
Re-organising Agricultural Markets for Doubling Farmer Incomes in India: Relevance, Mechanisms and Role of Policy

Sukhpal Singh*

ABSTRACT

It has been generally recognised by now that reform of agricultural markets is a must to achieve higher farmer incomes in India, as other attempts on the production front for the same without it would only be sub-optimal. In this context, this paper examines the rationale for the policy thrust on demand side measures to increase farmer income and assesses the role of various state-run mechanisms like minimum support price and procurement, and recently attempted new mechanisms and interventions by the government as a part of its reform agenda like deficiency price payment, and e-national agricultural market to contribute to the increase in farmer incomes. It specifically examines non-state mechanisms and alternatives like contract farming and value addition and the experience with such mechanisms in India and elsewhere from a demand side and value creation and capture perspective. It also examines the recent regulatory and policy measures, i.e., model APLM Act, 2017 and the model APL contract farming and services Act, 2018 for their goodness for contributing to the goal of higher farmer incomes and concludes with certain policy, regulatory and practice suggestions for reforming agricultural markets and value chains for better outcomes for farmer incomes.

Keywords: Agricultural markets, Farm income, Contract farming.

JEL.: Q11, Q13, Q24

I

INTRODUCTION

Indian farmers face multiple challenges like excessive stress on water and soil health, lack of knowledge/information about high value/growth products, limited exposure to high productivity practices due to lack of extension, inadequate credit access, weak market linkages, and inefficient supply chains. In this context, doubling farmers' income by 2022 is a laudable objective and brings the much needed focus on farmers' income instead of production or growth rate in agriculture which has led to the present agrarian crisis. The higher farmer incomes can foster the use of mechanised techniques to efficiently use stressed resources, increase farmers' knowledge of the high productivity practices and high value product choices available, and help farmers to better navigate market inefficiencies rather than settling for lower prices (Goyal *et al.*, 2017).

It is estimated that doubling in nominal terms requires six years and in real terms 13 years, and it is going to be higher timeframes in both respects for the marginal and the small farmers. Further, it would take different timeframes across different states

*Professor and Chairperson, Centre for Management in Agriculture, Indian Institute of Management, Ahmedabad-380 015 (Gujarat).

depending on the state level growth rates of farm household income which varies from 6.7 per cent in West Bengal to 17.5 per cent in Haryana in nominal terms with the average for India being 11.8 per cent, and the absolute level of farmer household income (Satyasai and Mehrotra, 2016). Chand (2017) estimates that farmer income can be increased by 75 per cent in 7 years and it would take 10 years for it to double. Goyal *et al.*, 2017 argue that the unlocking of supply, keeping in mind the market, could increase farm output by 40 per cent and agricultural gross domestic product (GDP) by 70 per cent by 2025 over 2015 resulting in 85 per cent increase in farmers' income by 2025. They further estimate 35 per cent of the total increase in income to arise from shift to high value crops, 25 per cent from yield increase in other crops, 10-12 per cent from wastage reduction, 4-5 per cent from cost of production reduction, and 8-10 per cent from direct market linkage.

1.1 *Supply Side vs Demand Side Focus*

There could be various mechanisms to achieve increase in farmer income both within as well as outside the farm sector. Within the farm sector, there could be supply side interventions like ones which increase yields as there are yield gaps of the order of 25 to 100 per cent across various crops especially in dry land regions, and in some of the high value crops even in irrigated areas, and India's average yields in most crops are only half of China's, or higher cropping intensity or demand side interventions like new channels for farmer produce or new value addition interventions. Since the supply side factors are not amenable to short run changes and also per se may not help as if higher production even if produced at lower cost does not result in good price realisation then the job is only half done. Further, it is also important to remember that higher production (from yield or cropping intensity increase) alone need not lead to higher income in the absence of any price support mechanism or well lined up markets for the produce as seen in the case of pulses recently.

There are many studies which examine the options for enhancing farmer's income from the supply side in terms of enhancement of yield or reduction of cost (Singh *et al.*, 2017, Kiresur *et al.*, 2017, Sirohi *et al.*, 2017, Parappurathu *et al.*, 2017 and Rao *et al.*, 2017). There are other studies which examine the role of crop or produce diversification in increasing farmer income (Basantaray and Nancharaiyah, 2017; Saxena *et al.*, 2017, Mandal *et al.*, 2017; Singh, 2018a).

Some states have already designed roadmaps for doubling farmer income. For example, Madhya Pradesh did it in 2016 and has also estimated contribution of various sources of income increase, wherein increased yields and agricultural diversification would together contribute 50 per cent (30 per cent and 20 per cent each) followed by reduction in input costs and better prices each giving 15 per cent of the increase and the rest coming from area expansion (14 per cent) and reduction in post-harvest losses (6 per cent) (Government of Madhya Pradesh, 2016; Satyasai and

Mehrotra, 2016). It is estimated that yield and production related efforts would lead to 70 per cent of additional farmer income with the rest 30 per cent coming equally from cost reduction, higher prices, and reduction of economic losses (Government of Madhya Pradesh, 2016). This shows that only 15 per cent is being targetted from demand side by working on output markets. Of the 19 pillars for doubling farmer income identified by the Madhya Pradesh government, only four : farmer producer company organisation, expansion of food processing sector, expansion of agricultural storage capacity, and better organisation of agricultural markets, are about demand side solution (Government of Madhya Pradesh, 2016).

Similarly, Chhattisgarh has also decided to focus on seven points to increase farmer income, of which only three: better marketing infrastructure, storage and processing facilities, and linking up of Agricultural Produce Market Committee (APMC) markets with e-NAM are about demand side intervention. The better price realisation due to these interventions is expected to contribute only 10 to 20 per cent to the income increase (Government of Chhattisgarh, 2017). This shows the production or supply side focus of the plans of these two states.

