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Liberating Indian Agriculture Markets

Dammu Ravi

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Liberating Indian Agriculture Markets

Dammu Ravi*

Abstract: . India's agriculture potential remained shackled to the objective of food security through various policy interventions since 1960. Despite achieving a record food production year after year and maintaining huge buffer stocks of foodgrains there continues to be widespread rural distress with a large number of farmers reduced to penury. Understanding what ails India's agriculture is imperative for taking right decisions. It is about time that Indian agriculture markets are liberated in the larger interest of farmer, consumer and economy. The paper brings out various complex issues in our current agriculture market situation and makes useful suggestions for unleashing the full potential of our agriculture, also to be a major export hub for global markets.

Keywords: PL480, Green Revolution, FCI, APMR, APMC, mandis, eNAM, NCA, CWC, NAAS, FAO, CACP, MSP, NSSO, PDS, DBT, WTO, MSP, PM Kisan Scheme, ITC, Farm Bills, APLM Act.

Background

The genesis of India's agriculture policy can be traced to 1960s when India was a food deficit nation with images of hunger, famines and droughts presenting a common sight. The food crisis forced India to import wheat from USA under PL480 program with imports ranging from 4-10 million metric tons (mts) a year, exposing India's vulnerability and dependence on outside sources. It was but natural that government made achieving self-sufficiency in food production its main objective and agriculture policies were framed to increase domestic food grain production as well as manage storage and distribution. In the 1960s, the use Green

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Revolution (GR) techniques helped to boost food production, while Food Corporation of India (FCI) founded in 1965 was mandated to manage food grain buffer stocks, along with a support price mechanism instituted through the then Agricultural Price Commission (Now called Commission for Agricultural Costs and Prices).

Impact of Green Revolution

The noble laureate Norman Borlaug and his research team in Mexico developed the Green Revolution techniques in 1960s which were pioneered in India by our agriculture scientists led by MS Swaminathan. These GR techniques brought transformational changes in Indian agriculture with infusion of high yielding variety of seeds, use of fertilizers, pesticides and water, mostly in rice and wheat. By 1980s, India became self-sufficient in food grains with record production increased from 82 million in 1960 to 129 million MTs and more than doubled by 1990s. This has reached 300 million tons in the latest year, heralding an era where managing surplus in grains becomes the main task ahead of the policymakers (Chand, 2019).

However, the adverse effect of GR on ecosystems became increasingly apparent by the late eighties as it resulted in reduction of soil fertility, depletion of ground water, loss of genetic diversity and soil contamination (Pingali et al, 2019). Also, the impressive gains under GR did not translate into measurable gains for farmers across the country mainly because the resource intensive processes necessitated under GR were being mostly harnessed by medium and large farmers in Punjab, Haryana and Western UP who had the capacity to make significant initial capital investments, while a large number of small and marginal farmers could not avail its benefits (Dev and Rao, 2010).

Table 1: India's Food Grain Production

(MTs)

Year	Wheat	Rice	Maize	Gram	Lentil	Others	Total
1950	6.46	20.58	1.73	3.65	-	18.38	50.80
1960	11.00	34.58	4.08	6.25	-	26.11	82.02
1970	23.83	42.22	7.49	5.20	0.37	29.31	108.42
1980	36.31	53.63	6.96	4.43	0.47	27.79	129.59
1990	55.14	74.29	8.96	5.36	0.85	31.79	176.39
2000	69.68	84.98	12.04	3.86	0.92	41.37	212.85
2010	86.87	95.98	21.73	8.22	0.94	30.75	244.49
2017-18	102.19	116.42	27.23	10.13	1.56	27.30	284.83
2018-19	107.18	117.94	28.98	10.90	-	30.67	295.67
2020-21	109.24	120.32	30.16	11.62	-	32.00	303.34

Source: Ministry of Agriculture annual report for 2018
https://agricoop.gov.in/sites/default/files/agristatglance2018.pdf

