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Friendly Fire: Wheat Subsidy in Punjab, Pakistan

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During the past decade every year the Punjab government has faced an awkward situation at wheat harvest. It must buy millions of tons of wheat at an above-market price despite massive carry-forward stocks already lying in its granaries. Cost of procuring such huge quantities and subsidising sales to flour mills is enormous and is met with commercial borrowing. In recent years, the government has struggled to balance its accounts for wheat operations; its outstanding liability to commercial banks stood at Rs. 444.7 billion in June 2018, viz. 22 percent of the total budget of the province in 2017-18. Clearly, the government procures more wheat annually than it needs with borrowed money that it cannot pay back. Ostensibly, wheat procurement aims to benefit small farmers, but its procedures exclude, rather than include them. Conversely, consumers end up buying expensive wheat-flour. A significant beneficiary of the procurement regime appears to be commercial banks finance the procurement and earn interest thereupon.

Keywords: Food Subsidy, Wheat Procurement, Subsidy Reform

1. INTRODUCTION

Several recent studies (Aamir, 2017; Ahmad and Farooq 2010; Amid 2006; Cummings, et al. 2006; Dorosh and Salam 2008; Prikhodko and Zrilyi 2013; Scott and Hernandez 2018; World Bank, 2010) have highlighted inefficiency, high cost and wastefulness of food subsidy programs in developing countries. These programs usually started as small interventions with a specific mandate responding to a particular crisis (e.g. ration cards during WWII in several British colonies (Alderman, 1988), but they gradually morphed into large generalised subsidy regimes that by the end of the 20th century were significantly contributing to what O'Connor (1979) and Offe (1984) call 'the fiscal crisis of the welfare state.' Yet, subsidy rollback—even of the obviously wasteful types—has been difficult, and governments have struggled to design and implement reform packages that reduce costs without unduly harsh political backlash (Gutner, 2002).

Often these subsidies are justified with reference to the need to support farmer incomes and poor urban consumers (e.g. PFD Overview, n.d.). Since these are large groups, policymakers consider as politically unfeasible any proposal for a drastic

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reduction in food subsidy programs, their increasing costs and apparent ineffectiveness notwithstanding (Gutner, 2002). The untested assumption in these assertions is that food subsidies actually benefit farmers and poor urban consumers. This is an empirical question and must be settled as such.

Punjab's wheat subsidy programme—worth Rs. 30 billion a year (US$ 216 million)[1]—presents itself as a good candidate for deconstructing the claim that food subsidies benefit farmers and consumers. The wheat subsidy is Punjab's largest subsidy and a cornerstone of its efforts to promote food security (*Dawn* 15th April, 2017). Each year, the Punjab government procures millions of tons of wheat during harvest season at above-market prices and sells wheat to flour mills over the year at below-market prices. The objective is to protect farmers from a price crash at harvest time and to subsidise consumers' flour purchases (PFD Market Stabilisation, n.d.). During the past ten years, existing stocks and fresh procurement have comprised a massive inventory, much larger than government's average annual release to flour mills. To finance procurement operations, the government borrows money from various banks, but it has consistently failed to pay back its outstanding debt to banks and has been paying huge sums as the mark-up. Clearly, the Punjab government is procuring more wheat than it needs with borrowed money that it cannot pay back.

This paper is a critical examination of the wheat subsidy regime in Punjab. The Punjab Food Department (PFD) borrowed Rs. 115.4 billion from a consortium of banks to finance a massive procurement of 3.62 million tons in 2018. PFD procured this huge quantity despite a carry-forward stock of 3.59 million tons already lying in its granaries from previous year's procurement. Given that PFD's average annual release to flour mills (3-3.5 million tons) was smaller than its carry-forward stocks, there was no reason to procure more wheat in 2018. *Prima facie*, such massive procurement is done each year 'for the economic well-being of small farmers' (Dawn 15th April, 2017). But does it really benefit them, or are there other groups benefiting from this massive public intervention carried out in the name of small farmers?

The analysis below shows that small farmers are largely excluded from the process and receive only a fraction of the benefit, if at all. Furthermore, PFD is unable to pay back the money it borrows every year. Its outstanding liability to commercial banks stood at Rs. 444.7 billion in June 2018. This appears a case of 'friendly fire'— borrowing from military terminology whereby a military is hit by its own shelling (Sen, 2005: 212-15). Punjab's wheat subsidy is an example of a public intervention that ends up hurting the interests of those very poor whose interests it was supposed to protect.

This paper fills an important gap. Although, there is a large body of literature on food subsidies in developing countries, there are only a few published studies on Pakistan. No study dissects Pakistan's wheat subsidy to see where exactly the money is spent. Most studies (e.g. Alonso and Swinnen, 2016; Dorosh and Salam, 2008) focus on estimating how the benefit is shared between producers, consumers and intermediaries. Further, there is rarely an effort to distinguish between the interests of small, medium and large farmers, or to identify the institutionalised mechanisms that include/exclude various producer groups (see for example Aamir, 2017; Ahmad and Farooq, 2010). This paper, on the other hand, closely looks at official data to identify commercial banks as

[1]US$ 1 = Rs. 139 (in January 2019).

significant beneficiaries of wheat subsidy in Punjab. This is a surprising finding. The interest collection by banks on government's current borrowing and outstanding dues comprises 3/4th (in some years > 90 percent) of the total amount brandished as wheat subsidy. This had escaped researchers' eye so far.

In addition to this short-term buildup of stocks and debt, this paper identifies the mechanisms that exclude small farmers from participating in official procurement campaigns as a more serious structural problem. By closely examining the grossly under-explored micro-processes of wheat procurement and the logistical life behind procurement numbers in Punjab, this paper invites and provokes policy communities to rethink the subsidy regime in Punjab so that a greater proportion of benefits reaches small farmers and urban consumers, in whose name the subsidy is provided.

2. METHODOLOGY

The case study method was considered appropriate to gain insights into considerations behind official decisions, their implementation and impact on identifying micro-processes that include/exclude various groups (Babbie, 2012). Secondary and primary data on wheat operations were collected during Feb-July 2017 and April-May 2018. Secondary data sources included PFD records and periodic surveys of the Pakistan/Punjab Bureau of Statistics. PFD records are public data since they are part of the (unclassified) record maintained by government departments in the normal course of their working. Anyone can obtain a copy upon a formal request under the Punjab Transparency and Right to Information Act, 2013. The authors were able to view these records after explaining to the Secretary PFD that the data were required for academic analysis. Authors' previous engagement with these officials for other policy research helped establish the *bona fide* of data collection. Data from the Pakistan/Punjab Bureau of Statistics were available on their websites. The analysis below uses PFD data for the past ten years only. Although, PFD maintains time series data for earlier period as well, but the same are not relevant to this analysis. Prior to 2008, there was no buildup of stocks[2] or outstanding bank debts.

Primary data were collected in the districts of Sargodha, Sheikhupura and Vehari—these are located in Western, Central and Southern Punjab respectively. Unstructured interviews were conducted with 35 respondents, including 15 farmers (eight had farms < 12.5 acres, five had farms between 12.5 – 25 acres, and two had farms > 25 acres),[3] nine PFD officials, four grain merchants, two flour miller, two urban consumers and three rural non-farm households. Initially, 45 farmers were selected from PFD's list of farmers (discussed later) in the field districts. But we managed to interview only 15 of them as the remaining were either absentee landlords, were out of town during our field work, or were simply unwilling to be interviewed. In PFD, we were able to interview two senior managers, one District Food Officer, and six officials working at Procurement

[2]PFD's time series data show that it's carry-forward stocks have historically hovered around 0.25 million ton. They crossed one million ton in 2001, stayed the same in 2002, but declined quickly thereafter to levels below the usual. They rose again in 2006 to 1.4 million ton and declined thereafter. Consistent build-up of stocks to alarming levels is a recent phenomenon.

