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Impact of COVID-19 in the Agricultural Sector –An Overview of post-pandemic Strategy of Recovery

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Abstract

The novel Coronavirus (COVID-19) pandemic has rapidly spread across the world, adversely affecting the lives and livelihoods of millions across the globe. India reported its first infection on 30 January 2020, prompting the authorities to soon initiate various measures to contain the spread of the epidemic. Given that the disease is highly contagious, the much-needed nation-wide lockdown was enforced starting 25 March 2020 in order to contain the spread of COVID-19 pandemic. COVID-19 pandemic has disrupted the Indian agricultural system extensively. Nevertheless, the recent quarterly GDP estimates post-COVID scenario showcase robustness and resilience in Indian agriculture, the only sector to register a positive growth of 3.4% during the financial year (FY here after) 2020–21. The pandemic wreaked a substantial physical, social, economic and emotional havoc on all the stakeholders of Indian agricultural system. Seizing the crisis as an opportunity, the state announced a raft of measures and long-pending reforms. We propose a 10-point strategy ranging from social safety nets, family farming, monetizing buffer stock, staggered procurement to secondary agriculture to revive and prosper post-pandemic.

Keywords :COVID-19, agricultural system, food system, COVID impact, **post-pandemic** recovery strategy.

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Introduction

The novel Coronavirus (COVID-19) pandemic has rapidly spread across the world, adversely affecting the lives and livelihoods of millions across the globe. COVID-19, originating from Wuhan, China – the epicentre – has eventually spread through the whole world and emerged into a pandemic. India has already become a hotspot for the virus, next to the USA, infecting 9.6 million (14.6% of global infection) as of December 6th, 2020 which has resulted in a decline of 23.9% gross domestic product in quarter 1, FY 2020–21. A pandemic shock can have a greater significance on economies due to lost human lives compared to a weather shock such as drought or flood or a trade embargo.

India reported its first infection on 30 January 2020, prompting the authorities to soon initiate various measures to contain the spread of the epidemic. Given that the disease is highly contagious, the much-needed nation-wide lockdown was enforced starting 25 March 2020 in order to contain the spread of COVID-19 pandemic. During the initial few weeks, the restrictions were strict and all non-essential activities and businesses, including retail establishments, educational institutions, places of religious worship, across the country were prohibited from operating. Subsequently, these restrictions are being gradually eased in a phased manner in most parts of the country. As the restrictions imposed due to the lockdown are being lifted, it is an opportune moment to analyse the impact of COVID-19 on different sectors of the economy. A number of reports have pointed towards the possibility of contraction of Indian GDP in 2020-21. This is a worrisome indication, since a higher GDP contributes immensely towards achieving better living standards, reduced poverty as well as improvement in other socio-economic indicators. While other sectors are reported to be under significant stress, it is important to analyse the impact on agricultural and allied sectors which provide likelihood to majority of the population in India.

The agricultural & allied sector carries immense importance for the Indian economy. It contributes nearly one-sixth to the Indian national income and provides employment to nearly 50% of the workforce. It is fundamental for ensuring food security of the nation and also influences the growth of secondary and tertiary sector of the economy through its forward and backward linkages. The performance of agricultural sector greatly influences achievements on many other fronts. For instance, World Development Report 2008 released by World Bank emphasises that growth in agriculture is, on average, at least twice as effective in reducing poverty as growth outside agriculture. Agricultural growth reduces poverty directly, by raising farm incomes, and indirectly, through generating employment and reducing food prices. In other words, a thriving agricultural sector is a boon for most sectors of the Indian economy.

Undoubtedly, all these shocks affect agricultural systems; however, pandemic shocks affect all the sectors of an economy. The pandemic disrupts demand and supply of food impacting the global supply chain; while droughts tend to be localized affecting only the associated sector or stakeholders. Similarly, shocks due to a trade embargo affect a particular sector and can be corrected in the short-term with suitable policy measures. For instance, in case of supply shortage due to droughts, globally linked wholesalers and retailers procure from other sources to avoid adverse effects. On the contrary, pandemic impact may be far-reaching and harsher and may even plunge a country into recession.

Impact of agricultural system: Production, Marketing and Consumption

Uncertainty imposed by the crisis, restrictions on inter-state movements and absence of transportation disrupted the food supply chains and spiked food prices and affected farm operations. Our analysis using the official time series price data of 284 days spanning from 01.11.2019 to 10.08.2020[9] of major food commodities indicated that the wholesale and retail prices of pulses, wheat flour and milk was 1–5% higher a month post-lockdown; prices of edible oils and staple cereals (rice and wheat) were 4–9% lower because of removing import restrictions and government interventions like free distribution of food grains. Vegetable prices rose with tomato prices increasing by 77–78% in a week and 114–117% a month post lockdown. Markets saw increased arrivals in May owing to distress sale and market reforms insulated farmers from lower prices. Smaller cities and rural areas saw higher price rises than the urban areas.