It is proposed that to increase farmer incomes, there is a need to adopt a higher value farm output mix, capture greater value through better storage and processing, and make market mechanisms more efficient for farm inputs, financing, and sale of output (Goyal *et al.*, 2017). But, the demand and market mechanisms to raise farmers' incomes are not examined adequately. Another mechanism of increasing farmers' income through higher or more stable prices is also unlikely to fructify in the presence of the inability of the state to implement Minimum Support Price (MSP) mechanism across two dozen crops with effective procurement across various states, with its agencies presently restricting themselves to a few states and a few crops to meet the public foodgrain procurement quotas. Only 25 per cent farmers were aware of MSP at all India level in 2012-13 with only 8 per cent being so in Maharashtra and 11 per cent in Gujarat, and going up only to a maximum of 50 per cent in Punjab. It was the highest (23-25 per cent) in case of cash crops like sugarcane, jute, cotton and cereal crops and was only 9 per cent in pulses and 17 per cent in oilseeds. Only about 19 per cent farmers knew about Food Corporation of India (FCI) and 75 per cent did not sell to procurement agencies (Aditya *et al.*, 2017). Further, the government may not be inclined or able to increase the MSP or set up price stabilisation fund (PSF) as evident in the fact that the Swaminathan Commission recommendation of MSP being 50 per cent above the comprehensive cost of production.

This paper examines the rationale for demand side measures to increase farmer incomes and assess the role of various mechanisms to contribute to the increase in farmer incomes including policy measures needed for the same. Section II provides the context and rationale for focus on demand side measures followed by Section III which assesses the role of various state-run mechanisms like minimum support price and procurement, and the more recently attempted new mechanisms and interventions

by the government as a part of its reform agenda like the deficiency price payment, and the e-national agricultural market to contribute to the increase in farmer incomes. It specifically examines non-state mechanisms and alternatives like contract farming and value addition and the experience with such mechanisms in India and elsewhere from a demand side and value creation and capture perspective. This is followed by Section IV on policy aspects of reforms in agricultural markets and their limitations and political economy of such reforms. The paper concludes in the fifth section with some policy and practice suggestions.

II

CONTEXT AND RATIONALE

It is important to realise that the small farmers in India are highly differentiated in terms of their market participation ranging from highly commercial to a mix of subsistence plus commercial and those mainly subsistence farmers in terms of marketable and marketed surplus as proportion of foodgrain production. The marketable surplus varies from a high of 61 per cent mainly in the commercial regions to a low of 45 per cent mainly in subsistence regions and the same goes for marketed surplus which is, in fact, slightly higher than marketable surplus for the subsistence plus commercial and the mainly subsistence categories where they end up selling more than what they are supposed to sell and the gap between marketed and marketable surplus is 0.6 per cent to 4 per cent for the two categories respectively (Agarwal and Agrawal, 2017). It is also important to recognise that it is mostly the marginal and small farmers who have 50 per cent or lower percentage of their income coming from agriculture and as low as 25 per cent to 29 per cent in Punjab and Haryana in case of marginal farmers and only 18 per cent in Tamil Nadu. This means that there is a need to raise farmer incomes from farming to retain these households as agricultural households. This focus on low farm income households would be desirable from the policy point of view so that more relevant policies and strategies are designed and implemented (Das, 2017).

In 2013, 60 per cent of the total income of agricultural households came from agriculture and only very small percentage of households across 21 crops ranging from 0 per cent in masur to 24.5 per cent in groundnut in *kharif* and 0 per cent in soybean and ragi to 15 per cent in cotton in *rabi* season insured their crops despite the fact that 39 per cent to 80 per cent households in *kharif* and 7 per cent to 93 per cent households in *rabi* across different crops suffered losses due to monsoon failure in 2012-13. They had not insured their crops ranging from 34 per cent in coconut to 64 per cent in jute in *kharif* and 24 per cent to 50 per cent in *rabi* as they were not aware about the crop insurance (ranging from 33 per cent to 64 per cent across crops) and another 10 per cent to 21 per cent in *kharif* and 12 per cent to 27 per cent in *rabi* did not avail of it as they were not aware of the mechanisms and procedures for it (Mukesh and Srivastava, 2019).

It is also important to recognise that India is not the only and the first country to set this kind of target about farmer income. China set this objective of doubling of farmer income in 2008 itself but it plans to do it over 12 years (2008-2020), and not 5 or 7 years despite the fact that China has better functioning institutions and infrastructure in place for it to happen than what India has, though China has a limit to what it can achieve on the yield side as its average yields are double of that in India. The Chinese strategy of doubling income of farmers involves expanding channels for generation of income, expansion of non-agricultural sector to shift surplus labour out of agriculture and into medium and large cities, and building of integrated labour market. This is a part of the larger agricultural development model which focuses on stable grain production, building and strengthening of farmer co-operatives and expansion of agribusiness, food quality and safety, agricultural science and technology, new social service system for agriculture for supply of inputs, finance, insurance and extension by NGOs, public and large private agencies, subsidies for grain production and farm inputs, minimum grain procurement price, reform of agricultural laws and regulations, and opening of agricultural sector to the world (Schneider, 2016).

The demand side rationale behind focus on farmer income is that there would be additional food demand of around 400 million tonnes by 2025 due to various factors like a four-fold growth of the Indian middle class in the last decade, combined with urbanisation and higher GDP; shift in consumption toward fruits and vegetables (F&V) and pulses due to diet shift to higher protein intake; and demand concentration in six crops—mango, tomato, potato, pomegranate, onion, and grapes which by 2025, would account for around 65 per cent of the incremental produce value, through a combination of exports and food processing, along with demand for packaged and branded pulses, fortified pulses, and ready-to-eat snacks (Goyal *et al.*, 2017).

III

MECHANISMS TO INCREASE FARMER INCOME FROM DEMAND SIDE

3.1 *Direct Role of Government in Markets*

The government intervention in agricultural markets has been through announcement of MSPs for 24 commodities and procurement in some of them, mostly wheat, paddy and cotton and, sometimes, coarse cereals, pulses and oilseeds. In other crops like jute and copra, the state governments and their nodal agencies, besides farmer collectives, play an important role in buying at MSP. In the MSP procurement system, there are two conditions which include: a cap on quantity to be procured from each farmer, and accepting the produce only at the purchase centre from the farmers. Though there are problems with these conditions as (a) the cap is fixed based on average yield which is not representative of all farmers' individual yields and (b) some farmers who cannot take their produce directly to the purchase

centre lose on the MSP benefits. The other intervention is in the form of market intervention scheme (MIS) wherein price support is provided to commodities not covered under the MSP policy. It is implemented only when needed and when requested by the state government wherein quantities, prices, and market locations are decided mutually by the Centre and the State and the losses, if any, are shared equally by the Centre and the State. This scheme has been used in the crops like onion, potato, chilies, tomato, apple, coriander and cumin and some states have used it more often than others. Some states have also created PSF to implement MIS in specific crops. The major challenge in managing farmer price risk has been forecasting of demand for specific commodities and using market intelligence for the same (Acharya, 2017).