[3]These are called small, medium and large farmers respectively in this paper. Farmers of less than one acre are called very small farmers.

Centres. Other respondents were selected for convenience, i.e. people who were willing to talk to us. Each interview was conducted in person by the authors in Urdu for 50 minutes on average (the shortest took 25 minutes and the longest was slightly less than two hours). There was no opportunity to record interviews, so we took notes.

Our fieldwork coincided with procurement campaigns in 2017 and 2018 (i.e. mid-April to end May in both years), hence several interviews could be conducted *in situ*. We frequently visited key sites, such as procurement Centres, grain markets, bank branches, storage places, and spent time in villages observing the procurement as it happened. On different days, we spent a total of 28 hours in procurement centres, five hours in grain markets, four hours in banks, and 20 hours at various farms to carry out field observations. In addition to capturing stakeholder perspectives, this provided an opportunity to observe what Krishnamurthy (2012: 74) called the 'micro-practices of procurement.' We took field notes, which were later expanded into detailed observations to inform analysis and writing.

Further, one author had personal exposure to wheat operations through his association with an NGO (Fountain House) that has a wheat-producing farm (around nine acres) in Sheikhupura district for agro-based therapy of people with mental health conditions. The farm was able to sell its wheat to PFD in 2016, but not in 2017 and 2018 despite several follow up visits to concerned offices. This provided a first-hand experience of exclusion by the bureaucratic apparatus that ostensibly existed to benefit small farms like this.

The spread of fieldwork over two years and ethnographic observation of various actors provided critical insights into PFD's wheat procurement process that would have been difficult to gain otherwise. Most of the fieldwork was carried out in 2017. However, official data on procurement and bank borrowing were updated in 2018, and short visits to (mostly the same) respondents and key sites enabled verification of observations across years and also allowed us to clarify confusions that had emerged while writing this paper.

3. PROCUREMENT TRENDS AND PRICE

Government's intervention in wheat market dates back to 1968, when it procured wheat for the first time in response to bumper crop for two consecutive years that the market did not clear (Aziz, 1979). Gradually, the government became the principal buyer and the private sector's role shrank. To keep flour prices low for poor households, it established an extensive network of ration-shops, which provided subsidised wheat flour to low-income households. Ration system was abolished in 1987 due to partial targeting, inefficiencies and corruption (Alderman, 1988; Islam and Garrett, 1997). The ration system was replaced with a subsidy on wheat issued to flour mills by the government from its procured stocks. Thus, a targeted subsidy was replaced by a general subsidy that ultimately became far more expensive than the one it replaced (Alderman, 1988). The twin requirements of clearing stocks during harvest season and providing subsidised wheat to flour mills later in the year led the government to procure progressively larger volumes of wheat each year.

As shown in Table 1, in the recent past, PFD has procured very large and variable quantities of wheat each year without an apparent link to production, existing stocks, or flour mills' demand. On average, wheat procurement has been 18.6 percent of total

Table 1

Production and Procurement (Million Ton)

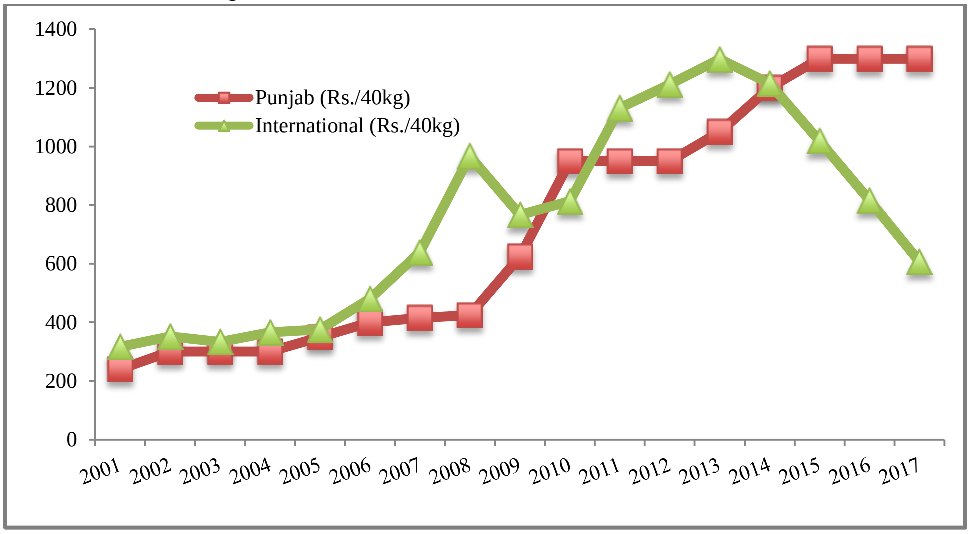
	Production	Existing Stocks	Procurement (% of Production)	Import (Export)	Total Available	Issued to flour Mills (% of Total Available)
2008	18.23	0.01	2.56 (14.0)	0.61 (0)	3.18	2.72 (85.5)
2009	18.42	0.23	5.78 (31.4)	0 (0)	6.01	3.04 (50.6)
2010	17.92	2.93	3.72 (20.8)	0 (0.91)	5.74	3.08 (53.7)
2011	19.04	1.88	3.19 (16.8)	0 (0)	5.07	3.20 (63.1)
2012	17.74	1.74	2.78 (15.7)	0 (0)	4.52	4.02 (88.9)
2013	18.63	0.48	3.68 (19.8)	0 (0)	4.16	4.02 (96.6)
2014	19.70	0.13	3.74 (19.0)	0 (0)	3.87	1.83 (47.3)
2015	19.20	1.96	3.23 (16.8)	0 (0.25)	4.94	2.90 (58.7)
2016	19.40	2.26	3.93 (20.3)	0 (0.44)	5.75	3.52 (61.2)
2017	20.46	2.58	3.95 (19.3)	0 (0)	6.53	3.60 (55.1)
2018	19.60	3.59	3.62 (18.5)	–	7.21	–

Source: Constructed from PFD data.

production. PFD has issued only a part of its available stock to flour mills and the rest has stayed in its granaries each year. Thus, in most years, PFD has significant carry-forward stocks from previous years. The peak procurement (5.78 million tons) during the past ten years was in 2009 and resulted in 2.93 million tons carry forward stocks at the time when procurement began in 2010. This must have translated into huge storage costs for PFD in 2009-10. Only small quantities of wheat are imported and exported, if at all. Mostly, import comprises food aid received from abroad. Small volumes of export despite massive surpluses can be explained in terms of the gap between the domestic and international prices, the former being higher than the latter (Aamir, 2017).

The procurement price-set in October-November each year —is supposedly based on the cost of production but is in practice determined by an interplay of technical and political considerations. Its comparison with the international price of wheat since 2001 (Figure 1) demonstrates that in most years the former has been below the latter. Procurement price has never decreased from its previous level: it has either increased from year to year or stayed the same. There were large price increases in 2008-09 and 2009-10 that appear to be delayed responses to international price escalations. No such response followed a decline in the international price since 2014. Clearly, there is no effort to peg the domestic price with the international price and to use international trade to stabilise prices and/or meet domestic demand.

Fig. 1. Procurement Price and International Price



Source: Constructed from International Grain Council and PFD Data.
Note: International prices were converted to PKR using currency conversion rates for 30th June in each year.

4. MICRO-PROCESSES OF PROCUREMENT

Wheat proc urement is a tedious process in multiple ways, especially, for the small farmer in whose name such large procurement is justified. Several authorisations by petty officials characterise the process, which the farmer has to manage at his cost and time. This administrative burden is too heavy for most small farmers to carry and the process becomes the principal mechanism of their exclusion.

