and more resilient varieties. However with little research and a slow approval process of new varieties, farmers do not have access

26 The absence of adequate storage and marketing facilities at the farm level is a major issue; growers do not have the needed resources to invest in warehouses and/or cold storage, which weakens their ability to wait for favorable prices before they can sell their produce.

27 The government often uses non-tariff barriers like permits to suppress imports. While the policy is flexible, the timeliness of decision making and early warnings can have a great impact on easing inflationary pressures.

to good quality seeds.<sup>28</sup> Most post-harvest losses occur during transportation and at the points of sale. These can be reduced by encouraging private sector participation (similar to what was seen in China, Kenya and South Korea) to provide refrigerated transportation, along with better storage and grading at markets. The PAMRA Act in Punjab, which establishes a new, more transparent legal regime to market agricultural produce to protect the free flow of produce and to encourage food supplies is a step in the right direction.<sup>29</sup>



### Recommendation No. 3:

The Departments of Agriculture and Food could **encourage high-value agriculture (HVA) through research and extension services and the removal of distortive policies** that pull resources away from HVA and discourage the private sector to participate in the modernization of value chains.

### Recommendation No. 4:

- **Strengthen the institutional capacity** (Pakistan Trading Corporation) and **improve the necessary infrastructure** (Ministry of Commerce) to facilitate trade (both import and exports) including timely and high-quality services for testing and certification (e.g. phytosanitary certificates and plant protection release orders), the availability of cold storage, scanners at custom borders, and quarantine facilities.
- **Strengthen linkages to the global markets** to maintain standing import arrangements with non-traditional suppliers in case of a supply shortage from traditional ones (including permits, pest risk analysis, and harmonization of the Pakistan Standard & Quality Control Authority (PSQCA) with other countries in the region, etc.).<sup>30</sup>



28 The export market, for instance, requires seedless kinnow varieties and although successful experimentation has been done in Sargodha, getting seeds approved is still an issue.

29 Guo Li and Willem Janssen. [Modernizing Punjab's farming to benefit farmers and consumers](#) (May 11, 2020).

30 For example, Pakistan imposed a ban on the import of disease-prone tomatoes from India in FY18, which was Pakistan's traditional bulk supplier. Informal imports from India were also not forthcoming, as its crops faced damages from rain, and political tension between the two countries led to a complete halt in cross-border trade. Therefore, when the tomato crop from Sindh (which accounted, on average, for over 35% of the national supply in FY15-FY19) got delayed, commercial traders could not import the commodity. A speedy arrangement had to be made to import tomatoes from Iran by making an exception to regulations and setting up ad-hoc quarantine arrangements ([SBP note on price stabilization mechanisms - February 2020](#)).



## Impact of price capping (Focus: Milk and meat)

**12. The government has historically been setting price caps for milk and meat, which does little to control prices at the retail level but significantly discourages investment in expanding production and improving quality.** Under the “Price Control and Prevention of Profiteering and Hoarding Act of 1977”, the federal government has delegated the power to fix the prices of milk and meat to the district governments. Normally, a committee which is headed by a commissioner and includes members of the Government’s Livestock and Dairy Department (L&DD), farmers, the community and others, is constituted at the district level. While it is the committee’s responsibility to set prices based on market conditions and production costs, in practice the price fails to incorporate changes in costs or to ensure the

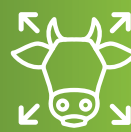
31 Wheat stalk, wheat bran and maize are all produced locally and constitute the basic diet for local animals. However, large quantities of all three are exported leaving very little for local consumption. This drives up their prices. To cover the shortfall in fodder supply, animal feed is imported at high costs.

32 The largest market for milk comprises of entities such as marriage halls, hotels, restaurants, and sweets shops.

adequacy of the returns required by producers to invest in quality improvement.<sup>31</sup> After the price is set, it is rarely enforced at retail level, so consumers continue paying high prices, unless they are willing to buy poor-quality adulterated product at the government-set price. However, producers are often forced to sell at the lower price set by the government so it is mostly the middlemen who benefit and profit from higher retail prices. The concentration of profits by the middlemen also constrains the small producers' ability to invest in value addition, cold storage, and processing at the farm level. Due to the high perishability of the product, any shock in the supply chain would therefore result in large losses of produce and an increase in prices. Such was the case of the shock caused by COVID-19. During the lockdowns, the product rarely reached markets in time for sale (except for milk being sold directly to processors, which represents about 4-5% of total production). Farmers were not able to sell their produce to middlemen resulting in a deep dive of the farm-gate price and an increase in the retail price due to shortages, tempered only by the reduction in demand from businesses due to the lockdowns.<sup>32</sup> Additionally, the producers of fresh milk also compete with imported milk powder which is used to produce reconstituted milk. Given the vulnerability of the fresh milk supply chain to shocks, it is unable to compete with this imported product that has a longer shelf life although a much lower nutritional value.