The other important initiative has been to link local agricultural markets to electronic national agricultural market (e-NAM) during the last three years wherein 585 markets have been linked to this platform by 2018 starting with 2015. The main purpose of this initiative was to discover more competitive auction prices with the participation of more buyers from across the country who can bid for produce in the local APMC market. The performance of this initiative remains mixed as shown by various studies. The major issues in these markets include: trader/Commission Agent (CA or *arthiya*) resistance (35-75 per cent of both CAs and traders) due to higher competition and interlocked transactions for credit recovery as e-payments are made, lack of quality assessment for distant buyer, and traders still preferring manual quality check (Pavithra *et al.*, 2018). In Haryana, due to e-NAM, price volatility increased and decreased in the same commodities (like paddy, potato, tomato, and onion,) across different markets. There was higher price realisation only in paddy, bajra and cotton in post- e-NAM period. E-NAM was used for price information, sale, and payment by both farmers and traders. The major issues included: delayed payments, poor connectivity, lack of guidance on e-processes, traders being less enthusiastic than the farmers, and poor grading and storage infrastructure (Sekhar and Bhatt, 2019). It is argued that to make a difference the e-NAM should achieve 50 per cent of the total volume of commodities traded in APMCs by 2020 (Acharya, 2017).

Another study on e-NAM in Uttarakhand (Agarwal *et al.*, 2019) found that only 2.6 per cent to 11.8 per cent of all farmers across various mandis studied were registered under the e-NAM though the number of registered traders and commission agents was higher at 15-150 per cent of all registered CAs and traders across mandis as traders from other places in India could register under e-NAM in any APMC. Further, farmer awareness of e-NAM was the lowest at 45 per cent as compared with the awareness of farmers about other channels of marketing like contract farming, direct purchase or farmer consumer market yard, though all the traders and CAs were aware of all the channels.

Another recent initiative of the government has been the deficiency price payment or Bhavantar Bhugtaan Yojana (BBY) which is supposed to be an alternative to the MSP and procurement system in place now. This has been tried in a few states

like MP (for non-perishables) and Haryana (for perishables) and in only selected crops. There have been recent studies on the rationale and effectiveness of BBY or DPP which point out its various lacunae which include: delayed payments due to determination of monthly modal price (minimum 45 days, (Sekhar *et al.*, 2018)), implementation only in notified crops and limited period of sale for farmers for availing benefit of DPP (Sekhar *et al.*, 2018), collusive depression of prices by traders, and multiple registrations needed by the farmers as this scheme is notified for different crops in each state which also differ from season to season and across years (Haque and Joshi, 2018) and limit on the maximum quantity sold (limited by area sown and average yield per acre at the district level) which can be claimed under it (Sekhar *et al.*, 2018). It is also not an income assurance scheme as it is not an alternative to both MSP and crop insurance as it only takes care of prices, not yields (Singh, 2015).

The other challenges in DPP include: due to differences in cost of cultivation and yields, MSP and district average yield based DPS would be inequitable for farmers placed in different regions; sale of inferior quality produce by the farmers under DPP has an adverse selection problem (Sekhar *et al.*, 2018), in situation of gluts and over production of a crop, the programme implementation costs can be very high like the MSP implementation costs due to low market prices, unless deficiency payment is limited to around 10 per cent of MSP or market price; artificial shortage or glut created by the intermediaries can lead to very high gap between market price and DPP or MSP; danger of MSP being killed by this alternative instead of its supplementation; lack of land and other identity proofs for its use by farmers, and also exclusion of tenant and lessee farmers who have no land titles to claim the benefit which may go to land owners; downfall of market prices due to absence of MSP and procurement under it; and finally, DPP being seen as market distorting under the WTO regime as farmer decisions would be driven by it (Haque and Joshi, 2018); and farmers may use it as income hedging mechanism and may not go by market signals in their production decisions (moral hazard problem) and may not have the incentive to try to get the best price. Interestingly, it has a storage subsidy component which is neither implemented nor known to the farmers. Secondly, the deficiency of price is based on modal price which is the average of given mandi modal price and the two other neighbouring state mandi modal prices or sale price whichever is higher (Sekhar *et al.*, 2018).

There are even estimates of the fiscal burden the government would have to incur if some crops are included under it as against others, and whether annual harvest prices and MSP or previous three- year average of market prices instead of MSP and the price for the year in question should be the criterion to calculate the price difference or deficiency in price. It is found that in the present Indian context, MSP based DPP works out to be beneficial for the farmer and the three-year reference prices based mechanism works better for the government in terms of lower payouts though it is stated that any DPP alternative would be better for both farmers and the

government compared with MSP based procurement and its management. Further, given the regional variations in cost of production and spatial variations in prices due to lack of spatial integration of markets, farmers located in different parts of the country would benefit or lose even in the same crop at the same time or benefit differently from the DPP scheme (Haque and Joshi, 2018).

3.2 Market Based Measures to Enhance Farm Income

The limitation of MSP mechanism becomes evident from an estimation carried out by Balaji *et al.*, 2017 wherein it is shown that in the case of gram, in order to double farmer incomes by 2022 in the states of Madhya Pradesh, Maharashtra and Rajasthan, the farm harvest prices need to increase by Rs.200 to Rs.600 per quintal which would give higher per hectare income of the order of Rs.1000 to Rs.4000. On the other hand, in the case of arhar, an MSP increase of Rs.200 to Rs.600 across the states would double the real farmer income though this would be lower by Rs.500 to Rs.3000 per hectare than the present situation. This assumed 10 per cent increase over the existing MSP. Since there is a limit to how much the state (government) can do directly on its own to improve the demand side of agricultural markets for better farmer incomes, it is important to examine the other market based and community bases alternatives like contract farming and direct purchase or farmer collectives for achieving higher farmer incomes.