The table1 conveys that although India's food production doubled by 1990s under GR and nearly four times by 2020, the production was skewed with mostly rice and wheat experiencing higher yields, covering 2/3rd of total food production. Also, agriculture contribution to India's GDP presents a scenario of diminishing returns. As can be seen from table2, in 1950, agriculture contributed 51 per cent to GDP with about 70 per cent of total working population was engaged in it; in 2000, its contribution to GDP drastically declined to 22 per cent but agriculture workforce only marginally declined

to 58 per cent; by 2020, its share in GDP further declined to 17 per cent but the workforce dependent on it continued to remain high at 42 per cent. It can be inferred that the domestic industrial growth was also lagging behind, unable to absorb excess labour trapped in agricultural activity. This has the socially undesirable effect of making agricultural productivity several times lower than that in the non-agricultural sectors (Bhalla, 2006). The ensuing widespread rural distress over time forced agriculture labour to migrate to urban areas as construction workers in large numbers.

Table 2: Sector wise contribution to Indian GDP (%)

Year	Agriculture & Allied %		Industry	Services	Others
	GDP	workforce	%	%	%
1950	51	69.7	16	30	3
1960	47	69.5	20	30	3
1970	42	69.7	23	33	2
1980	36	60.5	25	37	2
1990	29	59.0	27	42	2
2000	22	58.2	27	50	1
2010	14	51.5	28	57	1
2020	17	42.3	27	55	1

Source: (i) Ministry of Statistic and Programme Implementation
(ii) https://data.gov.in/search/site?query=GDP

The fragmentation of land holdings which is so characteristic of Indian agriculture has debilitating impact on food productivity and rural well-being. The Agricultural Census data for 2015-16, brought out every 5 years, as captured in the table3, suggests that the average agriculture land holdings have been too small to

Table 3: Agriculture Landholdings (in Mln Ha.)

Groups	1970		1980		1990		2000		2010		2015	
	Holdings	Avg. (ha.)	Holdings	Avg. (ha.)	Holdings	Avg. (ha.)	Holdings	Avg. (ha.)	Holdings	Avg. (ha.)	Holdings	Avg. (ha.)
Marginal	36	0.40	50	0.39	63	0.39	75	0.40	93	0.39	100	0.38
Small	13	1.44	16	1.44	20	1.43	23	1.42	25	1.42	26	1.40
Semi-Medium	11	2.81	13	2.78	14	2.76	14	2.72	14	2.71	14	2.69
Medium	08	6.08	08	6.02	08	5.90	07	5.81	05	5.76	05	5.72
Large	03	18.10	02	17.41	02	17.33	01	17.12	01	17.38	01	17.07
All Sizes	71	2.28	89	1.84	107	1.55	120	1.33	138	1.15	146	1.08
Total Area	161.88		163.76		165.87		159.66		158.70		157.68	

Source: Agriculture Census Report 2015-16, Ministry of Agriculture and Farmers Welfare

realize the full potential of agricultural activity in the country. In 1970s, there were 71 million land holdings with average size of 2.28 hectares and by 2015, in 45 years, the land holdings increased to 146 million with average size reduced to 1.08 hectare. During this period, the total agriculture land under cultivation had more or less remained constant, rather marginally reduced to 157.68 million hectares from 161.88 million hectares.

Further breakdown of these numbers suggest that nearly 86 per cent of India's farming community are small and marginal farmers with 126 million land holdings of less than 2 hectares (average size of holding at 0.38 hectare) and comprises a share of 44.3 per cent of land area; medium level farmers constitute 13% with average land holdings between 2-6 hectares with 19 million holdings and comprise a share of 43.61 per cent of land area; large farmers' holdings are more than 10 hectares who constitute about 0.57 per cent (870,000) with 11 per cent share of land area. Majority of our farmers are not only small and marginal but also possess unequal agriculture land holdings and permanently dependant on the vagaries of monsoons and government subsidies.