Tenants and small farmers often fail to cross the very first hurdle—their names do not appear on *patwari's*[4] list, which is the basis of PFD procurement. Every year, when the procurement season commences, PFD sets up several procurement centres to which various villages are assigned. Each Centre has a list of farmers in its catchment area. This list has several errors. Tenants are often not included in the *patwari's* records on the insistence of influential landowners.[5] Technically, a tenant can approach the PFD with a copy of the tenancy agreement to get his name included in PFD's list. But often tenancies are verbal, and few small tenants will prepare formal agreements[6] just to satisfy PFD requirements.

Similarly, it is not uncommon for the names of politically weak or misaligned farmers to *accidentally* slip out of the *patwari's* list. Although, an aggrieved landowner whose name is not on *patwari's* list can approach higher officials for rectification. Our field work shows that this process is seldom initiated due to substantial transaction costs, such as multiple visits to various offices. Three out of eight small farmers in our sample and the Fountain House did not appear in the list in 2017. Interestingly, Fountain House

[4] An important field official of the Punjab government.
[5]A tenant recorded in *patwari's* records has certain protections against eviction.
[6] To have a written agreement, a tenant needs willingness of the landlord to sign the agreement, to do the paperwork and pay the legal fees (e.g. stamp duty). After this is done and the tenant has his name on PFD's list, there is still no certainty that PFD would be procuring when his turn comes.

was on the list in 2016 when carry-forward stocks were small and PFD was procuring generously, but not in 2017 and 2018 when existing stocks were large. In-charge of Fountain House told us that his staff had visited their procurement centre each year to find out why their name was not on the list. Each time, they were returned with an advice to apply to the local Assistant Commissioner. The In-charge weighed the pros and cons of doing so, and in the end decided to sell to the local *beopari* instead.

Farmers whose names are in *patwari's* list proceed to the procurement centre to obtain jute/polypropylene bags (called *bardana*). Farmers can supply their wheat only in officially-issued *bardana*. Each bag bears a number which is recorded against the farmer's name. Farmer's *bardana* allowance is based on the national average yield of 800 kg per acre (Pakistan, 2016), i.e. eight jute bags (100 kg each) or 16 polypropylene bags (50 kg each) per acre. A maximum of 200 jute bags (or 400 polypropylene bags) is issued to a farmer at a time.[7] After the farmer returns filled bags, another consignment of *bardana* is issued, if needed. The farmer must pay a deposit of Rs. 134 per jute bag (or Rs. 38 per polypropylene bag) into a designated bank account. The bank prepares a call deposit receipt, which the farmer presents at the Centre to receive the *bardana*. Farmers recoup this deposit upon delivery of bagged wheat.

Wheat-surplus farmers usually try to dispose off their produce as quickly as possible since they need cash for next sowing and PFD's interventions create little incentive for investment in storage (Prikhodko and Zrilyi, 2013). PFD being the preferred buyer due to its high price, issuance of *bardana* becomes a locus of control and patronage. PFD issues *bardana* preferentially to those who are well-integrated into local political and social networks. Farmers keep local PFD officials in good humor throughout the year; the favour is retuned at the harvest time. One farmer told us: "In our lives, local PFD officials matter almost as much as the local police officials and patwaris do. We cannot afford to annoy any of them." In years of bumper crop and low international price, PFD follows an unofficial go-slow policy in *bardana* issuance. For example, in 2017 and 2018, the Punjab government, unwilling to buy the entire stock at a procurement price that it found politically unfeasible to reduce, wriggled out of the situation by rationing *bardana* to a favoured small set of farmers. The rest were put in a slow-moving queue. Three of our farmer respondents whose names appeared on the PFD list could not get *bardana* in their first couple of visits, whereafter they sold their wheat to middlemen at the (lower) market price.

Farmers who do get the *bardana* can deliver wheat-filled bags only to their designated centre. They fill their bags, weigh them, stitch them, load them in a trolley and drive/escort them to the Centre. Not every farmer has the infrastructure to carry out these (seemingly simple) activities. The trolley has to be rented, and the rent has to be paid in cash. An ordinary trolley can carry 100 bags. Only two of our small farmer respondents had a marketable surplus exceeding 100 bags.

Once the trolley arrives at the Centre, it is weighed if the weighbridge is available, or a 10 percent sample is drawn and weighed to calculate the total weight. The sample is also assessed for quality. It is not uncommon for politically misaligned farmers to experience more rigorous quality testing. The In-charge Fountain House told us:

[7] In 2018, the limit was set at maximum of 80 bags per farmer.

> "In 2016, we had a good crop and our name was on the PFD list. So, I filled the bags and loaded the entire stock (about 200 maunds) onto trollies and sent these to the Centre. I am on good terms with the Centre In-charge. Still, he was unusually strict. He said our grain size was smaller than officially prescribed. When my staff argued with him, he asked them to approach the Deputy Director, PFD, which we did. The Deputy Director was a good man. When we told him, we are a charity and spend our entire income on mentally patients, he phoned the Centre In-charge to take it easy."

Transportation to the Centre and unloading of bags is farmers' responsibility. To help with these labour intensive and backbreaking activities, casual labour is available at the centre, which is paid by farmers at Rs. 9 per 100 kg bag. PFD reimburses these labour charges, though not farmers' expense on filling and stitching of bags, loading and transportation to the centre.

While issuing *bardana*, PFD officials also advise farmers a preferred date for wheat delivery. The Centre populates its calendar in a manner that procurement operations are spread over the entire procurement season (mid-April to end-May). If everything goes by the schedule, the transaction is usually completed within 5-6 hours. If it is an unusually busy day, or if the farmer is ahead of or behind schedule, it may take longer. The farmer is not compensated for the wait.

PFD also shortchanges farmers by procuring a little extra wheat (without payment) to compensate for loss during storage and transportation. PFD's total storage capacity is 2.19 million tons, and the rest of the procured wheat is stored in the open under plastic sheets. PFD officials estimate the loss accruing in covered and open storage as 2-2.5 percent and 5-6 percent respectively. Still, PFD operates under a zero-loss presumption (Prikhodko and Zrilyi, 2013). One Centre In-charge commented: "our seniors know that there will be some loss during operations, yet they expect us to make up the loss somehow magically." The staff readily shifts the burden onto the farmer. All farmers in our sample complained about being shortchanged. Fountain House, for example, had 200 maunds for sale to PFD in 2016. They were shortchanged one kg/maund, which translated into a loss of Rs. 6,500 for the entire consignment.

Upon delivery of wheat, PFD calculates farmer's payment and pays cash for smaller consignments (< 50 bags) or issues a slip for larger consignments to be presented at the designated bank branch. At day's end, PFD prepares a consolidated statement for the bank's convenience. The bank pays the farmer upon receiving the consolidated statement and farmer's payment slip, which means a farmer cannot receive his payment the same day but must visit the bank the next day or later.

Our farmer respondents who sold their wheat to PFD in 2017/2018 found this process bureaucratic and arduous. They had to visit the procurement Centre *at least* thrice – once to ascertain if their name was in the list, then for obtaining *bardana* and finally for delivering wheat. They had to visit the bank *at least* twice – once to pay call deposit for *bardana* and then to collect payment. This process took between 7-10 days. Throughout this process, they looked up to various PFD officials for approvals – for issuance of *bardana*, for quality clearance and for payment. They also faced a lot of uncertainty. Even when their names were on the list, they did not know if PFD would still be procuring when their turn came. PFD stops procuring upon meeting its target for the year.