As most of the produce is sold to private traders (60-80 per cent) except paddy and wheat (40 per cent and 30 per cent of the season respectively, and only less than 20 per cent is sold to co-operative channel in wheat and paddy), it is important to examine the nature and performance of private channels for delivery of better prices and lower transaction cost to farmer sellers. The very unavailability of procurement agency and lack of local purchase were among the top three reasons for MSP aware cultivating households not selling to procurement agencies. The farmer collectives and private agencies provided lower cost transport and warehousing facilities for the farmers to access markets and sell their produce when prices were better (Mukesh and Srivastava, 2019).

It is interesting to note that in *kharif*, only 4 per cent (sugarcane) to 59 per cent (soyabean) farmers across crops sold through the APMC market and only in paddy and sugarcane, a significant proportion (17 per cent and 50 per cent) was sold through the co-operative or the government agency. The APMC mandi sales for *rabi* ranged from 2 per cent in sugarcane to 64 per cent in gram and 6 per cent and 57 per cent through the cooperative and the government channels for sugarcane and paddy. Interestingly, in maize and wheat, there was significant presence of co-operative and government channel during *rabi* season (15 per cent and 19 per cent). It was mostly in sugarcane, paddy and cotton crops that the farmers had sold to procurement agency in *kharif* and in sugarcane, jowar, barley, and paddy besides cotton, in *rabi* season. The awareness of MSP was very low (<20 per cent) across the crops other than

sugarcane, paddy, coconut, wheat, cotton and jowar (from 20 per cent to 45 per cent across crops) and the procurement agency awareness even lower than this (<10 and <15 per cent in *kharif* and *rabi* seasons). Surprisingly, in crops like arhar, cotton, soybean, jowar and mung in *kharif*, and cotton and arhar in *rabi*, a significant proportion of farmers reported receiving better market price than MSP and, therefore, had not sold to the government agency at MSP (Mukesh and Srivastava, 2019).

Another recent study of the functioning of APMC market in sweet potato in Karnataka revealed that no farmers stored the produce after harvest and it was mostly sold during months of December, September, October and November in the APMC in that order in terms of percentage of total produce sold in the market. In more than 80 per cent cases, the farmers were immediately paid in cash. The farmers incurred very high cost in commission, packaging, cleaning, and transportation and received only 20 per cent of the consumer price with various intermediaries' earnings margins which were 56 per cent of consumer price. On the other hand, when a farmer was able to sell directly to commission agents or traders in the APMC for sending the produce to the retail channels directly, the producer share rose to 30 per cent despite the total margins of retailers and commission agents being 64 per cent as there were no wholesalers in this channel (Prakash *et al.*, 2018). In fact, only 7 per cent produce is graded at the farm level (40 per cent in pigeon pea in Gulbarga), there is manual assessment of quality, and auction missing or not competitive enough (esp. in perishable produce markets) (Pavithra *et al.*, 2018).

Thus, establishing market linkages between farmers and buyers would bring transparency in the pricing and better value, especially for perishable products. It will enable the downstream players to source more effectively by eliminating the intermediaries. Promoting direct market linkage for the farmers is estimated to give 8-10 per cent higher farm incomes (Goyal *et al.*, 2018).

There is no doubt that contract farming helps the farmers to earn more than in other channels of selling (Singh, 2002; Kumar, 2006; Kharumnuid *et al.*, 2017; Kaur and Singla, 2018). It also helps to shift market risk to the contract agency. But, there are issues of higher cost of production in contract farming as compared with non-contract situation and exclusion of the marginal and small farmers with the exception of a few crops (Singh, 2002; Kumar 2006; Singh, 2012; Sharma 2016; Mishra *et al.*, 2018; Kaur and Singla, 2018; Ton *et al.*, 2018). Even in gherkins, the land holdings of contract growers were much larger (7.4 acres) and more irrigated as compared with those of non-contract growers (4.9 acres) (Swain, 2011). This requires policy and practice interventions to make contract farming inclusive and effective for small producers (Singh, 2013). It is for this reason that research and policy have been concerned about the inclusiveness of business models globally (Melese, 2012; Vorley *et al.*, 2012; Singh, 2018b) and, for some time now, FAO has been looking at the issue and designing and propagating responsible contracts and contract practices (FAO, 2012; FAO and IISD, 2018). It is the organisation of the growers into some

collective which can make them benefit from contract farming due to higher bargaining power.

That value addition and agro processing can make difference to the farmers' income is brought out by a case study of mango processing in Tamil Nadu where the farmers supplying to the processing unit earned 49 per cent more as compared to the non-supplying farmers. This was possible because the unit procured directly from the farmers or through local contractors and was able to buy more than 80 per cent of its raw material from within the district and another 8 per cent within the state and was exporting more than 50 per cent of the total output (13 per cent directly). In fact, 94 per cent of the total mango production by the farmers went to the processing industry directly or through contractors and commission agents handled only 3 per cent of the production for various channels. Compared to the 50 per cent farmer share in consumer price in trade channel and 55 per cent through the commission agent, the processor linkage had 63 per cent producer share in consumer rupee. The farmer also valued assured market, prompt payment, absence of intermediaries, for their higher income, and technical guidance, low cost credit, and no rejections as important input benefits in their linkage with the processor (Venkatesh *et al.*, 2017).

Further, governments encouragement for more equitable contracts by facilitating contracts, providing information, designing model contracts and monitoring supervising or regulating contracts also helps as was the case in the Philippines where oil palm grower contracts were monitored for their implementation and extension provided by the Department of Agriculture. This was the case in Zambia as well in contract farming schemes in sugarcane and cotton (Schupbach, 2014). Small scale sugarcane contract farmers working on small plots of (7 hectares each) long term leased land by the foreign investment based company, which also had its own farms/estates, under a renewable formal written agreement including code of conduct for lease contract farmers, had higher yields than the company estate, and achieved higher income compared with that by their non-contract participants. This was true for cotton contract farming as well and the effect on net agricultural and household incomes was even larger when the degree of involvement in contract farming was taken into account. Infact, the out growers finally ended up owning a part of the company as shareholders (13 per cent) (Schupbach, 2014).