II. Agriculture markets in India

The policy emphasis on the need to maintain food grain buffer stocks made our agricultural markets highly regulated over time. Agriculture Produce Markets Regulation (APMR) Act in 1963 and a modified Agricultural Produce Market Control (APMC) Act in 2003 largely defined the agriculture market situation in the country; while the farmer mandated farmers to sell their produce in open *mandis* by themselves or through registered traders, the latter allowed private individuals and corporate sector to buy agriculture produce directly from farmers. Since Agriculture was

a state subject, implementation of APMC Act in most situations was adhoc and half-hearted. Commission agents and traders usually take advantage of the gaps in the Acts and monopolise markets by way of granting licences, levying *mandi* fees, paying commissions, money lending etc., all of which tie small and marginal farmers to *mandis* (Minten et al., 2012; Nuthalapati et al., 2020).

Logistics hurdles

Poor logistics are a big hurdle, especially for small and marginal farmers to take advantage of the mandi facilities. The 6630 *mandis* in the country cover an average distance upto 463 sq kms, but as this large distance is a big disincentive for a farmer to take his produce to a mandi, he usually ends up selling it to a trader at a lower than the market price. In due recognition of these shortcomings, the Swaminathan Committee Report (SCR) in 2006 strongly recommended creation of more *mandis* for better management of MSP. Building on this report, the National Commission on Agriculture (NCA) in 2011 recommended to build mandis five times more to help farmer reach the nearest *mandi* in an hour. Such a plan would require construction of 33150 *mandis* (6630*5) across the country, which if implemented, could reduce average distance to a nearest mandi to 80 sq kms. As the eco-system of a mandi require construction of buildings, roads, warehouses and transport networks with huge investments, it is best if private investments are tapped. Parallely, virtual markets have also been found to be effective in trading of agriculture produce; The Karnataka State Agriculture Marketing Board set up National e-Markets Limited (NeML), which inspired the idea for a pan-India electronic trading portal eNAM in 2015 that sought to connect *mandis* across the country. So far about 1000 *mandis* have been connected by eNAM, providing vibrancy to domestic agriculture trade.

Storage infrastructure

The Gaps in our food grain storage infrastructure has a bearing on agriculture prices. Bumper harvest, if not quickly marketed or excess production not stored in time, depresses prices. As can be seen from the table4, the total installed food grain storage capacity in the country under central pool, as available with Food Corporation of India (FCI), Central Warehousing Corporation (CWC) and State Agencies (both owned and hired capacity) including covered and plinth storage, was only 81 million MTs (as on 1.4.2021). According to the National Academy of Agricultural Sciences (NAAS), India has 7645 cold storages across the country that can store only 35 million MTs of fruits and vegetables. This grossly inadequate food grain storage infrastructure in the country cannot support food security strategy at a time when food grain production in the country is increasing. According to NAAS study in 2017, India's post harvest food grain losses on account of inadequate storage infrastructure was in the range of 13-18 million MTs which comprises about 6 per cent of total food grain production and translates to about Rs 7000 crores losses per year. According to FAO, India's combined loss of both food grains and horticulture is about 40 per cent every year.

Table 4: Storage Capacity for Food Grains (MTs)

As on	FCI	Other agencies	Total
01-04-2015	36	35	70
01-04-2016	36	46	82
01-04-2017	36	42	78
01-04-2018	37	49	86
01-04-2019	39	47	86
01-04-2020	41	34	75
01.04.2021	41	40	81

Source: https://fci.gov.in/storages.php

In recent times, Government has initiated decentralization of storage of food grains by involving private sector for setting up of silos, cold chains, warehouses, transport and logistics. These initiatives would, no doubt, minimize losses and stabilize prices in the long run. For stronger private sector participation in the creation of storage infrastructure in the country makes it necessary to free agriculture markets.