Survey results indicated that three-fourths of the consumers reported a price rise in food commodities during the lockdown. The concern is that the skyrocketing prices might lead to social unrest; however, the Government of India has managed the situation deftly with timely market reforms and social safety nets for the poor, migrants and farmers. Looking at the scale of COVID-19 spread and the panic created, food prices were quite resilient (except for vegetables). Resilience of the sector might be partly due to timely short term policy support and therefore we are nowhere near a price spike yet..

COVID-19 induced lockdown in India disrupted food markets which forced consumers to alter their consumption patterns. Consumers prioritized what they wanted and what they really needed. Various surveys report that individuals lost their jobs or their income decreased during lockdown. The lockdown coupled with sudden negative income shock posed serious concerns about food and nutrition security in India. In a survey of 2259 migrant youth, 32% reduced their daily food intake. Consumers changed their behaviour patterns by reducing consumption of non-essentials, reduced market visits, stocking and consumption behaviour changed equally across intensity of incidence *viz.*, green, orange and red.

Strategy of post COVID-19

Our aforementioned discussion on the impact of COVID-19 on the Indian agricultural system enabled us to arrive at a 10-point strategy for strengthening the sector against the crisis and sustainability issues posed by the pandemic.

Social safety nets:

The imminent shut down stopped production leading to job and income loss and demand recession. The pandemic also led to food loss and wastages that affected the food and nutrition security especially of the vulnerable sector, though briefly, and can have lifelong impacts on capabilities. The government and private interventions should warrant managing the food loss and waste, reviving the demand and food intake. To manage the food waste at household level, implementation of good food management practices like preparation of shopping lists and planning the course of meals are advocated. India's employment guarantee scheme – Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) could employ migrants who have come back to their own villages and direct transfers could put cash into the hands of poor who do not have access to MGNREGA. Government expenditures should thus be towards increased funding for MGNREGA (employment), PM-KISAN (cash transfer to farmers under the Prime Minister-Farmer Honour Fund) and PDS (offering nutri-rich foods through public distribution system). Alternatively, distribution of 'food coupons' or 'combo packs' comprising a basket of goods especially biofortified foods like zinc and iron rich cereals and millet will facilitate the nation towards the pathway in ensuring nutrition security.

Price and revenue risk management:

COVID-19 had less or negligible effect on food prices (except for vegetables). However, food prices are plagued by high volatility which translates into price risk to farmers. The Government should consider setting up a price stabilization fund to insulate farmers from the price risk. Further, crop insurance in India generally covers only the yield risk; COVID-19 has presented the government an opportunity to transform the crop insurance scheme which covers the revenue (yield and price) risk of farmers. Alternatively, farmers and consumers can avail the benefits of futures trading to buy/sell the standardized commodity contracts at a pre-decided price for delivery in the future. To meet the contract size set by the commodity exchanges, Farmer Producer Companies (FPCs) can transform themselves into aggregators.

Shifting the focus from primary to secondary agriculture:

COVID-19 induced lockdown has disrupted agricultural labour markets that witnessed huge reverse migration. A survey reports that 45% of the migrants returned home during lockdown. Structural weakness in the system should be addressed to enable recognition of farming as an enterprise. Processes which add value to primary agricultural production systems and enterprises which source raw materials from crop residues, by-products and waste from primary agriculture should be promoted. For instance, cotton stalks have a wider and untapped scope for use as soft and hard boards, paper and pulp manufacture. Accelerating research on high-end secondary agriculture products is urgently needed. Development of fruit-based ice cream, converting bamboo or wood waste to fancy decoration, preparation of sweets from bovine milk, use of natural fibres and culled potato to prepare bio-plastics, pectin extraction from fruit peeled wastes and bio-ethanol production are some examples. Further, innovations in the post-harvest technologies of medicinal and aromatic plants which supply raw materials to herbal medicines, pharmaceuticals, cosmetics, and food flavour industries could increase export potential and create employment .

Family farming:

In strategizing to strengthen the agricultural sector, we must pay attention to the concept of sustainability. Nothing comes closer as family farming to the exemplar of sustainable food production. Family farmers not only produce food; they save biodiversity, produce nutritious and local foods, develop new strategies and develop innovations to tackle social, economic and environmental challenges (FAO and IFAD, 2019). FAO suggests affirmative policies to support family farmers as a solution to the unsatisfactory world food system in which one-third of the food produced goes to waste.

Collective farming:

Crop farmers should heed the successful cases like dairy cooperatives to increase productivity and profits. Unlike cereals, pulses and vegetables, milk prices were not affected by the lockdown (Cariappa et al., 2020a). The procurement, processing, and distribution network of dairy cooperatives resisted the exogenous shock. Crop farmers should come together either as cooperatives or farmer producer organizations (FPOs) or farmer producer companies (FPCs) and work in the network of the international food system. Through aggregation (of inputs used and output produced), economies of scale can be ensured. Nudging by the union government on the principles of cooperative federalism (as done for Goods and Services Tax) is required for land reforms and contract farming. These steps together will have the potential to overcome challenges of production and marketing risks of the farmers.