### Recommendation No. 5:

**The government could discontinue the capping of milk and meat prices by the L&DD. While this may not reduce retail prices in the short run, it could reduce the pressure on farmers to sell their produce at a low price. This could incentivize more investment in production and storage at the farm level which could, in the medium run, help bring down prices.**





### Impact of the lack of monitoring, forecasting, and coordination (Focus: Need for early warning and reduction in information asymmetry)

**13. While the government has a system for crop monitoring that gathers fairly accurate estimates, it is not agile enough to give authorities an early warning on possible crises so that they can make timely arrangements like opening trade to keep supply stable.** Every year, the Directorate of Crop Reporting Services (CRS) provides estimates of produc-

tion, land under cultivation, and yield using both sample field surveys and satellite imagery. The wholesale price is gathered by the Directorate of Agriculture Marketing and the retail price is gathered by the Pakistan Bureau of Statistics (PBS).<sup>33</sup> There is no clear estimate of existing stocks held by the private sector.<sup>34</sup> The fragmentation of data across different actors makes it difficult to create a complete picture of price changes and its drivers to provide early warnings. It also makes it difficult to understand the prices and margins received by the farmers, wholesalers, and the middlemen which is critical to identify the focus of required interventions.<sup>35</sup> Further, there

33 Price lists are set by taking an average of auction prices of all lots of the commodity in the wholesale markets and adding a 10-15% mark-up. This process is inefficient as it creates winners and losers depending on whether someone bought lower or higher than the average wholesale price. In fact, it favors those that buy lower-quality, and therefore, cheaper lots, over those that buy higher-quality produce. It is also difficult to enforce by the Price Control Magistrates who are expected to monitor prices at the retail level in addition to their other responsibilities. The distortive effect of this price setting is seen at most retail outlets where produce regulated by the district committees is kept separately and is typically of subpar quality.

34 For example, the recent hike in sugar prices appears to be the direct result of misreporting in sugar stock positions that led to a decision to delay sugar imports. Farmers, middlemen and logistical partners are largely undocumented making it harder to get reliable statistics for policy making.

35 The Punjab Government has started collecting data on all the middlemen in the province. Data from all auctions is collected via the Mandi application and data from the retail end is collected via the Qeemat application. With this data in hand the government can regulate the actions of the middlemen as it allows for a checked rate of return between middlemen and retailers. This way the government has been able to decrease intra-district volatility as well.



is an additional challenge of restrictions on movement of products which create informal markets to allow movement from surplus to deficit areas (and neighboring countries) where prices may be high.<sup>36</sup> This fragmentation of the market combined with insufficient forecasting capacity makes it difficult for policy makers to estimate the size of any needed strategic reserves, domestic demand, surpluses/deficits to trade across borders, and investment requirements.<sup>37</sup> This regulatory uncertainty increases the cost of doing business and incentivizes the manipulation of markets through uncompetitive behavior.

**14. Agricultural markets are structured in a way that allows some actors to take advantage of information asymmetry, due to insufficient market integration of farmers and lack of monitoring, to maximize their profits at the expense of producers.**

Information asymmetry between producers and consumers, due to insufficient market integration of farmers, prevents producers from transitioning away from traditional crops towards HVA. Farmers rely on market signals received from the middlemen or through government sources which are often skewed towards a few traditional crops. Another example of this asymmetry is between the middlemen and farmers. The middlemen often purchase the entire crop prior to harvesting to get a low price from farmers. In the absence of formal credit these middlemen also become providers of informal credit and inputs.<sup>38</sup> Therefore, by acting as providers of inputs and as sales agents, the middlemen can bind farmers in terms that maximize their own returns while minimizing risk. The commission agents who then auction this produce bid up the price leading to high retail prices. This leads to welfare losses for both producers and consumers.