Minimum Support Price (MSP)

MSP has been in operation in the country since 1965 with a twin objective of preventing agriculture prices from crashing and protecting poor farmers. Over time 23 crops have come to be covered under MSP of which rice and wheat enjoy maximum support. The Commission for Agricultural Costs and Prices (CACP) fixes MSP by calculating inputs costs such as fertilizers, implements, labour, seeds etc. and marking up 40-50 per cent margin over domestic price for the benefit of farmers. At a broader level, MSP helps farmers, but the ground reality reveals a distorted picture. According to the National Sample Survey Office (NSSO) report of 2018, only 6 per cent of farming community in the country has benefitted from MSP so far and these are mostly large and medium farmers, middlemen or traders in few states. Small and marginal farmers who constitute 86 per cent of the farming community are seldom able to avail MSP for obvious reasons such as burden of transport cost, pre-seasonal commitments, pending loans, lack of awareness of MSP etc.

Thus, when MSP is provided to all farmers, regardless of their economic status, large farmers and middlemen benefit the most. The Niti Aayog Evaluation Report on MSP in 2016 points out varying awareness levels amongst farmers about MSP across

States – Punjab and Haryana at the highest and at lower levels are Odisha, Uttarakhand, Jharkhand, Gujarat, Karnataka etc. Some states like Kerala, AP and North East rarely utilize MSP as they grow different crops. According to the National Accounts Statistics report in 2018, annual net income from agriculture in 2017-18 in Punjab was Rs.5.31 lakhs per cultivator and, in Haryana, it was Rs.3.44 lakhs against a national average of Rs.1.7 lakhs. These two states continue to be the biggest beneficiaries of MSP, without having ever experienced agriculture distress. In fact demand for MSP has grown in time with commensurate increase in area of cultivation under MSP for rice and wheat. States like Madhya Pradesh, Jharkhand and Bihar too are producing rice and wheat regardless of whether or not right conditions exist.

Table 5: Comparative Prices of Indian Agriculture items – MSP, Domestic price and International price

Rs. Per Quintal Q4

Products		Minimum Support Price (MSP)	Domestic Market Price	International Market Price
Paddy	2015	1410	1458	1586
	2016	1470	1489	1635
	2017	1550	1638	1686
	2018	1750	1743	1889
	2019	1815	1698	2038
Rice	2015	2160	2060	2204
	2016	2250	2150	2299
	2017	2370	2270	2415
	2018	2637	2437	2598
	2019	2734	2534	2697

Table 5 continued...

Table 5 continued...

Wheat	2015	1525	1603	1322
	2016	1625	1817	1108
	2017	1735	1704	1133
	2018	1840	1747	1533
	2019	1925	1586	1380
Gram (Chickpea)	2015	3500	4576	5108
	2016	4000	8553	*9727*
	2017	4400	4334	4818
	2018	4620	3938	4392
	2019	4875	4160	4379
Maize	2015	1325	1448	1102
	2016	1365	1433	1206
	2017	1425	1356	963
	2018	1700	1161	1173
	2019	1760	1839	1188
Lentil	2015	3400	6558	5813
	2016	3950	5529	5088
	2017	4250	4104	3548
	2018	4475	3796	4062
	2019	4800	4331	4133

Source: CACP and farmer.gov.in websites

The table5 indicates price distortion caused due to MSP for agricultural items in the last five years. It may be observed that where government procurement has been enduring under MSP, it had always resulted in steep variation in MSP and International prices, the former being invariably higher as in the case of rice and wheat. Thus, high MSP for agricultural items not only causes food inflation and also make export of those items costly by out pricing themselves in international markets.

Public Distribution System (PDS)

Public Distribution System (PDS) has been in practice since 1960s as a system of management of food security for delivering social justice. PDS is the largest distribution machinery of its type in the world which fulfills twin objectives of (i) providing price support to farmers for their produce and (ii) distributing food grains to the poor at affordable price. In addition, States also procure food grains from open markets and sell to the poor through PDS at subsidized rates as part of their electoral commitments, often incurring huge expenditure. Food grains are procured at MSP rate by the Food Corporation of India (FCI) to be stored in buffer stocks and released to poor through the (PDS) network of 5,37,790 Fair Price Shops under PDS across the country for 228 million ration cardholders, benefiting about 760 million people.