Ostensibly, these practices are designed to regulate procurement but in practice they place a substantial administrative burden on the farmer. They comprise a mechanism to effectively exclude those very small farmers who are the *raison d'etre* of this public intervention. Cash-strapped farmers who need quick payment to settle a debt, to buy inputs for the next crop, or to finance a marriage, sometimes prefer to sell to intermediaries for this very reason. One farmer respondent said:

I had only 15-20 days after the wheat harvest during which I had to plough my land to clear it of weeds, and to get it levelled. I don't have a tractor, so I rent it. But I can either rent one before everyone else needs them or after they are done. I can't possibly do the rounds to banks and food centres.

Further, small farmers are less likely to have the required surplus that would justify multiple visits to various offices, *in situ* labour of bag filling, weighing and stitching, and transportation. They are also less likely to be adequately networked to navigate their way through the official maze. In 2017, when the wheat campaign was being launched, the then Chief Minister publicly vowed that 'small farmers will be given preference in wheat procurement and the government would procure as much produce as they would bring to the procurement centres' (*Dawn* 5th April, 2017). This public pronouncement from the highest level notwithstanding, three of our small farmer respondents and the Fountain House failed to sell their wheat to PFD in that year. The bureaucratic procurement processes had effectively excluded them.

These bureaucratic procedures also create plenty of rent seeking and patronage opportunity for PFD officials. For example, in both 2017 and 2018, market prices were substantially lower (Rs. 1,100 – 1,250) than the PFD price (Rs. 1,300). In these years, while everyone wanted to sell to PFD, it had substantial carry forward stocks (Table 1) and was unwilling to procure beyond its target. In the absence of a neutral queuing system, this demand-supply gap enabled PFD officials in the field to procure wheat from their favoured farmers especially as the procurement season was ending. Although, none of our farmer respondents reported paying a bribe or using a reference (i.e. *sifarish*) themselves, almost everyone knew someone who had.

A key challenge, therefore, for PFD is to reduce considerable discretion exercised by these officials. Recent debates about bureaucratic accountability and policy implementation highlight the discriminatory use of discretion and how this shifts policy benefits away from marginalised groups (Epp, et al. 2014; Schram, et al. 2009). An important enabler for misuse of discretionary authority is that traditional modes of monitoring, such as field inspections, audits, etc., fail to monitor every interaction between frontline officials and citizens. Only when officials stop acting like what Bovens and Zouridis (2002) call 'tiny oligarchs' benefits of policy interventions reach their intended target groups. For PFD, one possibility is to use technology to improve monitoring of its frontline officials, say, by developing and following a neutral queuing system that brings greater certainty to the procurement process. Another is to simplify business processes and make them more transparent. Reduction of discretion at the frontlines is a key challenge for PFD if it wants micro-processes of procurement to include, rather than exclude tenants and small farmers.

5. THE REAL BENEFICIARY

PFD's wheat subsidy is built into the (usually) above-market procurement price and below-market issue price (i.e. the price at which it sells wheat to flour mills). There have been years in which market price was higher than the official price, forcing PFD to ban inter-provincial movement to meet its procurement targets (e.g. 2014 (*The Nation*, 14th May, 2014). Generally, however, PFD sets a high procurement price to incentivise wheat cultivation, and issues wheat to flour mills at a discounted price (PFD Overview, n.d.).

PFD's subsidy regime has the following objectives: (1) reduce flour price volatility; (2) protect farmers from a market crash; and (3) provide subsidised wheat flour to consumers (PFD office records).[8] PFD has been largely successful in reducing seasonal fluctuations in flour prices (Pieters and Swinnen, 2016, PBS, 2015: Table 219). Pieters & Swinnen (2016) show that annual fluctuations across the years have also been reduced. However, PFD has only partially succeeded in achieving the other two objectives (discussed shortly). Yet the cost to the government is substantial.

In 2017-18, the total cost of PFD's wheat operations was Rs. 34.43 billion (Table 2). Ironically, such huge cost—collectively called incidental charges—was mainly due to bank mark-up on money borrowed for procurement. 2017-18 was by no means exceptional; PFD's cost of wheat operations per unit was simply a continuation of a decade-long trend. Bank mark-up accounted for the largest share of the total incidental cost during the past decade: it was > 90 percent in 2010-13, declined thereafter, but was still quite high (around 70 percent) in 2017-18. The next two items were transportation and PFD salaries, which together accounted for a mere 9.7 percent of the total cost (Table 3).

Table 2

Total Cost of PFD's Wheat Operations

	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18
Procurement (million ton)	5.78	3.72	3.19	2.78	3.68	3.74	3.23	3.93	3.95	3.62
Total Cost (billion Rs.)	14.45	18.60	23.33	22.42	29.38	21.42	22.78	37.26	26.68	34.43
Cost per Ton (Rs.)	2,500	5,000	7,313	8,065	7,984	5,727	7,052	9,480	6,755	9,511

Source: Constructed from PFD data.

Table 3

Breakdown of Cost (Rs. per Metric Ton)

Component	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18
Gunny Bags	12	13	(413)	(116)	(681)	5	272	1,177	788	1,284
Delivery Expenses	70	75	75	75	75	75	75	75	90	75
Bank Commission	59	89	89	89	99	113	113	122	122	122
Taxes & Duties	12	16	16	12	11	12	14	15	11	15
Transportation Charges	885	871	98	338	556	502	602	602	497	769
Handling Charges	13	1	3	1	3	-	2	2	-	2.55
Godown Expenses	90	444	133	140	202	237	385	392	222	431
Storage & Unforeseen Expenses	-	-	145	-	123	-	-	-	-	-
PFD Charges	145	212	188	261	330	266	293	320	308	352
Interest (as % of Total Incidentals)	1,214 (49)	3,279 (66)	6,978 (95)	7,264 (90)	7,266 (91)	4,427 (77)	5,295 (75)	6,775 (72)	4,717 (70)	6,461 (68)
Total per Metric Ton	2,500	5,000	7,313	8,065	7,984	5,727	7,052	9,480	6,755	9,511
Total per 40 kg	100	200	293	323	319	229	282	379	270	380

Source: constructed from PFD data.

Note: These are actual costs which have not been adjusted for inflation.

[8] Another objective is to increase domestic production to reduce imports and to protect consumers from international price fluctuations.

Overall, PFD's wheat operations have been progressively costing more. The per ton cost rose from Rs. 2,500 in 2008-09 to Rs. 9,511 in 2017-18. Though, this is largely due to an increase in the mark-up charges, the increase in other items is not insignificant altogether. For example, PFD charges have increased from Rs. 145 per ton to Rs. 352 per ton. Similarly, bank commission is now more than twice of what it used to be ten years ago. This increase is worrisome since it implies that procuring wheat is becoming increasingly expensive for PFD.

The unusually high mark-up charges in recent years warrant explanation. PFD has a credit line with three consortia of banks to be utilised during the procurement season. The amount is repaid during the year as wheat is sold to flour mills. Not wanting to pass on the full cost of operations to consumers, the Punjab government picks up part thereof as a subsidy. However, since 2008 the government has been clearing only a part of its liabilities due to financial constraints and the rest has remained outstanding each year (see Table 4). Except in 2010-11 and 2012-13, repayment has been less than new borrowing, thereby increasing the outstanding liability. Consequently, PFD has had to pay the mark-up not only on its current borrowing but also on the outstanding debt. On average, during the last five years, PFD has paid a whopping Rs. 19.6 billion each year as mark-up alone. *Prima facie*, the Punjab Government has no intention of paying back the outstanding dues, as it has budgeted only Rs. 10 billion each year since 2014 for PFD's wheat operations (PFD office records). Apparently, there is a tacit understanding that only mark-up will be paid each year—that too partly—and the outstanding liability will be allowed to stay —and mount.

Table 4

Borrowing and Mark-up (Million Rs.)

