Food Inflation & Market Interventions

Inflation in Pakistan has exhibited volatile trends in recent years touching double-digit figures intermittently, much of this increase and fluctuation can be attributed to growth in food inflation[1]. This has significant impacts on social welfare; particularly the welfare of the poor. Poor households are more vulnerable to the impacts of high food inflation as they spend a higher share of their expenditure on food[2]. Therefore, high food inflation coupled with stagnant income levels significantly lowers their purchasing power; as the expenditure share on food increases resources are diverted away from other essential goods and services such as healthcare and education which is detrimental to the development of human capital, productivity and economic growth of the country.

This note explores the various supply and demand factors and the market structures which lead to food inflation in Pakistan. It highlights some policy actions and borrows from the discussion that took place in a webinar jointly hosted by the Consortium for Development Policy Research (CDPR) and the World Bank on 'Food Inflation and Market Interventions'. The webinar focused on the tools of market distortion, their impacts on food inflation and explored how the government can play a more facilitative and supportive role rather than a distortionary one in maintaining food price stability, particularly in response to shocks like Covid-19.

Context

In recent years, Pakistan has seen a high rate of food inflation as well as food price volatility. A recent World Bank policy note points out that food inflation and volatility in Pakistan has exceeded that in other neighbouring countries. Between May 2020 and 2021, prices of food and non-alcoholic beverages increased by 14.83% with urban centres seeing a higher rise (15.3%) compared to rural areas (12.8%). Such a sharp increase in food prices can have a detrimental impact on nutrition especially given that 68% of Pakistan's population is unable to afford a healthy diet. An average household spends more than a third (nearly 36%) of its consumption expenditure on food. In fact, cereals, meat, and dairy alone comprise more than half of an average household's expenditure on food as illustrated below. In the absence of adequate social protection, price hikes can have a disproportionate impact on the poor, and can aggravate malnutrition and other health problems, especially among children.

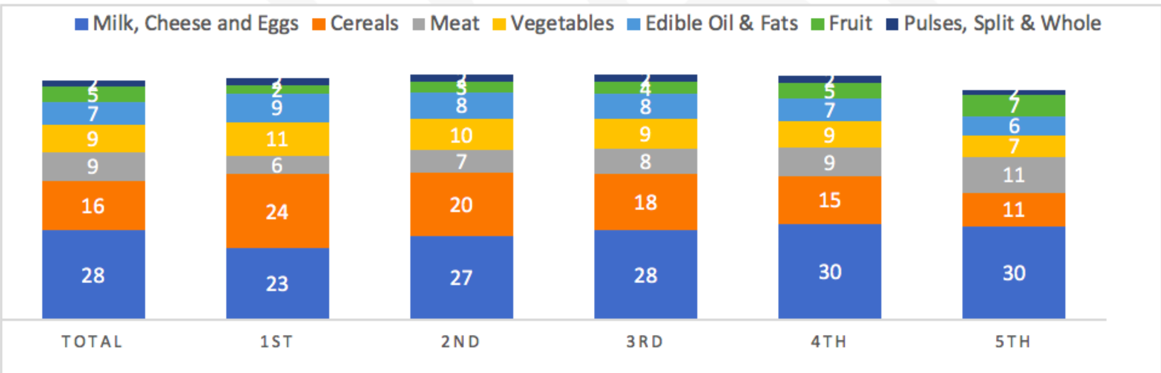

Figure 3: Distribution of Monthly Household Expenditure on Major Food Items by Quintiles 2018-19

[1] https://www.dawn.com/news/1621555

[2] https://mpra.ub.uni-muenchen.de/45009/1/MPRA_paper_45009.pdf

The composition of the Consumer Price Index (CPI) and the distribution of food expenditure by households show that milk, wheat products, vegetables, meat, and sugar are the most important commodities that drive CPI and household consumption. Over the years the demand for fruits, vegetables, milk and meat (all constituents of a healthy, balanced diet) has increased. However, many of these commodities are perishable and seasonal in nature and thus inherently vulnerable to price volatility; they are also the first to be affected when there is an external shock. Research shows that although the cost of a basic diet is increasing in Pakistan, the cost of a healthy nutrient sufficient diet is increasing at a faster rate due to which a healthy diet is becoming more and more inaccessible to consumers.

What caused Food Inflation?

Food price inflation is driven by various demand and supply factors. The interactions between contributory factors are complex and lead to uncompetitive market conditions and failures that raise food price volatility and urban-rural disparities in the prices of essential food items. It is vital to understand the underlying causes of the price hikes which range from inappropriate policies and regulations that distort markets, inhibit competition and discourage private investments, to limited investment in research, innovation and technology transfer.