That private sector investments can also help inclusion is shown by Plenty Foods in Sri Lanka where it was committed to working with small farmers as part of its business model which involved direct contract farming and with Oxfam intervention it moved from individual contracts to producer organisation model and working with groups which led to lower transaction costs for it as the other stakeholders like private financial institutions and training institutions took care of those interfaces with the farmers and their groups and still had higher reach in terms of the number of farmers. The company set up crop based steering committees within village level farmer organisations to transfer technology, know how, and farming techniques and they, in turn, selected a lead farmer to liaise with different service providers including

Plenty Foods. Plenty Foods had a four-partite contract farming agreement with Department of Agriculture (DoA), financial service provider and producer organisations under which DoA provided extension services. This led to 500 farmers in 32 groups being covered by Plenty Foods, with 70 per cent of the crop management committees being led by women and higher yields and incomes for the growers, besides Plenty Foods benefitting in its brand reputation as a socially responsible company (Jayadevan, 2011). This is similar to the national level four-sector co-operation plan attempted in Thailand as part of its national plans during the 1980s and 1990s (Singh, 2005). There are a few exporting firms in India which are inclusive of small producers and the primary marketing organisation (PMO) provision of the Global GAP has also facilitated this (Singh, 2018b).

IV

HOW NOT TO REFORM MARKETS

That agricultural market reforms can do more damage than good if not thought through for their intent and implications is bought out by some recent reforms attempted/undertaken by some states and by the Union government. The model Agricultural Produce and Livestock Markets Act, 2017 (APLMA) for the first time mandates the APLM Committee to take measures to prevent sale/purchase of produce below MSP in APLM market, if applicable (Government of India, 2017, p.40; Singh, 2018c).

Recently, Maharashtra government, under pressure from farmer lobbies, made it mandatory for private traders also to buy farmer produce at MSP if applicable, by amending the APMC Act. But, it had to retract immediately as traders across the state went on strike and, genuinely so, as the MSP is promised by the state and not by the private trade and, therefore, should be delivered by the state directly or indirectly by making markets competitive. The traders cannot be penalised for what has been committed but not delivered by the state as traders buy and sell as per market conditions (demand and supply) because they are in their own market based operations.

More recently, Gujarat traders and farmers came together to demand that National Agricultural Co-operative Marketing Federation (NAFED) should not buy/procure directly from the farmers but implement Bhavantar Bhugtaan Yojana ((BBY or deficiency price payment (DPP)) as this affects the private traders as they lose the chance to buy that produce. This is a classic case of new agrarian political economy of markets where farmers and traders who, are generally adversaries, have come together to strike so that they could fleece the state both ways - by getting price benefit by way of BBY where traders can manipulate prices to benefit themselves and the farmers. It is ironic that, on the one hand, farmers and their unions claim that MSP is not effective as it is not backed by procurement, and on the other hand, both farmers and traders in this case don't want a public agency to procure but want BBY!

In fact, this is another case of farmer and trader lobbies coming together as there are many traders with farming background in Gujarat as has happened in Punjab and some other states. In this kind of political economy only, there has been strong opposition to direct payment to farmers in Punjab by FCI and Cotton Corporation of India (CCI) for the last 15 years as there is interlocking of markets of credit and produce and the state government has been siding with the *arthiyas*/traders as many traders are also farmers (30 per cent) and these *arthiyas* resort to money lending to farmers as completely illegal and informal activity and recover their payments from the proceeds of the produce sold by farmers through them (Singh, 2006; Singh and Dhaliwal, 2011; Singh and Bhogal, 2015; Singh, 2016).

4.1 Regulation and Promotion of Existing and New Channels

The biggest change in the domain of APMC as per model APLM Act, 2017 is that it would not regulate marketing of notified agricultural produce in its delineated market area, but only in principal, sub-market and market sub-yards. Here, the issue then is: who would regulate direct purchase outside the market yard by direct buyers like food supermarkets or traders or exporters? Even if market fee has to be collected on such produce (which is recommended to be one-fourth of the applicable market fee), how would that be recorded and monitored and verified? This is also contradictory to Section 4(1) of the Act which declares the whole state as one unified market. If this unified market is still to be regulated for the benefit of the farmer as seller and for fair play for all involved, who would do it as the APLMC has no jurisdiction outside the principal market yard or sub market yard or market sub-yard? (Singh, 2018). Unfortunately, the model APLM Act, 2017 still maintains the Commission Agent (CA or *Arthiya*) as the central actor in the APMCs whereas this institution of CA should ideally have been done away with as now there are many new actors like Primary Agricultural Co-operative Societies (PACS), Produce Companies (PCs) and other Farmer Producer Organisations (FPOs) which are already procuring from farmers in states like UP, Bihar, and Madhya Pradesh for FCI and other public agencies at the local level and are also bringing in credit and other input and market linkages to their member and non-member farmers. Infact, Madhya Pradesh did away with CAs from the APMC markets during the 1980s itself which is not even discussed often (Singh, 2018a).

The model Agricultural Produce and Livestock Contract Farming and Services Act (APLCFSA), 2018 bids goodbye to regulation as an objective as it is titled as APLCFS (promotion and facilitation) Act. That the committee has gone overboard in facilitating contract farming for the benefit of private agencies as against the farmer interest is also clear in the fact that the Act has provision for the producer leasing out agricultural land to the sponsor-lessee for contract farming under this Act, not inconsistent to state's law or any other law at the time being in force (Government of India, 2018, p.26). How can a committee mandated to legislate on contract farming

step into the domain of land leasing issues when there is a separate model land leasing Act proposed by the Niti Aayog and when there are state level laws to permit or restrict land leases? This clearly would allow sponsors full access to farm land, not just through contract farming (Singh, 2018c).

It is surprising that the model Act could not think of the much needed group contracts. That group contracts are already in practice in India in Gujarat in crops like potato and that they were a deliberate choice of the Thai state for leveraging contract farming for agricultural development has been unfortunately ignored completely (Singh, 2018c).