	Bank Borrowing					
	Outstanding	New	Total	Repayment	Balance	Mark-up Paid
2008-09	–	52,394	52,394	45,795	6,599	3,942
2009-10	6,599	143,176	149,775	47,376	102,400	19,028
2010-11	102,400	88,667	191,067	101,067	90,000	25,971
2011-12	90,000	76,025	166,025	56,127	109,898	23,180
2012-13	109,898	73,305	183,203	104,258	78,945	20,233
2013-14	78,945	110,540	189,485	97,267	92,218	16,272
2014-15	92,218	112,580	204,798	39,098	165,700	19,827
2015-16	165,700	105,345	271,045	75,231	195,814	18,492
2016-17	195,814	128,064	323,879	100,740	223,139	18,536
2017-18	223,139	128,846	351,985	22,942	329,043	21,465
2018-19	329,043	115,444	444,487	–	–	–

Source: constructed from PFD data.

By 2018, the outstanding debt had increased to a level that alarmed both PFD and the Punjab Finance Department. PFD office records show that both departments opposed large procurement in 2018. The latter even sent a summary to the Chief Minister in March, 2018 before the Punjab cabinet met to set a procurement target for the year. The summary noted that there was hardly any justification for large procurement in 2018 when a stock of 3.59 million ton was already available with PFD and Rs. 329 billion were owed to banks on account of previous wheat operations. The Finance Department suggested to keep new procurement strictly to whatever PFD needed (additional to existing stocks) for issuance to flour mills over the year and using the saving to retire the outstanding debt (PFD office records). But with the general elections due in a few months, the advice was a little untimely. The Chief Minister promptly overruled it. Instead, PFD was given a procurement target of four million ton for 2018 (Dawn, 15th April 2018).

For the consortia of banks, things could not have been better. Lending to the government is the least risky and has little transaction costs, if any. Banks get a competitive interest rate from a borrower who is happy to pay the mark-up year after year on a growing portfolio. Their principal amount is secure against sovereign guarantees. It is hard to escape the conclusion that banks have been a major beneficiary of PFD's wheat operations during the past decade.

6. ACTORS AND THEIR INTERESTS

According to PFD's pronouncements (e.g. *Dawn* 5th April 2017), its wheat operations are carried out for the benefit of small farmers. But the above discussion shows that the process is anything but friendly for small farmers. Are small farmers still benefitting, or are there other groups that are benefitting and are exerting enough policy influence to continue PFD's wheat operations despite not making sense otherwise? To answer this question, we will have to critically examine the interests of key actors, such as farmers, intermediaries, PFD, flour mills and consumers.

Farmers

An important reason for government intervention is to avoid a market crash in April-May when farmers are trying to dispose off their produce. However, farmers are not a homogenous group and they benefit variously from government intervention according to what Manig (1990) calls the 'societal modes of distribution.' Below we look at official statistics on farm size and wheat production to broadly comment on the benefit of PFD's wheat operations on various farmer categories.

Data on wheat production by farm size in Punjab (Tables 5 and 6) show that 13.27 percent of farms do not produce wheat at all. Of the 86.73 percent farms that produce wheat (comprising 63.71 percent of the total area of private farms), 90.45 percent are smaller than 12.5 acres, i.e. 78.45 percent of total farms producing wheat are small farms. These farms are only 40.50 percent of the total farm area and 63.56 percent of the area of farms reporting wheat.

Very small farms (<1 acre; 8.94 percent of all farms in Punjab) also do not sell wheat because they do not have a marketable surplus. Data on wheat production by farm size are not available, but assuming that they produce at the national average of 800 kg wheat per acre and consume wheat flour @ 140 kg per capita (Dorosh and Salam, 2008), and have an average household size of 6.3 (HIES, 2015-16), they produce less than their own consumption even when they allocate the entire area to wheat production. Together, non-wheat-producing farms and very small farms are 22.21 percent of all farms in Punjab.

Table 5

Wheat Area by Farm Size in Punjab

Farm Size (Acre)	Total Farms		Farms Reporting Wheat		Wheat Farms as % of Total Farms	
	No.	Area (acre)	No.	Area (acre)	No.	Area (acre)
< 1	729,981	306,511	469,412	152,333	8.94	0.52
1 – 5	2,617507	6,205,234	2,363,425	4,600,168	45.02	15.69
5 – 12.5	1,412,603	10,478,386	1,285,613	7,078,499	24.49	24.14
12.5 – 25	359,408	5,812,909	316,642	3,518,254	6.03	12.00
>25	130,322	6,523,401	117,968	3,289,459	2.25	11.22
Total	5,249,821	29,326,441	4,553,060	18,683,533	86.73	63.71

Source: Constructed from Pakistan Agriculture Census 2010 (Tables 1.1 and 6.11).

Table 6

Wheat Producing Farms by Farm Size

	Farms in Punjab	
	No.	%
Total Farms	5,249,821	100
Farms do not Report Wheat	697,176	13.27
Farms Reporting Wheat		
< 1 Acre (too small to have a surplus)	469,412	8.94
1 – 12.15 Acre (mostly excluded by the arduous process)	3,649,028	69.51
> 12.5 Acre (have marketable surplus and networks)	434,610	8.28

Source: Constructed from Pakistan Agriculture Census 2010 (Tables 1.1 and 6.11).

Farms of 1-12.5 acres are 69.51 percent of total farms and represent 39.83 percent area. These farmers are likely to have a marketable surplus, but the PFD protocols discussed above effectively discourage most of them from selling their produce to the government. All eight farmers of <12.5 acres that we interviewed testified to this effect. Four of them in 2017 and five in 2018 sold their wheat to local traders. Other respondents, including PFD officials and grain merchants also observed that farmers in this category are more likely to sell in the market than to PFD.

The last category is farms larger than 12.5 acres. Our field work shows that these are PFD's real clients. These large farms represent only 8.28 percent of total farms but 23.22 percent of the area. These farmers produce marketable surplus and aspire to sell at official price should their local networks enable them to do so. Dorosh and Salam (2008) estimate that the top 10 percent wheat farmers in terms of sales account for 47 percent of total wheat sales and the top 20 percent account for 67 percent of total wheat sales (though not exclusively to PFD). Wheat sales (to PFD and elsewhere) are concentrated at the very top!

Our PFD respondents were of the view that these large farmers use their political clout to lobby with the government for an ever-increasing procurement price and large annual procurement targets. This is how PFD explained the Punjab government's refusal to accept their suggestion in 2018 for a gradual reduction of procurement targets (discussed above). Our field work shows that these farmers also ingratiate themselves with local PFD officials so that they get the *bardana* on a priority basis, their waiting time is the least at the Centre as they are frequently allowed to jump the queue, and few objections are raised to the quality of their harvest. In the words of one large farmer respondent:

I am friends with the Deputy Director in PFD. He regularly visits me on various functions. The entire staff knows this. So, they give me *bardana* promptly and as per my requirement. Sometimes, I get *bardana* and pay the deposit later on. I never face a problem.

The relationship is not one-sided, though. In deficit years, i.e. when PFD is struggling to meet its procurement targets due to high demand in other provinces or abroad (e.g. in 2014 (*The Nation* 14th May 2014)), these farmers come to PFD's rescue. 'When everyone else is trying to make money, we honor our friendships,' said one farmer respondent. In these years, they help local PFD officials meet their targets and reap the returns in surplus years in the shape of preferential treatment. Such a symbiotic relationship is difficult to establish and maintain for small farmers simply because their marketable surplus is too small to be significant for PFD in deficit years.