Investment in agricultural research and development:

The estimated annual growth (in real terms) from 2014–15 to 2018–19 in agriculture and allied sectors was 2.9%. While the Indian economy contracted by 23.9% in the first quarter of 2020–21, agriculture was the only sector to register a positive growth of 3.4%. It is time to realize that agriculture sector could keep the growth engine sputtering when other sectors fail to rise to the occasion despite the farmers facing enormous amount of production and marketing risks even during normal times. Undoubtedly, inclusion of the private sector increases the investment flow as well as efficiency in functioning of the system. Private and government investments in agricultural research and development, insurance, finance, mechanization, cold storage, logistics, automation, digital procurement and distribution (e-marketing) should be taken up as a priority.

Buffer stock:

Monetizing the excess stock in the buffer could be a potential source of revenue for the union government. The stock held by the Food Corporation of India has in store more than double the buffer stock norms and is worth at least ₹1,50,000 crore (US$205 billion). Monetizing the surplus besides revenues, may also reduce huge maintenance and logistics costs. This amount could be invested in promoting rural agriculture enterprises or capacity building, drought proofing, etc. Again, to reduce wastage through scientific storage is urgently needed.

Staggered procurement and pricing:

During pandemic situations which disrupt logistics, markets, storages, etc. the government can opt for a staggered procurement and pricing strategy which accounts for the threshold level in cost of storage especially for staples like rice and wheat produced and consumed by millions. This would also encourage farmers to store the commodities at farm level, providing storage is available, against distress selling.

Reforms in agricultural finance:

Access to cheap loans has to be enabled, especially for small and marginal land holders to revive the sector. Restructuring agricultural loans and repayment schedules, withholding the declaration of long-term loans as non-performing asset (NPA), interest subvention on availed loans during the moratorium period etc. should be implemented to safeguard the livelihoods and welfare of the poor.

Stakeholder partnerships:

Concerted efforts and inter-institutional partnership (regional as well as global) are inevitable as envisaged in the Sustainable Development Goal 17 to strengthen the weaker and vulnerable sections of the society. Stakeholder partnerships help to bridge the information and knowledge gaps by creating awareness, leveraging Information and Communication Technologies (ICTs) including social media platforms. The idea here is to educate people not to opt for panic buying and hoarding essential items, to maintain hygiene of market functionaries, and to sanitize market yards in addition to social distancing which are essential for smooth functioning of the markets *in lieu* of COVID-19 crisis.

Conclusions

The novel Coronavirus (COVID-19) pandemic has rapidly spread across the world, adversely affecting the lives and livelihoods of millions across the globe. India reported its first infection on 30 January 2020, prompting the authorities to soon initiate various measures to contain the spread of the epidemic. While other sectors are reported to be under significant stress, it is important to analyse the impact on agricultural and allied sectors which provide likelihood to majority of the population in India. The agricultural & allied sector carries immense importance for the Indian economy. It contributes nearly one-sixth to the Indian national income and provides employment to nearly 50% of the workforce. It is fundamental for ensuring food security of the nation and also influences the growth of secondary and tertiary sector of the economy through its forward and backward linkages. The economic shock will likely be much more severe for India, for two reasons. First, pre-COVID-19, the economy was already slowing down, compounding existing problems of unemployment, low incomes, rural distress, malnutrition, and widespread inequality. Second, India's large informal sector is particularly vulnerable. Out of the national total 465 million workers, around 91% (422 million) were informal workers. Lacking regular salaries or incomes, these agriculture, migrant, and other informal workers would be hardest-hit during the lockdown period. The lockdown has choked off almost all economic activity. In urban areas, leading to the widespread loss of jobs and incomes for informal workers and the poor. Estimates by the Centre for Monitoring Indian Economy show that unemployment shot up from 8.4% in mid-March to 23% in the first week of April. In urban areas, unemployment soared to 30.9%. The shutdown will cause untold misery for informal workers and the poor, who lead precarious lives facing hunger and malnutrition.

The pandemic led crisis has wreaked havoc on both the Indian and global agricultural system. A global food security crisis is in potentially looming that cannot be countered without understanding the impacts of COVID-19 on the agricultural system, especially of the developing countries. Initial investigation in India shows that restriction on movement, transportation problems and reverse labour migration have disrupted domestic supply chains which ultimately contributed to rises in wholesale and retail prices of a few commodities like pulses, wheat flour, milk and vegetables. More than 90% of consumers across all the regions have changed their shopping behaviour. As the pandemic continues to threaten the global food system, the role of state becomes much more pertinent. In order to protect and safeguard the livelihoods of millions of people associated with the agricultural system, the state should increase spending on social safety nets immediately and take up other short and medium term strategies. Raising revenue by offloading excess buffer stock and increased credit to the agriculture sector should be the top priority for post-pandemic economy restoration.

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