FCI incurs huge expenditure for procuring food grains at MSP rates and bears losses by releasing them through the PDS network. In 2019, FCI procured paddy at Rs 17.50 per kg and, including cost of refining it at the miller and logistics, the cost added upto Rs 36-38 per kg and released it to the poor at Rs 2 per kg through PDS. Instead, if FCI were to buy rice in the open market at Rs 28 per kg for distribution through PDS, it could save upto Rs 6-8 per kg. In 2020-21, the cost of food subsidies to government was Rs. 525,444 crores, an increase by 50 per cent over the previous year.

Thus, APMC, MSP and PDS usually go in an organized manner and, when implemented in sync, it makes sense in terms of the benefit the structure collectively provides to both farmer and poor. Although it fulfils the twin objectives, within the structure, the benefits are skewed as they are mostly cornered by big farmers and traders. The underlying assumption is that majority of Indian

poor eat only rice and wheat, a thinking not only outdated but also strengthens policy intervention for regulating agriculture markets. It needs to be reflected as to why despite incentives in the form of MSP, zero tax on agriculture produce, free electricity, high import tariffs on agriculture, farmer suicides have increased. According to the National Sample Survey Report of 2019, the total number of farmer suicides in India from 1995 to 2019 was 3,92,705, a clear indication of the obvious disconnect between policies and changing aspirations of farmers. Just as agriculture growth is not an indication of farmers well being, GDP growth is not a reflection of prosperity of all.

The Way Forward – Beyond APMC

The merits of APMC controlled agricultural market has become less relevant today, not merely for reasons of their inability to deliver benefits to the majority of Indian farming community, but also that in the age of internet and e-commerce, farmers too should be allowed to take advantage of the opportunities offered by open markets, i.e., freedom to sell their produce for better remuneration anywhere and to anyone. Logic dictates that if manufactured goods can be sold through the medium of e-commerce platforms openly, Indian farmer too should be allowed to sell his produce to anyone. eNAM networks if extended to *mandis* across the country, sourcing by retail food chains directly from farmers and cooperatives will happen overtime.

Direct Bank Transfer (DBT) schemes have been successfully implemented with regard to LPG, MNREGA, PM Kisan etc. Extension of DBT to small and marginal farmers in place of MSP benefit could be a game-changer. Similarly, DBT, instead of food grains through PDS, is extended to BPL beneficiaries; it could

prevent leakages in the scheme as well as give choices to the poor to buy nutritious food grains from the open market. The study of the Indian Statistical Institute for the XV Finance Commission in March 2019 estimated that the total food subsidy expenditure (both Union and State governments) in 2020-21 was about Rs 5,25,441 crore. According to the Commission for Agricultural Costs and Prices (CACP), the annual fertilizer subsidy was Rs.85,000 Cr during the same period. If agriculture subsidies, at least partially, are brought under DBT to farmers, it will overtime help to stabilize agriculture prices; minimize leakages; limit wastage in storage; and reduce exploitation by middlemen. Moreover, DBT is a WTO compatible scheme and fits in perfectly well with India's obligations under the Agreement on Agriculture.

An environment of competition induced by corporatisation in parallel with APMC should minimize scope of misuse and exploitation. Presence of strong cooperatives in some states, like in Kerala, has proved to dilute monopolization by corporates. For a farmer, timely remuneration more than higher price realization for their produce is a greater incentive which could be a strong pull factor for entering into contract farming with private sector with pre-seasonal arrangements. Although corporatisation is not the panacea for agriculture distress, it is worth encouraging, where possible, especially since the existing APMC system has not fully addressed problems of the farming community. The ITC e-commerce model experience is said to have actually helped farmer earn a higher income by 50 per cent through elimination of middleman in the supply chain. With likely fresh investments from corporate sector, agri production is expected to move closer to the consumer and help discover reasonable price for agriculture items for the farmer.