In recent past, PFD has attempted to discourage preferred buying from large farmers through including a landownership ceiling in eligibility criteria (*Dawn* 15th April 2018) or restricting the number of bags a farmer can receive in one go. However, PFD officials were skeptical about the effectiveness of these measures because land records indicate ownership rather than the operational size of the farm. The latter is usually larger than the former because most landholdings are joint but are operated by a single family member. So, for example, if a landowner of 20 acres leaves behind five legal heirs with equal shares, the land record will indicate five farmers of four acre each, whereas on the ground the farm is more likely cultivated by one family members whereas others will seek employment elsewhere, if they can. In other words, on record, there are five small farmers but, on the ground, there is one large farmer and four persons with non-farm incomes. PFD officials opined that this dissonance between the *de jure* and the *de facto* undermined their efforts to restrict PFD buying to small farmers using land ownership as the criteria.

Estimating the benefit incidence of PFD's wheat operations on any group of farmers is difficult. There are large supply-demand variations from year to year. In years of high (anticipated) consumption, the market price may be very close to, or even higher than the official price. In May 2014, for example, our farmer respondents in Sheikhupura district sold their produce at the farm-gate to intermediaries at Rs. 1,190 per 40 kg as against the official price of Rs. 1,200 per 40 kg. In surplus years, however, the market price may be significantly lower than the official price. For example, the same farmer respondents sold their produce at Rs. 1,160 and Rs. 1,105 per 40 kg in May 2017 and April 2018 respectively as against a procurement price of Rs. 1,300. Further, the market price also varies according to the farm's location. A metric ton in a wheat surplus district is cheaper than a metric ton in a wheat deficit district, simply because the former has to be ultimately transported to high-consumption areas.

High procurement price benefits wheat-surplus farmers including those who do not sell to PFD. It positively impacts farmers' bargaining position in the market. A rising tide lifts all ships. The World Bank (2015) estimates that in the absence of any buying at all by the government, the market price may fall to Rs. 950 per 40 kg in a surplus year. The drop will be lower if the government does not withdraw from the market but procures smaller quantities.

This was the case in 2017 and 2018—both years of a bumper crop and large carry forward stocks in PDF granaries. PFD adopted an unofficial go-slow policy and rationed *bardana* to politically networked farmers. Consequently, the market price fell to Rs. 1,150 – 1,180 per 40 kg in various districts of Punjab in 2017 (compared to the official price of Rs. 1,300 per 40 kg). Losing hope in PFD procurement, seven of our farmer respondents sold to local traders at the going price (only four sold to PFD; remaining four used their wheat for own and extended family's consumption). This saved them (approximately) Rs. 20 per 40 kg for the cost of stitching, loading and transportation, as traders collected wheat from the farm-gate and brought their own bags. So, the net difference between a farmer selling to PFD and a farmer selling to a local trader in 2017 was approximately Rs.100–130 per 40 kg. This was, then, the approximate benefit that accrued to those of our farmer respondents who sold wheat to PFD in 2017. This benefit was not insignificant, but it was confined to medium and large farmers. All four farmers in our sample who sold to PFD in 2017 had farms larger than 12.5 acres. The situation was very similar in 2018. The market price was even lower and only these same four farmers sold to PFD. Another way of putting this is that a system designed and implemented in the name of small farmers ended up excluding them from a benefit of Rs. 100–130 per 40 kg.

But this is not to suggest that small farmers or those medium farmers who did not sell to PFD did not benefit at all. Assuming WB estimates on price-drop in case of complete PFD disengagement were correct, farmers who sold to intermediaries also benefited between Rs. 200 – 230 per 40 kg.

Beoparis

Local traders (called *beoparis*) purchase at the farm gate and pay cash. *Beoparis* use their own *bardana*, and arrange for loading, transportation and unloading. They provide all these services for their profit at the intersection of market and procurement prices. The *beoparis* we interviewed reported selling small quantities of wheat to PFD in both 2017 and 2018. They completed all formalities on behalf of the farmers they purchased wheat from. To this extent, PFD records were erroneous since they showed purchase from farmers. On being asked if PFD officials ever noticed that they were not purchasing from farmers, one *beopari* replied:

They just care about the farmer's National Identity Card, and as long as we are able to provide that, there is no problem. But it has now become difficult since payment is also to be received at the bank.

Mostly, however, these *beoparis* stocked wheat in the harvest season and sold to retailers, bakers and flour mills subsequently as prices rose gradually.

Do *beoparis* make excessive profit? Anecdotal evidence from our fieldwork suggests that they do not. *Beoparis* provide a range of services and maintain a network of client farmers from whom they purchase wheat on annual basis. If the difference between their cost price and the official price was large in most years, a larger number of investors would enter the market and bring down profits.[9] If it was insignificant, *beoparis* would

[9] There are no significant barriers to entry. All that it takes to become a *beopari* is to have the capacity to buy wheat and to store it for a few months. Most *beoparis* operate small-scale. Large buyers are flour mills and Commission Agents (Arhti) in grain markets.

not invest their money and time in wheat operations. For example, as noted above the difference between market and procurement price was Rs. 110-130 per 40 kg in 2017. So, *beoparis* buying from the farmer saved in the range Rs. 90-110 (deducting Rs. 20 for stitching, etc.) per 40 kg. This is around 7 percent on their investment, which is neither insignificant nor excessive. In due course prices rise. The highest they went in 2017 and 2018 was Rs. 1,540 per 40 kg. *Beoparis* make money here as well depending upon their storage and transaction costs.

While small farmers benefit from a high procurement price, *beoparis* benefit from the arduous procurement process. If the process is simplified, a larger proportion of small farmers will prefer to present their produce directly at the Centre in a surplus year. On the other hand, any additional procedural requirement will persuade more of them to sell their stocks in the open market. To the extent the process is simplified, they will have a meaningful alternative and their bargaining power *vis a vis* the *beopari* will improve.

PFD

During our fieldwork, we came across several instances when rent seeking and patronage opportunities created by the bureaucratic process were exploited by unscrupulous staff. The loose accountability framework for government officials encourages system's manipulation for personal gain. Our farmer respondents testified, and PFD senior management concurred, that in surplus years, it was not uncommon for PFD officials to exploit their discretion in issuing *bardana*, quality control, weighing, etc. to strengthen their personal networks. These networks were subsequently deployed to gain choice postings, escape audits and avoid accountability. In the words of a senior PFD official: "We have some nuisance value, admittedly less than the police but arguably more than, say, the livestock department. People like being posted in PFD." Overall, these 'micro practices of corruption' (Krishnamurthy, 2012) place PFD officials as another beneficiary of the wheat operations in Punjab.

Clearly, PFD's interest lies in the continuation of large-scale procurement, involing the bureaucratic procedures. We found little evidence during our interaction with PFD officials of any soul-searching to re-engineer the business process, reduce transaction costs, improve quality of service, or reimagine the subsidy regime. Senior officers were, however, visibly perturbed at the ever-rising cost of debt servicing. PFD Secretary formally advised the Chief Minister Punjab in 2017 and again in 2018 to retire outstanding debt and reduce procurement targets (PFD office records). The advice was quietly ignored, as it required diversion of resources from priority projects and risked offending powerful middle/large farmer lobby.

Flour Mills

Flour mills[10] profit from PFD's wheat operations in three ways. First, they receive their annual capacity-based wheat quota at a below-market price. As noted above, wheat prices rose to a peak of Rs. 1,540 per 40 kg in 2017-18, but flour mills received wheat from PFD at a price of Rs. 1,300 per 40 kg (Table 7). Second, PFD moves wheat at its

[10]There are 910 mills in Punjab. 80 percent are small-to-medium size.

Table 7

Subsidy per 40 kg (Rs.)