The biggest anti-thesis of CF in the Act is the provision which states that the contract farming Board would ensure buying of entire pre-agreed produce of the grower by the contracting agency which goes against the very logic of quality promotion and standards in the market. Though it sounds good to protect producer interest this way, but it would be quite problematic to ensure this as when a contract specifies the quality standards beforehand, why should a buyer buy lower quality produce which may not be needed by them? In practice, the contracting agencies do buy some of the lower quality produce as part of the agreement to give a market outlet for the farmers but it is always a source of conflict as the prices offered for this rejected or lower quality produce (sometimes on flimsy grounds) are very low or nominal (Singh, 2002; 2013). Further, the Act links contract price to market price which is the anti-thesis of contract farming philosophy as if the agency has to go by market prices which may not be efficiently discovered, then why should it go for contract farming? The reason for undertaking contract farming is that the desired quality and cost are not available to the agency in the open market. In fact, one of the states in India (Haryana) had linked the contract price to the MSP whichever crop it was relevant for, and that was undesirable as the contract price cannot be tied to any other price mandatorily as the costs and yields can also be grounds for the farmers to get into contract farming, not just price (Singh, 2018c). For more detailed analysis of this Act, see Singh, 2018c.

V

CONCLUSIONS

Since agricultural market reforms are about giving farmers a choice of channels, therefore, all channels, i.e., direct purchase, contract farming, farmer consumer market yard, private wholesale market, and APMC needs to be promoted and regulated as one or two channels cannot provide effective marketing facility for all the farmers, especially the marginal and small farmers in India in any state.

More importantly, it is the value creation and value capture in a value chain like new products or product differentiation through new ways of producing them or just promoting them to create intangible product differentiation that can help to tap new market segments and get a higher price for the farmer from the same amount of

produce. The differentiation could be in terms of product quality, process quality like organic or non-pesticide management (NPM) practices or other good agricultural practices, its delivery, safety, local origin or simple branding and its promotion (Roy and Verma, 2019). This requires value chain based interventions and innovations in products processes, organisations and institutions. These kind of value chain interventions for higher farmer income would require new institutional arrangements, creation of agricultural clusters, more competitive buying channels, and choice of channels for the farmers. This requires the presence of and an intervention by producers' collectives to create and capture value from high value produce along with or without private sector.

For raising farm incomes, there is a need to reorganise agriculture in terms of institutions at local level with farmers becoming part of collectives like co-operatives, and producer companies, to get involved into the domestic and global value chains where they can help the farmer to lower the cost of production and marketing and achieve scale to realise higher prices and surpluses. This requires investment in agriculture and agribusiness by converting subsidies into investments.

So far as the role of FPOs is concerned, the government should bring FPOs in the procurement of pulses. If this happens, it is bound to provide a valuable business opportunity to the FPOs concerned, besides helping farmers get good prices. The APMC licenses (for buying and for facilitating sale purchase as agents) should be extended liberally to any agro entrepreneur or rural youth and farmer producer companies (PCs) for more competition in these markets for better price discovery.

The system of warehouse receipts is very important in making farmers avoid distress sale and realize remunerative price for their produce. The government agencies should promote and invest in creation of warehouse infrastructure both in the private and public (APMC) sectors so that the farmers can get working capital and investment loans against the produce without resorting to distress sale.

Even the residue of major crops like paddy and cotton which is burnt in many states and has become a policy and social issue, can be utilised to create new source of income for the landless and marginal farmers and other rural workers, as part of the agro-industrialisation process which is logical corollary of agricultural growth and development.

The experience of contract farming across the globe suggests that it is not the contract per se which is harmful as a system but how it is practised in a given context. If there are enough mechanisms like group contracts, producer companies/associations, Non-Government Organisations (NGOs), and regulation of contracts, to monitor and use the contracts for facilitating development of smallholders, it can certainly lead to a betterment of all the parties involved, especially the small and marginal farmers. In the emerging environment of 'triple bottom line' of people, planet and profits, corporate agencies need to incorporate the 'people' and 'planet' concerns into their strategies and actions so that sustainability of both business as well as smallholders is achieved and sustained. Besides contract farming, there could

be other alternatives like farmer-owned business, joint ventures and management contracts to benefit from agribusiness opportunities.

The government can help create value in the agricultural sector by way of: enabling the shift towards improving farmer incomes through a focus on crucial areas like storage, and market access to cater to local, national, and export demand; enabling shift towards high value crops through differentiated value chain strategies; and shift in focus from primary production towards value addition and retail (Goyal *et al.*, 2017).

Finally, it is important to realise that whatever expansion contract farming and direct purchase may witness, India's large mass of marginal and small farmers would need public and private wholesale markets which need to be reformed and set up respectively as they are the last resort for a large majority of them. These markets need to be reformed in terms of free licensing for better competition, e-payment of market fee, ensuring open auction, better facilities, representation of producer companies in APLM management and even denotification of Commission Agents/*Arthiyas* as Madhya Pradesh did it in 1985 though it is not widely known and discussed even today. The reform of APLM markets is important as they serve as competitors to contract farming and 'direct' purchase practiced by retail chains and other buyers, and even upcoming private wholesale markets, and can help improve the terms offered by retail chains and contracting agencies to the growers as the contract/direct purchase prices are unfortunately benchmarked to APLM prices and the Act also takes this route to contract prices.