**Recommendation No. 6:**

- **Develop a harmonized platform used by both federal and provincial government to monitor the food system.** The platform should track changes in global supply and demand, currency exchange rates, local production and consumption, carry-forward stocks, private sector stocks, production and public procurement in all provinces/areas, and trade. The system must be designed to get frequent estimates, possibly through remote sensing technology, on production and yield and give early warnings in case of any disruptions.
- **Improve the accessibility of farmers to market information,** in order to help them make informed decisions about crop choices, investments in land management, and choice of markets to sell in, based on weather patterns, pest infestation and future prices, among others. Greater access to information will also help limit the use of information asymmetry by actors along the value chain who maximize their profits at the expense of the producers' income.



<sup>36</sup> The economic interests of the Punjab Food Department (PFD) and the mills conflict when the PFD wants mills to grind wheat for consumption in Punjab, whereas the latter find greater opportunities to profit in Khyber Pakhtunkhwa or Afghanistan.

<sup>37</sup> For example, the market for onions is characterized by grossly underestimated levels of per capita consumption and by informal trade. Since domestic demand is underestimated, and the contribution of informal imports from India is not factored in, the institutions involved in ensuring price stability cannot respond to price hikes driven by supply disruptions from India in an effective and timely manner.

<sup>38</sup> Commercial banks consider such farmers risky and unworthy of credit while Microfinance Institutions charge very high interest rates on loans provided to farmers. Hence, the middlemen assume the role of a bank to fill this vacuum. They also assume the role of sales agents either by facilitating the sale of the harvested crop or by setting up arrangements which bind the farmers to sell their entire produce to them.



## Conclusion

Food price inflation is a crucial agenda for the government to protect the poor from price shocks and to tackle undernutrition due to unaffordable nutritious food. However, the unintended consequences of government interventions often distort the market, leaving it increasingly less efficient and responsive than it was before. It is important that the costs of these unintended consequences are weighed against the benefits when making policy decisions. The previous 6 recommendations are all important contributors to a broader set of actions that can be taken to strengthen the food system, as summarized below:

- **Remove information asymmetry** between stakeholders including federal and provincial governments, government and private sector, farmers and middlemen, markets and end consumers. This requires an open data policy that encourages the use of technology to ensure high transparency, traceability, and quality testing. It also requires the government to maintain stable and predictable policy positions that are well communicated to facilitate the ease of doing business.
- **Eliminate distortive policies** that drive resources away from high-value crops through minimum support prices, reduce producers returns to invest in value addition or quality through price caps, and put the government in direct competition with the market through public procurement.
- **Encourage private sector participation** in a way that rewards performance and efficiency rather than capacity. While the PAMRA Act approved in Punjab is a step in the right direction, its operationalization and monitoring are important. Sindh approved a similar act in 2010 (Sindh Wholesale Agricultural Produce Markets); however, the rules and regulations required to operationalize it were never prepared.
- **Make research and development (R&D) a national priority** with an enabling environment that includes adequate funding and appropriate legislation. While plans have been made in the past, they have not been supported by adequate resources. A demand-driven R&D ecosystem requires collaboration between universities, industry, farmers, government institutions and private investors. It also requires legislation that protects intellectual property and ensures smooth approval processes to incentivize the private sector to invest in research in Pakistan.
- **Use well-targeted social protection tools** as a consumption-smoothing instrument instead of untargeted subsidies. While many distortive policies claim to support producers and consumers, the benefit to both is less, if any, than the cost of a market vulnerable to manipulation. It would be more efficient and less distortive to use targeted social protection programs to protect the poor.

## Recommendation Matrix

Stakeholders' readiness	Policy Category	Impact expected in the...		
		Short Term	Medium Term	Long Term
<b>High</b>	Demand	Use social protection programs for consumption smoothing and protection from price shocks	Use behavior change communication campaigns to influence dietary patterns	
	Supply		Empower producers through improved extension services to increase productivity and transition to high-value agriculture	Invest in research to modernize the agriculture sector and make it more resilient
	Volatility	Strengthen global trade linkages through standing arrangements		Develop infrastructure to process, store and supply produce to consumers and minimize losses
	Systematic Issues		Use of better data and forecasting mechanisms for early warnings and timely decision making	
<b>Low</b>	Demand		Implement reforms like PAMRA to better communicate demand signals to producers	
	Supply		De-cap milk and meat prices	Reduce the role of government in the market, for instance through reduced public procurement
	Volatility	Remove non-tariff barriers to trade and streamline procedures/processes Act against collusion and other noncompetitive practices		
	Systematic Issues	Promote better communication across stakeholders including the different levels of government, consumers, producers and the private sector	Open data sharing to facilitate research and investor confidence	