1. **Supply Side:** Food prices are impacted by several factors such as low agricultural and livestock productivity, that keep supply of domestically produced food below potential, and results in higher food prices. Low productivity is driven to a large extent by high costs of production and inefficient use of scarce resources such as land and irrigation water. Food prices are also impacted by inefficiencies in the supply chain such as lack of storage and processing facilities, particularly for perishable crops; abundant supply in the absence of storage often lowers prices below the cost of production, thus discouraging the production of perishables. Speculative behaviours like hoarding also leads to artificial shortages and can drive up food prices. Moreover, Pakistan remains vulnerable to the effects of climate change, with farmlands routinely affected by floods, locust swarms, and droughts that reduce farm output
2. **Demand Side:** Pakistan has a one of the highest population growth rates (2% in 2020)[3] in the region. In addition to this, Pakistan has a rising GDP growth rate[4] which results in higher per capita income which means individuals have more money to spend on good and services. Higher capacity to pay not only changes the magnitude of demand but also the consumption patterns; people tend to want to consume more high value goods like fruits, milk, meat etc. When supply is unable to match the rising demand it leads to shortages and price hikes.
3. **Domestic & International Market Shocks:** Due to poor productivity, Pakistan remains a net importer of food and is therefore exposed to global price fluctuations, currency fluctuations and exchange rate volatility. Fluctuations in oil and energy prices also play an important role as they greatly impact the cost of production.
4. **Governmental Inefficiencies:** The government has a responsibility to manage food inflation and protect the poor from price shocks and maintain food stocks through procurement, managing exports and providing import subsidies. These are all steps that

[3] https://data.worldbank.org/indicator/SP.POP.GROW?locations=PK
[4] https://www.pbs.gov.pk/sites/default/files//press_releases/2020/Press%20Release%20-%20National%20Accounts%20Committee%20Meeting.pdf

the Pakistani government takes to ensure food security. However, government interference remains a significant factor driving up food price inflation; distortionary (and often reactionary) policies that disregard the cost of policy uncertainty and their ripple effects on the food system can make the market more vulnerable to shocks and manipulation and further result in suboptimal production mix, inefficient use of scarce resources, low private sector participation, and low integration in global value chains all of which reduces consumer and producer welfare and increases the fiscal burden.

Reign of the Middle-Men (Arthiyas)

There are major gaps in narratives; producers complain that they are not getting enough compensation or fair prices for what they produce while on the other hand, consumers complain that they are being skinned due to exorbitantly priced food goods. There are many intermediaries between the producer and consumers and each retains a significant margin in their transactions thus creating a large surplus between these two ends. Market dynamics need to be better understood to get a clear picture of why this happens.

An important power dynamic within the sector is represented by the role played by middlemen. Initially, the middlemen represented market agents who were buying fruits for the wholesale markets, but now these also include the processors. The processors try to negotiate purchase of entire farms prior to the crop yield[5]. This way they can purchase produce at much lower price, thereby impacting the revenues earned by growers. Overall, fresh produce markets are structured in a way that allows commission agents who conduct auctions, to bid up the price leading to high retail prices. This leads to welfare losses for both producers and consumers. Ensuring farmers get reasonable margins for their produce is key to ensuring greater productivity. A key factor influencing the commission agent's profit is the information asymmetry between market actors. While the Punjab government has initiated efforts to disseminate information about agricultural produce prices, the impact of these initiatives remains limited.

Majority of farms in Pakistan are less than 12.5 acres and two of the main constraints of small farmers are lack access to credit and poor connectivity to markets; due to no form of regulation checking their behavior, middlemen exploit these constraints. Banks consider such farmers risky and unworthy of credit and Microfinance Institutions charge very high interest rates on their loans. The middlemen assume the role of banks in this vacuum; they become providers of informal credit and inputs and to maximize returns while minimizing risk also assume the role the sales agents either by facilitate the sale of the harvested crop[6] or by setting up such arrangements which bind the farmers to sell their entire produce to them. In this way middlemen buy produce for minimal prices and then sell them at much higher prices retaining a hefty profit for themselves.