REFERENCES

- Acharya, S. (2017), "Effective Implementation of Agricultural Price and Marketing Policy for Doubling Farmers' Incomes: Doable Priority Actions", *Agricultural Economics Research Review*, Vol.30, pp.1-12.
- Aditya, K.S.; S.P. Subash, K.V. Praveen, M.L. Nithyashree, N. Bhuvana and A. Sharma (2017), "Awareness of Minimum Support Price and Its Impact on Diversification Decision of Farmers in India", *Asia and the Pacific Policy Studies*, 4(3), 514-526.
- Agarwal, B. and A. Agrawal (2017), "Do Farmers Really Like Farming? Indian Farmers in Transition", *Oxford Development Studies*, DOI:10.1080/13600818.2017.1283010.
- Agarwal, P., R. Singh and O.P. Singh (2019), "New Agricultural Marketing System: Awareness, Status, Perceptions and Impact in Uttarakhand", *Indian Journal of Agricultural Marketing*, Vol.33, No.1, pp.44-53.
- Balaji, S.J.; Kishore P., R. Saxena, N.P. Singh and D. Franco (2017), Technology – Policy Tradeoff in Doubling Farmers' Income: A Case Study on Pulses, *Agricultural Economics Research Review*, Vol.30 (Conference Number), pp.117-126.
- Basantaray, A.K. and G. Nancharaiah (2017), "Relationship between Crop Diversification and Farm Income in Odisha – An Empirical Analysis", *Agricultural Economics Research Review*, Vol.30 (Conference Number), pp.45-88.
- Chand, R. (2017), *Doubling Farmers' Income – Rationale, Strategy, Prospects and Action Plan*, NITI Policy Paper No. 1/2017, Niti Aayog, Government of India, New Delhi, March.

- Das, R. (2017), "Raising Farm Income in India: What Does a Simultaneous Quantile Regression Approach Tell", *Agricultural Economics Research Review*, Vol.30 (Conference Number), pp.257-268.
- Food and Agriculture Organisation (FAO) (2012), *Guiding Principles for Responsible Contract Farming Operations*, Food and Agriculture Organisation (FAO), Rome.
- Food and Agriculture Organisation (FAO) and IISD (2018), *Model Agreement for Responsible Contract Farming*, with Commentary, Food and Agriculture Organisation (FAO), Rome.
- Goyal, A.; C. Rajagopalan, L. Goedde and N. Nathani (2017), *Harvesting Golden Opportunities in Indian Agriculture: From Food Security to Farmers' Income Security by 2025*, McKinsey & Company, July.
- Government of Chhattisgarh (2017), Roadmap for Doubling of Farmers income in Chhattisgarh by 2022, Government of Chhattisgarh (GoC), Department of Agriculture and Food Processing, Raipur.
- Government of India (2017), *Model Act (The--- State/UT Agricultural Produce and Livestock Marketing (Promotion and Facilitation) Act, 2017*, April, MoAFW, Department of Agriculture, Co-operation and Farmers' Welfare, Government of India.
- Government of India (2018), *Model Act (The--- State/UT Agricultural Produce and Livestock Contract Farming and Services (Promotion and Facilitation) Act, 2018*, February, MoAFW, Department of Agriculture, Co-Operation and Farmers' Welfare, Government of India.
- Government of Madhya Pradesh (2016), Roadmap for Doubling M P Farmers Income in 5 years, Government of Madhya Pradesh (GoMP), Bhopal.
- Haque, T. and P.K. Joshi (2018), "Price Deficiency Payments and Minimum Support Prices- A study of selected crops in India", *Economic and Political Weekly*, Vol.53, No.20, 19 May, pp.53-60.
- Jayadevan, G. (2011), "Growing Partnerships - Private Sector Working with Farmers in Sri Lanka", in Wilson, D., K. Wilson and C. Harvey (Eds.) (2011), *Small Farmers, Big Change: Scaling Up Impact in Smallholder Agriculture*, Practical Action and Oxfam, Warwickshire and Oxford, Chapter 6, pp.1-94.
- Kaur, P. and N. Singla (2018): "Can Contract Farming Double Farmers' Income?" *Economic and Political Weekly*, Vol.53, No.51, 29 December, pp.68-73.
- Kharumnuid, P.; S. Sarkar, P. Singh, S. Priya, B.S. Tomar, and D.K. Singh (2017), "An Assessment of Contract Farming System for Potato Seed Production in Punjab - A Case Study", *Indian Journal of Horticulture*, Vol.74, No.3, pp.453-457.
- Kiresur, V.R.; M.R. Nayak, G.M. Gaddi and K.S. Khyadagi (2017), "Improved Farm Technology Adoption and its Role in Doubling Farmers' Income: A Case of Dry Zones in Karnataka", *Agricultural Economics Research Review*, Vol.30 (Conference Number), pp.217-231.
- Kumar, P. (2006), "Contract Farming through Agribusiness Firms and State Corporation: A Case Study in Punjab", *Economic and Political Weekly*, Vol.41, No.52, 30 December, pp.5367-75.
- Mandal, S.; D. Burman, U.K. Mandal, T.D. Lama, B. Maji and P.C. Sharma (2017), "Challenges, Options and Strategies for Doubling Farmers' Income in West Bengal – Reflections from Coastal Region", *Agricultural Economics Research Review*, Vol.30 (Conference Number), pp.89-100.
- Melese, A.T. (2012), "Contract Farming: Business Models that Maximise the Inclusion of and Benefits for Smallholders in the Value Chain", *Rev. Dr. Unif.*, pp.291-306.
- Mishra, A.K.; A. Kumar and A. Dsouza (2018), "How Can Organic Rice be a Boon to Smallholders? Evidence from Contract Farming in India", *Food Policy*, Vol.75, pp.147-157.
- Mukesh and N. Srivastava (2019), "Data Driven Road Map for Doubling Income for Farmers of India", *Statistics and Applications*, Vol.17, No.1, pp.235-259.
- Parappurthu, S.; G. George, R. Narayanakumar, N. Awasthy, C. Ramachandran and A. Gopalakrishnan (2017), "Priorities and Strategies to Boost Incomes of Marine Fisher Folk in India", *Agricultural Economics Research Review*, Vol.30 (Conference Number), pp.205-216.
- Pavithra, S., C.P. Gracy, R. Saxena and G.G. Patil (2018), "Innovations in Agricultural Marketing: A Case Study of E-Tendering System in Karnataka, India", *Agricultural Economics Research Review*, Vol.31, No.1, pp.53-64.