	Procurement Price (1)	Incidentals (2)	Cost Price (1+2=3)	Release Price (4)	Subsidy (3-4=5)
2008-09	625	100	725	545-900	180-(-175)
2009-10	950	200	1,150	975-1,000	175-150
2010-11	950	293	1,243	975-1,000	268-243
2011-12	950	323	1,273	1,000	273
2012-13	1,050	319	1,369	1,075-1,125	294-244
2013-14	1,200	229	1,429	1,330	99
2014-15	1,200	282	1,482	1,280-1,330	202-152
2015-16	1,300	379	1,679	1,300	379
2016-17	1,300	270	1,570	1,300	270
2017-18	1,300	380	1,680	1,300	380

Source: Constructed from PFD data.

expense from areas of procurement to areas of consumption. Wheat production is concentrated in Southern and Western Punjab, whereas consumption is spread across the province. On average around 0.7-0.8 million tons are moved annually to ensure that sufficient stocks are available in each district to meet allocated quota of mills (PFD office records). PFD bears the transportation cost (Rs. 60-70 per 40 kg). Third, mills sell flour at the standard price regardless of whether wheat is sourced from PFD over the year or bought cheaply the open market at the harvest time. These profits are substantial (Dorosh and Salam, 2008).

PFD sets the flour price periodically as a function of the issue price, transportation costs, grinding costs and millers' margin. The issue price may remain the same or vary through the year. There are substantial rent opportunities for mills that receive subsidised wheat from the government and sell flour at the market price (Dorosh and Salam, 2008). Both millers we interviewed reported grinding cheap wheat purchased from the farmer during May-September but selling flour at the (higher) official price. From October to April, they grind PFD's subsidised wheat and sell at the official price. As long as PFD bears the cost of storage, wastage and transportation, they have little incentive to buy larger quantities during harvest season.

Consumers: PFD issues wheat to flour mills at prices lower than its cost (Table 7). In 2016 and 2017, for example, PFD issued wheat to flour mills on the procurement price. This means the entire cost of operations, storage, transportation, etc. was picked up by PFD as a subsidy to consumers. In other years, the general trend has been to pick up part of the incidentals in the hope that this subsidy would be passed on to consumers.

This is not to suggest that the cost absorbed by PFD is equivalent to consumer subsidy, which would be the difference between the consumer price of wheat flour with and without PFD intervention. We make no effort to estimate that. All that is said above (and in Table 7 below) is that PFD picked up the entire cost of its wheat operations (Tables 2 and 3) as a subsidy to consumers in 2015-17. If PFD improves its efficiency or reduces its borrowing costs, it can provide wheat to flour mills at the same price as in 2017, but at a smaller cost to itself.

Consumers are a diverse group and various sub-groups are affected differently. Wheat-deficit rural households and urban consumers are directly affected by a change in flour prices. According to official data (PBS, 2015: Table 7), wheat products account for 12.84 percent of total household expenditure in Punjab. Bottom two quintiles spend 20.65 percent and 17.73 percent respectively of their income on wheat flour (PBS, 2015). These quintiles are vulnerable to the adverse effects of price increases.

Will the price of wheat flour rise by the amount of subsidy if PFD stops wheat operations? Certainly not. Instead, flour price may decrease due to two reasons. First, in the absence of public intervention, the wheat price will fall at the harvest time and traders will stock up at these low market prices. Second, the private sector's wastage and storage/transportation costs will be lower than PFD incidentals (Aamir, 2017). Thus, mills' net cost will be lower than it is in the current interventionist regime.

What will be the net effect if PFD procures wheat but without having to pay interest on the piled-up outstanding debt? Data in Table 4 show that current borrowing in 2017 accounted for only 36.60 percent of the total PFD debt. If PFD had to pay mark-up only on its borrowing for current operations, its incidentals would be correspondingly less. Adjusting the mark-up as shown in Table 3 accordingly gives us a figure of Rs. 205.19 per 40 kg for PFD incidentals, were there no outstanding debt. If PFD procures wheat at the official price and if it pays mark-up only on new borrowing, its cost price of wheat at the time of issuance to flour mills will be Rs. (1,300 + 205.19 =) 1,505.19 per 40 kg. If PFD provides no subsidy at the issuance of wheat, cost of flour will increase by Rs. 205.19 per 40 kg; if it provides subsidy at the current level (viz. Rs. 379 per 40 kg), cost of flour will decrease by Rs. (205.19–379 =) 173.81 per 40 kg, *ceteris paribus*. In other words, consumers are paying Rs. 173.81 extra per 40 kg for Punjab government's failure to retire its outstanding debt.

7. CONCLUSIONS AND POLICY RECOMMENDATIONS

We have documented above how banks, small/middle/large farmers, *beoparis*, flour mills and PFD officials benefit from Punjab's wheat subsidy regime. By looking at the micro-processes of procurement and by dissecting numbers, we make a case for reimagining the wheat subsidy regime so that a greater incidence of benefit falls upon small farmers and consumers in whose name the subsidy is maintained. In 2017-18, the total cost of PFD's wheat operations was Rs. 34.43 billion. This is not an insignificant amount for a province whose total budget in that year was Rs. 1,970 billion (Punjab, 2018). The similar cost incurred year after year is like a small, non-fatal wound that bleeds the body imperceptibly and steadily. This 'friendly fire' consumes valuable resources, excludes small farmers and deprives the consumers of a potential benefit.

The question immediately arises: when all this is known to the government, why does it not reform the subsidy regime? PFD leadership admitted that government's reluctance emanated from fears that reform would result in low wheat prices in the harvest season and high and volatile flour prices in the rest of the year, both of which may lead to violent unrest. These fears are not totally unfounded. Global evidence suggests that subsidy reforms may trigger a series of events that are potentially destabilising, especially when latent political discontent exists (Gutner, 2002; Hopkins, 1988). Amid (2006) has cited several cases where subsidy reforms provoked popular unrest. Therefore, gradual reform will be a safer strategy for the government, starting with improved targeting, open sharing of ideas, and awareness of the general public on the reasons behind actions being taken.

Government's reform options depend on its objectives. If the objective is to address the short-term problem of the government's mounting fiscal burden, it is imperative to repay the high-cost, short-term debt to commercial banks. Procurement targets better aligned with PFD's releases to flour mills will enable PFD to clear each year's liabilities within that year. Clearly, PFD should not allow its outstanding liabilities to mount again. As seen above, this serves neither the government nor its target groups. If the objective is to develop a more efficient wheat market, the government should gradually reduce its footprint on the wheat landscape. Instead, it should strategically intervene to regulate the interaction amongst farmers, *beoparis*, mills and consumers. If the objective is to address the structural issue of small-farmer exclusion, the government should reform the business process. These objectives are not mutually exclusive.