Farmers in Pakistan are not very well integrated in industry; most of the market signals they receive are from the middle men or through government policies, which is why the production has been unable to keep up with the changing demand. Production is still operating traditionally with focus on a limited number of commodities resultantly farmers are unable to transition towards production of more high value commodities such as fruits and vegetables. Measures

[5] Political Economy Analysis on Horticulture Sector (2020). Report funded by FCDO

[6] https://www.theigc.org/wp-content/uploads/2014/09/Haq-Et-Al-2013-Working-Paper.pdf

need to be taken to diversify the crop portfolio and boost productivity of farmers. This can only be effectively done with multi-sectoral support in the form of technical advice, high quality inputs (seeds, fertilizers, insecticides) and most importantly market integration and shortening of value chain

Plight of the Milk Farmers

The government has historically set price caps for milk and meat which does little to control price at the retail level but significantly discourages investment in expanding production and improving quality. In the meat and milk market, prices are often controlled by the government at the district level[7]. A committee is formed under the commissioner, comprising of representatives of farmers and government officials of the Livestock and Dairy Development (L&DD) Department. This committee is responsible for price-setting for dairy and meat products, based on production costs and market conditions. A World Bank policy note points out that in practice, the prices set by the committee rarely incorporate changes in production cost and promise insufficient returns for farmers to improve the quality of their products. Once the price is set, it is rarely monitored at the point of sale, which results in consumers having to pay higher prices, unless they are willing to buy poor quality adulterated products at government prices. Such price-setting leads to profit-maximization by the intermediary, yet the producer ends up receiving the capped price anyway. This results in adulteration in food products by retailers to keep selling at a low price and also very low margins for the producer to invest in storage, value-addition, or production improvements. This makes the supply chain vulnerable to shocks like the one experienced during the pandemic related lockdowns.

Dairy farmers sell loose milk to middlemen, in charge of transporting it to urban areas for retail. These middlemen often buy the milk at cheap rates from farmers and sell it to retail outlets/agents at high prices. Since the government enforces price caps at the retail stage, retailers are forced to sell adulterated milk to consumers to meet their margin. For this reason, large companies selling ultra-high temperature (UHT) processed milk prefer to buy loose milk from smaller dairy farmers directly through village milk collection centres.

Another aspect is lack of consideration to local needs and inter-sectoral integration. Wheat stalk, wheat brawn and maize are all produced locally and constitute the basic diet for local animals. However, large quantities of all three are exported leaving next to none for local consumption which drives up the prices; to cover shortfall in fodder supply animal feed is imported at high costs. Exports plan should be devised in such a manner that local demand is fulfilled first and surpluses are traded.

Similarly, in the livestock industry, farmers usually sell their animals to investors/middlemen who provide them to *mandis*, where they are sold to small and large slaughterhouses. Price caps imposed by the government do not take rising input prices into account, and prove unhelpful to consumers, who may have to pay for low quality meat at the price set by the government.

The Government's Role (Challenges and Initiatives)

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[7] Under "Price Control and Prevention of Profiteering and Hoarding Act 1977", the Federal Government has delegated this power to District Governments to fix the prices of milk and meat.

The government heavily influences the agriculture markets by fixing minimum support prices, providing input subsidies, restricting movements of agriculture commodities, and imposing tariff/subsidy on export and import. All these interventions affect consumer and producer welfare and increase the fiscal burden. Consumers end up paying higher than international prices with a general perception that even producers don't get the announced minimum price for their products.

It is imperative that measures are taken to curtail losses incurred in transit. The more perishable the commodity, lower the share of consumer price given to the farmer. Limited profit margins greatly reduce resource availability and incentive for reinvestment in measures which minimize post-harvest losses. Other losses that occur during transportation and at the marketing stage, can be minimized by encouraging private sector participation (similar to what was seen in China, Kenya and South Korea) to provide refrigerated transportation, better organization, storage and grading at market. The PAMRA Act in Punjab, which establishes a new, more transparent legal regime to market agriculture produce in order to protect the free flow of produce and to encourage food supplies[8] is a step in the right direction.

There are reports that the willingness and openness of authorities to approve seeds for new and better varieties is absent. Government's approval process of seeds for new and better varieties brought forth by the private sector is long, cumbersome, biased and inefficient[9]. There is a need to address this conflict as Pakistan is still stuck at low value and low yield varieties, for example the export market requires seedless kinnow varieties and although successful experimenting has been done in Sargodha, getting seeds approved is still an issue.

Although the Punjab government has considered setting up strategic reserves, the cost of doing so is too high making it infeasible. There are certain social safety nets in place such as the Ehsaas poverty scorecard which gives subsidies to deserving families[10]. The government is encouraging middlemen to develop ties with neighboring countries to ensure supply channels in the face of shocks. There is a high fiscal burden of providing endless subsidy hence the government has set ceilings for subsidies; small and medium farmers are typically recipients of the subsidy. The government hopes for a domino effect whereby larger farms begin to use similar inputs at full prices. To boost private sector participation and increase competition, the Punjab government has removed barriers from entering the market, enabling several private actors to set up many fruits and vegetable markets; thus increasing competition and lowering price. In an attempt to limit impacts of climate change on agricultural produce production of new resilient seeds has begun, additionally stalk shredders have been installed to mitigate crop burning – but climate change is a global issue which the Pakistani government cannot single handedly tackle; it can at most take adaptive or mitigative action.