- Prakash, P.; D. Jaganathan, P.S. Sivakumar, S. Immanuel, P. Kishore and P. Kumar (2018), "Does APMC Market Increase Farmer's Income? Evidence from Value Chain Analysis of Sweet Potato in Karnataka", *Indian Journal of Agricultural Economics*, Vol.73, No.3, July-September, pp.342-357.
- Rao, B.D.; D.N. Mukherjee and V.A.Tonapi (2017), "Strategies for Doubling Farmers' Income in Nutri-Cereals by 2022: Impact of Reduction of Yield Gaps and Inclusion of Fallow and Wasteland under Cultivation", *Agricultural Economics Research Review*, Vol.30 (Conference Number), pp.183-191.
- Roy, D. and S. Verma (2018), "Product Differentiation to Tackle Farm Distress", *Economic and Political Weekly*, Vol.54, No.19, 11 May, pp.18-21.
- Saxena, R.; N.P. Singh, B. Choudhary, S.J. Balaji, R.K. Paul, U. Ahuja, D. Joshi, R. Kumar and M.A. Khan (2017), "Can Livestock Sector be the Game Changer in Enhancing the Farmers' Income? Reinvesting Thrust with Special Focus on Dairy Sector", *Agricultural Economics Research Review*, Vol. 30 (Conference Number), pp.59-76.
- Satyasai, K.J.S. and N. Mehrotra (2016), Enhancing Farmers' Income, NABARD Foundation Day Seminar, July 12.
- Schneider, M. (2016), "Dragon Head Enterprises and the State of Agribusiness in China", *Journal of Agrarian Change*, doi:10.1111/joac.12151.
- Schupbach, J.M. (2014), "Foreign Direct Investment in Agriculture-The Impact of Outgrower Scheme and Large Scale Farm Employment on Economic Wellbeing in Zambia", Ph.D. Thesis No.22287, University of Zurich.
- Sekhar, C.S.C.; A. Tripathi and Y. Bhatt (2018), "Ensuring MSP to Farmers-Are Deficiency Payment an Option", *Economic and Political Weekly*, Vol.53, No.51, 29 December, pp.50-57.
- Sekhar, C.S.C. and Y. Bhatt (2019), "Electronic National Agricultural Market: (e-NAM): A Review of Performance and Prospects in Haryana", *Agricultural Situation in India*, Vol.75, No.10, January, pp.39-44.
- Sharma, N. (2016), "Does Contract Farming Improve Farmers' Income and Efficiency? A Case Study from Punjab", *Economic and Political Weekly*, Vol.51, No.40, 1 October, pp.63-69.
- Singh, D.R.; P. Kumar, A. Kar, G.K. Jha and A. Kumar (2017), "Solar Energy Use in Agriculture for Enhancing Farmers' Income: A Case of Solar Tube Wells in North-Western Rajasthan", *Agricultural Economics Research Review*, Vol.30 (Conference Number), pp.269-277.
- Singh, S. (2002), "Contracting Out Solutions: Political Economy of Contract Farming in the Indian Punjab", *World Development*, Vol.30, No.9, pp.1621-38.
- Singh, S. (2005), "Role of the State in Contract Farming in Thailand: Experience and Lessons", *ASEAN Economic Bulletin*, Vol.22, No.2, pp.217-228. (now *Journal of Southeast Asian Economies* from 2013).
- Singh, S. (2006), "Credit, Indebtedness and Farmer Suicides in Punjab – Some Missing Links", *Economic and Political Weekly*, Vol.41, No.30, 29 July.
- Singh, S. (2012), "New Markets for Smallholders in India: Exclusion, Policy and Mechanisms", *Economic and Political Weekly*, Vol.47, No.52, 29 December, pp.95-105
- Singh, S. (2013), "The Practice of Contract Farming in India: Making it Inclusive and Effective", *Food Chain*, Vol.3, No.3, pp.137-154.
- Singh, S. (2015), Crop Insurance or Deficiency Payments? *Mint*, Ahmedabad, December 21.
- Singh, S. (2016), "Arthiyas in Punjab's APMC Mandis: Inadequate Analysis and Solutions", *Economic and Political Weekly*, 51.
- Singh, S. (2018a), "Doubling Farmers Income: Mechanisms and Challenges," *Economic and Political Weekly*, Vol.53, No.7, 17 February, pp.15-19.
- Singh, S. (2018b), "Food Value Chain Investments and the Small Farmer Linkage: Indian Experience, Potential and Policy", *World Food Policy*, Vol.4, No.2, pp.79-100.
- Singh, S. (2018c), "Reforming Agricultural Markets in India: A Tale of Two Model Acts", *Economic and Political Weekly*, Vol.53, No.51, 29 December, pp.44-49.
- Singh, S. and S. Bhogal (2015), "Commission Agent System: Significance in Contemporary Agricultural Economy of Punjab", *Economic and Political Weekly*, Vol.50, No.45, 7 November, pp.56-62.

- Singh, S. and T.K. Dhaliwal (2011), *Taking More Than a Commission- A Critique of the, Commission Agent System in Punjab Agriculture*, Aakar Books, Delhi.
- Sirohi, S.; V. Sridhar, A.K. Srivastava, S.S. Kalamkar, D. Sharma and V. Booyal (2017), "Ration Balancing: Promising Option for Doubling Income from Dairying", *Agricultural Economics Research Review*, Vol.30 (Conference Number), pp.193-203.
- Swain, B.B. (2011), "Contract Farming in Andhra Pradesh: A Case of Rice Seed and Gherkin Cultivation", *Economic and Political Weekly*, Vol.46, No.42, 15 October, pp.60-68.
- Ton, G.; W. Vellema, S. Desiere, S. Weituschat, and M.D.'Haese (2018), "Contract Farming for Improving Smallholder Incomes: What Can We Learn from Effectiveness Studies", *World Development*, Vol.104, pp.46-64.
- Venkatesh, P.; M. Balasubramanian, K.V. Praveen., K.S. Aditya., V. Babu, D., M.L. Nithyashree and A. Kar (2017), "Agro-Processing Industry and Farmers' Linkages: Pattern and Impact on Enhancing Farmers' Income in Tamil Nadu", *Agricultural Economics Research Review*, Vol.30 (Conference Number), pp.13-25.
- Vorley, B.; L. Cotula and M. Chan (2012), *Tipping the Balance: Policies to Shape Agricultural Investments and Markets in Favour of Small Scale Farmers*, Oxfam International, December.