The way forward emerges from our discussion above. First, the government should improve the evidence base for price setting and strengthen PFD's analytical capacity so that procurement prices and targets reflect market requirements and PFD's strategic objectives and fiscal space. In general, the procurement price should be better aligned with the international price. This price should be kept flexible so that it can move both ways in response to market conditions. If the government liberalises international trade and restricts regulation of import/export to exceptional circumstances, international prices will provide the hedge against inflationary pressure on domestic prices. However, as noted by Pieters and Swinnen (2016) and Alonso and Swinnen (2016), linking domestic prices to international prices will transmit the latter's volatility to the former. This will defeat an important purpose of PFD's wheat procurement regime. To avoid such an outcome, the government should continue to intervene in the market strategically. Second, the government should initiate measures to offset the adverse effects of price liberalisation in the short run. We propose the creation of a Wheat Support Fund, to which should go savings from reduced PFD costs. This Fund should be used exclusively for improving wheat-related rural infrastructure, and for supporting the development of wheat storage by farmers in particular and the private sector more generally. Currently, even large farmers and traders have little incentive to invest in storage facilities as they cannot compete with massively subsidised PFD operations. But a reduced PFD role will create the space for farmers/traders to develop their own storage facilities. If PFD staggers its procurement over the May-October period and provides a premium for later procurement, this will incentivise middle/large farmers to hold on to their wheat for longer, rather than dispose it off at once in the harvest season. Small farmers will benefit indirectly, as there will be correspondingly less wheat for the market to clear in the harvest season. Staggering procurement will also reduce PFD's cost of storage and mark-up charges to the extent that PFD procures smaller quantities in April-May. The premium paid for later purchases should be smaller than PFD's cost in case of earlier purchases. Third, PFD's business process should be improved to make the procurement process less problematic especially for small farmers. PFD should consider accepting wheat in farmers' *bardana* or at least restricting its *bardana* issuance to farmers as per small farmers' production capacity. Finally, as earlier advocated by Dorosh and Salam (2008), PFD should issue wheat to flour mills on market rates through open auction, rather than on capacity-based quotas and arbitrary prices. This will help PFD recover some of the costs of its wheat operations. This will also increase mills' incentive to procure larger quantities from farmers at the harvest time and store these under their own arrangement for later use. To this extent, procurement, transportation and storage functions will transfer from PFD to flour mills.

A reduced PFD footprint may benefit consumers through lower wheat flour prices at least in surplus years when domestic production is plenty and export opportunities are scanty. Consumers will benefit from increased wheat purchases by flour mills and *beoparis* at harvest time. To protect low-income consumers against price volatility and higher flour prices in deficit years, the government may consider direct cash provision. It should be possible to target such cash provision to the bottom two quintiles through the existing databases of poor households (e.g. the one maintained by the Benazir Income Support Programme). A key challenge will be to regularly update the database and enhance bureaucratic capacity to identify households most in need of cheap flour. There is plenty of evidence from across the globe suggesting that targeted subsidies may help the poor at lower costs (Alderman, et al. 2018; Gentilini, 2016; Lofgren and El-Said, 2001; Margolies and Hoddinott, 2015; Subbarao, et al. 1997). However, care must be taken that the cost of alternative programs is not higher than the generalised subsidy that they will replace.

REFERENCES

Aamir, S. (2017). Policy reforms and analysis of wheat procurement system in Punjab, Pakistan. Munich Personal RePEc Archive. (Working Paper No. 81562).

Ahmad, M, and Farooq, Umar (2010). The state of food security in Pakistan: Future challenges and coping strategies. *The Pakistan Development Review*, *49*(4).

Alderman, H. (1988). The twilight of flour rationing in Pakistan. *Food Policy*, August, 245–256.

Alderman, H., Gentilini, Ugo, and Yemtsov, Ruslan (2018). *The 1.5 billion people question: Food, vouchers, or cash transfers?* Washington, DC: The World Bank.

Alonso, E. and Swinnen, Johan (2016). Who are the producers and consumers? Value chains and food policy effects in the wheat sector in Pakistan. *Food Policy*, *61*, 40–58.

Amid, J. (2007). The dilemma of cheap food and self-sufficiency: The case of wheat in Iran. *Food Policy*, *32*, 537–552.

Aziz, S. (1979). Abolishing hunger: The complex reality of food. *Third World Quarterly*, *1*(4), 17–27.

Babbie, E. (2012). *The practice of social research* (13th Edition). California: Wadsworth Publishing.

Bovens, M. and Zouidis, S. (2002). From street-level to system-level bureaucracies: How information and communication technology is transforming administrative discretion and constitutional control. *Public Administration Review*, *62*(2), 174–184.

Cummings, R., Rashid, S., and Gulati, A. (2006). Grain price stabilisation experience in Asia: What have we learned? *Food Policy*, *31*(4), 302–312.

Dawn (2017). https://www.dawn.com/news/1324980/punjab-to-procure-4m-ton-wheat

Dawn (2018). https://www.dawn.com/news/1401695

Dorosh, P. and Salam, Abdul (2008). Wheat markets and price stabilisation in Pakistan: An analysis of policy options. *The Pakistan Development Review*, 71–87.

Epp, C. R., Marnard-Moody, S., and Haider-Markel, D. P. (2014). *Pulled over: How police stops define race and citizenship.* Chicago: University of Chicago Press.

Gentilini, U. (2016). Revisiting the 'cash versus food' debate: New evidence for an old puzzle? *Word Bank Research Observer*, *31*(1), 135–67.

Gutner, T. (2002). The political economy of food subsidy reform: The case of Egypt. *Food Policy*, *27*(5-6), 455–476.

Hopkins, F. (1988). The politics of adjustment: The African case. *Food Policy*, *13*(1), 47–55.

Islam, Yassir and Garrett, James (1997). *IFPRI and the abolition of the wheat flour ration shops in Pakistan.* Washington, DC: International Food Policy Research Institute.

Krishnamurthy, M. (2012). States of wheat: The changing dynamics of Public procurement in Madhya Pradesh. *Economic and Political Weekly*, *47*(52), 72–83.

Lofgren, H. and El-Said, M. (2001). Food subsidies in Egypt: Reform options, distribution and welfare. *Food Policy*, *26*, 65–83.

Manig, W. (1990). Formal and informal credit markets for agricultural development in developing countries—The example of Pakistan. *Journal of Rural Studies*, *6*(2), 209–215.

Margolies, A. and Hoddinott, John (2015). Costing alternative transfer modalities. *Journal of Development Effectiveness*, *7*(1), 1–16.

O'Connor, J. (1979). *The fiscal crisis of the state*. NJ: Transaction Publishers.

Offe, C. (1984). *Contradictions of the welfare state.* Cambridge MA: MIT press.

Pakistan, Government of (2016). *Pakistan economic survey 2015-16*. Ministry of Finance, Government of Pakistan.

Punjab, Government of (2018). *Budget in brief*. Punjab Finance Department.

PBS (2015). *Punjab development statistics 2015-16.* Lahore: Punjab Bureau of Statistics.

PFD Market Stabilisation (n.d.). https://food.punjab.gov.pk/market_stabilization. Accessed 11/04/2018.

PFD Overview (n.d.). https://food.punjab.gov.pk/overview. Accessed 12/03/2018.

Pieters, H. and Swinnen, Johan (2016). Trading-off volatility and distortions? *Food Policy*, *61*, 27–39.

Prikhodko, Dmitry and Zrilyi, Oleksandre (2013). *Review of the wheat sector and grain storage issues*. Rome: Food and Agriculture Organisation.

Schram, S. F., Soss, J. Fording, R. C., and House, L. (2009). Deciding to discipline: Race, choice, and punishment at the frontline of welfare reform. *American Sociological Review*, *74*(3), 398–422.

Scott, J. and Hernandez, Citlalli (2018). From food subsidies to targeted transfer in Mexico. In Alderman, H., Gentilini, Ugo, & Yemtsov, Ruslan (eds.) *The 1.5 billion people question: Food, vouchers, or cash transfers*? Washington, DC: World Bank.

Sen, A. (2005). *The argumentative Indian: Writings on Indian history, culture and identity.* New York: Farrar, Straus and Giroux.

Subbarao, K., Bannerjee, A., Braithwaite, J., Carvalhe, S., Ezemenari, J., Graham, C., and Thompson, A. (1997). *Safety net programme and poverty reduction: Lessons from cross-country experience*. Washington, DC: World Bank.

The Nation (2014). https://nation.com.pk/14-May-2014/punjab-bans-inter-provincial-movement-of-wheat

World Bank (2010). *Food price increase in South Asia: National responses and regional dimensions*. Washington, DC: World Bank.

World Bank (2015). Strengthening markets for agriculture and rural transformation (SMART – PforR): Policy note for secretary agriculture. (Unpublished).