Export/ Import

India's share in the global agricultural trade in 2019 was only 2.3 per cent and the most obvious reason for its low penetration in the global markets is due to a highly regulated export/ import trade over several years, robbing India's potential to be an agriculture powerhouse of the world. While judicious use of import restrictions are considered necessary for preventing unfair competition due to possible dumping by global cartels, excessive use of import restrictions could end up in speculative trade, hoarding and price distortions. India's average agriculture import applied tariff rate at 32.7 per cent and bound rates in the range of 100 to 300 per cent provides significant price protection for domestic producers. With MSP rates ever increasing we have ended in a peculiar situation of rendering some of our agri-products especially rice, wheat and sugar out priced in international markets. Providing export subsidies to access foreign markets can, at most, be a temporary solution and also risks faltering WTO rules; India is currently fighting a sugar export subsidy case in the Dispute Settlement Body of WTO. It is important to recognise that Import of food items does not always adversely affect domestic prices, if calibrated with a view to mitigating domestic shortages. Often, food imports contribute to food security for a large population like ours which do not have the luxury of uninterrupted food supplies during off-seasons. In recent times import of lentils and pulses have helped to fill gaps in domestic production and stabilized prices. If conditions for food processing sector improve, it should be possible to absorb surplus domestic agriculture production and encourage higher value addition in food items.

Farm Bills

The Report of the Committee of State Ministers in 2013 recommended developing a National Single Market for agriculture produce by removing all barriers to internal trade in recognition of the complexities and contradictions in dealing with agriculture as a State subject even as inter-state commerce and trade remained in the Union List. Accordingly, a model Agricultural Produce and Livestock Market (APLM) Act 2017 was drafted by the Union Government recommending to facilitate inter-state trade by further unifying domestic markets. In pursuance of these long pending demands for reform, 3 Farm Bills were introduced in September 2020 as Ordinances in the Parliament.

The Farmers' Produce Trade and Commerce (Promotion and Facilitation) Bill, 2020 is expected to create an ecosystem where farmers and traders enjoy the freedom to sell and purchase farm produce outside the registered "mandis" under APMCs. Private buying and selling outside *Mandis* was already allowed under APMC Act; the difference being that the Act legally permits opening of alternative market structures to facilitate direct buying and contract farming. It should be anticipated that these parallel markets at some stage in future may weaken MSP as private sector is expected to buy agriculture items at competitive prices, dictated by demand-supply market forces, and not at a higher MSP rates. These alternative markets are expected to reduce post-harvest losses and improve remuneration through grading and facilitate linkages to terminal markets in food processing, retail and exports. Contract farming would be beneficial to small and marginal farmers who constitute 86 per cent of the Indian farming community as they can transfer the risk of market unpredictability to the private sector.

The Farmers (Empowerment and Protection) Agreement on Price Assurance and Farm Services Bill 2020 provides a legal mechanism for farmers to enforce time bound payments from big corporate / traders. Since Sub-Divisional magistrate is authorized to settle such cases, acting on farmers complaints within three days, it saves the farmer the hassle of having to go to higher court for dispute resolution. However, building awareness about these provisions is important for farmers to exercise their rights timely.

The Essential Commodities (Amendment) Bill 2020 allows removal of commodities like cereals, pulses, oilseeds, onion and potatoes from the list of essential commodities, thereby, doing away with imposition of stockholding limits on such items except under extraordinary circumstances like war, pandemic, food crisis, etc. Hoarding of these commodities is expected to gradually reduce with price stabilization happening through resilient supply chains networks establishing in these commodities.

Conclusion

In a short span of 50 years, Indian agriculture has evolved to be a food surplus producing sector. While it has provided food security to the people, the changing aspirations of farmers have remained unaddressed. The recent Farm Bills by seeking to liberate agriculture markets, can achieve twin objectives of providing a larger cover of protection to farmers by ensuring rightful remuneration while at the same time reviving the vast untapped potential of Indian agriculture to be a food basket of the world.

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