Evaluating the Government's Price Control Mechanism

[8] https://blogs.worldbank.org/endpovertyinsouthasia/modernizing-punjabs-farming-benefit-farmers-and-consumers

[9] Government authorities limit approvals of patents as they want to have a claim on the patent of the seed variety, which is not acceptable to the private sector that wants the market to operate freely.

[10] https://www.pass.gov.pk/NewsDetailWerFf65%5ES23d$gHc548de27-59fb-40e9-90b3-cc85f9386f120ecFf65%5ES23d$Pd

Prices at various wholesale markets are recorded and the average of prices is taken, the government allows for a 10-15% markup and sets the rate for the following day. This process is inefficient as it creates winners and losers; profit margins reduce for those who purchased the produce at a higher-than-average price may even result in a loss and vice versa for those who bought at lower-than-average prices. The distortionary effect of this price settling is seen at most retail outlets where DC regulated produce is kept separately and is typically of subpar quality. Regulation and monitoring become extremely difficult because the number of retailers/vendors far exceeds the number of price control magistrates This results in loss in consumer welfare. Additionally, price setting encourages fraudulent behaviors and disincentivizes farmers up in the chain from innovating and investing in packing processes which reduce post-harvest losses. Buyers and sellers are aware of losses incurred in transit and the prices set incorporate those potential losses which essentially mean that the producer losses out the most by getting a very low price.

Efforts should be made to understand how the pie is split between the farmer, wholesaler and middle man. Understanding such linkages will play an important role in determining the locus of the intervention and ensuring reforms which not only benefit consumers but producers as well.

Addressing Gaps in Data

Quality data is also essential not only for long-term policy making but for producers when making decisions about their resource allocations, investors and consumers.

One of the biggest causes for the food inflation in Pakistan is due to lack of documentation – this impacts the entire supply and demand chain. Farmers, middlemen and logistical partners are all undocumented because people want to avoid getting caught in tax nets. Resultantly the statistical data collected has been flawed due to which governments (federal or provincial) are unable to develop strategies based on numbers. due to flawed data.

The Punjab government has set out to address this issue, they have 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 regulatory regime kicks in which allows for a checked rate of return between the middleman and the retailers. In this way the government has been able to decrease intra-district volatility as well.

Policy Recommendations

It is imperative that necessary steps are taken to boost productivity and regulate distortionary market practices which are causing food prices to skyrocket. A few policy suggestions are listed below:

1. Boost productivity by improving agricultural technology and subsidizing inputs to encourage investment.
2. Regulation of the value chain to limit the disparity between prices consumers pay and those producers receive.
3. Steps should be taken to regulate the role of the middleman. Middlemen have become so entrenched in the system that it would be fanciful to try to eliminate them entirely, hence it is imperative that the size of their contribution is considerably shrunk. This

needs to be done in an informed manner so as not to compromise their positive contributions i.e., provision of credit in the absence of formal channels.
4. Price setting encourages fraudulent behaviors. Need to focus elsewhere. Perhaps regulation should be placed at an earlier rung for example when the base price is set for auction at mandi.
5. Data collection and consolidation should be prioritized and this data should be used to formulate well-informed policy interventions.
6. Strong border arrangement in the face of supply shocks
7. Strengthen export policies to limit illegal smuggling ang hoarding of commodities. Furthermore, reevaluate export policies to only allow export of a commodity once local demand is met (reference to milk farmers).
8. Learning from global best practices; set up forward-looking strategies such as strategic reserves, early warning systems (forecast likely shocks and shortfalls), safety nets (supplement incomes of the most vulnerable households) and insurance systems (to allow producers to bounce back after a shock).
9. Assumed low productivity in the sector discourages highly qualified individuals from entering and productivity suffers because of uneducated, untrained, limited skilled farmers hence there is a need to launch awareness campaigns to rectify perceptions and encourage new entrants.
10. Master planning is needed to prevent the browning of green fields due to unchecked urbanization.

Conclusion

Food price inflation should be a crucial agenda for the government specially to protect the poor from price shocks and to tackle undernutrition. To ensure unintended consequences of government interventions do not distort the market leaving it even less efficient and responsive than before, it is important that the costs of these unintended consequences are weighed against the benefits when making policy decisions. Policymakers need to base decisions on an understanding of the food system such that their policies/interventions minimise distortions. The government should therefore ensure that markets perform efficiently while fulfilling its development outcomes.

Short-run solutions are not beneficial for the Pakistan. The government needs to devise robust, forward-looking policies. Timely and effective interventions are necessary and should include measure that can handle unpredictable shocks and ensure long-term resilient food flows.