

Covid-and Indian Agriculture

Arnab Majumdar

Assistant Professor, Department of Economics, Women's Christian College, Kolkata, West Bengal, India.
Mail Id:arnab195@gmail.com | Orcid -0000-0002-5715-1577

Abstract

Like every other country, India has also been immensely affected by the Covid19 pandemic. Not only India's economic growth process has been hampered but it has been pushed back by quite a few years. In this background, it may be a worthwhile proposition to assess the impact of Covid and its subsequent restrictions on India's agricultural sector. The study attempts to assess the pandemic's impact on India's agricultural sector focussing on the different aspects of the sector and also takes a look at the government's response to the situation and what is required from the agricultural sector in future.

Keywords: Lockdown, Farm-gate prices, Agri-inputs, NABARD, Fiscal, Legislative

Background

COVID-19 has been an unprecedented phenomenon in the history of human civilization. The pandemic has simply left the entire world in a state of shock. Nobody could imagine the magnitude and extent of the crisis. From a health crisis it snowballed into an economic, social, educational and a psychological crisis. Like every other country, India too had been firmly in the clutches of Covid 19 since the first infection was reported on 30th January, 2020. Subsequently, as the cases began to rise, the government initiated measures to contain the spread of the epidemic. As part of such measures, a nation-wide lockdown was imposed from March 25th, 2020. The lockdown affected the functioning of every sector of the Indian economy. The lockdown was eased in a phased manner after the initial few months and restricted economic activities began but that could not offset the loss suffered by the economy. The disruption in economic activity which resulted from the lockdown had a deep seated impact on the Indian economy.

It pushed back the economy considerably which is manifested by the massive contraction suffered by the economy during 2020-21.

There was a negative growth of -7.3% in India's GDP in 2020-21 which implies that compared to 2019-20, India's GDP decreased by 7.3% in 2020-21. The contraction of the economy put all the constituent sectors under significant stress. Agriculture, Industry and Services all suffered a significant fall in their output levels. People across the sectors lost their jobs and many experienced a fall in their income levels, particularly those working in the unorganised sector suffered greatly.

In this background, it could really be worthwhile to have a look at how the Indian agriculture and allied sectors have been affected by COVID 19 and its related restrictions. This is because, agriculture & allied sectors are still of crucial importance for the Indian economy. It may contribute around 20% to India's GDP but even now it employs around 58% of India's workforce and about 70% of all the rural households are dependent on agriculture for their income Baru (2022). Besides, if the agricultural sector performs, there is food security for the nation which enables large section of the population to have sufficient food at affordable prices and thereby a considerable portion of their income is at their disposal for spending on industrial goods and services . This

boosts the growth of secondary and tertiary sectors. It is through the forward and backward linkages agriculture and allied sectors have a significant impact on the performance of the Indian economy. In fact World Bank, in its 2008 report has reinforced the criticality of agriculture in any country's economy by pointing out that on an average growth in agriculture is at least twice as effective in reducing poverty compared to the other sectors.

The Lockdown

The lockdown started at a time when harvesting of India's second agricultural crop season i.e. rabi season had just begun and farmers were expecting good returns from sale of their produce but their expectations received a serious jolt on account of the Covid and subsequent lockdown. The lockdown lead to autonomous and concurrent demand and supply shocks resulting in simultaneous decline in the supply and demand for agricultural and allied sector products. There was a decline in the production level, severe disruption of the domestic and global food supply chains and a fall in the farm-gate prices. To have a proper understanding of how such a scenario evolved in the Indian agricultural sector on account of Covid, there is a need for a comprehensive analysis of the impact of Covid and the subsequent restrictions on different aspects of the Indian agricultural sector. These aspects are as follows:

- **Overall market scenario for agriculture and allied sector commodities.**
- **Market scenario for agricultural inputs**
- **Agricultural Labour Market**
- **Marketing of Agricultural Products**
- **Banking Services**

Overall market scenario in the agricultural and allied sector: The announcement of lockdown coincided with the beginning of the harvesting of Rabi crops (Rawal, Kumar, et.al, 2020). The major crops of the season are wheat, chickpea (gram) and mustard. Besides, numerous other crops, including various fruits and vegetables, are also produced in this season of which the most important is potato. Harvesting of wheat was already underway in central and eastern India and mustard in western India when the lockdown was announced. However, due to the prolonged winter, harvesting of wheat in north- western India, the most important wheat-producing region of the country, was to start only around the middle of April. Nowadays, harvesting of wheat is largely mechanised. Owners of the combine harvesters as also the drivers and mechanics mostly come from Punjab every year to the different states for carrying out harvesting. But the imposition of lockdown restricted the movement of the harvesters and the personnel who would drive them. As a result, in states like Madhya Pradesh, Chhattisgarh and Uttar Pradesh, where the wheat crop was ready to be harvested the lack of availability of harvesters forced the farmers to manually harvest most of the crop themselves or by using whatever labour was locally available. Now even if the crop is harvested manually, to separate the grain, threshing machines are needed. Apart from machineries, the entire gamut of harvesting and post-harvest activities like threshing, winnowing, loading and storage require an assembly of large number of personnel. With the lockdown in place, both the availability of machineries and personnel were extremely in- adequate and as a result harvesting and post-harvest activities proceeded at a snail's pace. Not only such delays in harvesting and post-harvesting activities increased the risk of crop losses but the limited storage capacity at the farm level is which is often not good enough for prolonged storage further compounded the risk of crop losses particularly for producers of perishable crops. Thus the inadequacy of labour and machineries along with the lack of timely availability of essential agri-inputs and need for maintenance of social distancing and other restrictions all combined to bring about a decline in the production levels of the agriculture and allied sectors.

In a study conducted by National Agricultural Bank for Rural Development (NABARD) covering 560 districts in 33 States/UTs i.e. 73% of India's total districts it was observed that there was a significant drop in the production levels in the agriculture and allied sector in majority (47%) of the districts. In some of the districts (34%) the production levels in agriculture and allied sector remained unchanged. Only in a very small proportion (19%) of the districts there was an increase in the overall of production. However, out of the different segments, the least decline in production was observed in the food grain sector where production level declined by 2.7% on the whole. The relatively lesser impact of lockdown on food grains production could be because of the fact that harvesting of major rabi crops viz. wheat, mustard, gram, etc. had progressed to a considerable extent in many of the states by beginning of April 2020 when the lockdown was just imposed and so the farmers could move substantial portion of their produce from their farms and store them. This considerably reduced the loss of crops in the field on account of non-availability of harvesting machineries and personnel during lockdown. Apart from this, the relaxation of Covid restrictions for the agriculture and allied sectors after the initial months of lockdown which eased production and movement of agricultural commodities to some extent also played a role in mitigating the impact of lockdown on agriculture.

The maximum decline in production was observed in the poultry sector where output went down by 19.6%. The fisheries sector also experienced a decline in production to the tune of 13.6%. Both demand and supply side factors contributed to this decline. The demand contraction in the poultry sector arose as people began to believe that eating chicken and eggs may lead to Covid-19 infections and this resulted in a sharp fall in chicken and egg sales. As the markets for chicken shrunk, broiler chicken whose life span is about 30 to 40 days, grew in size and numbers, and began to pile up in the farms and the farm owners were forced to keep feeding them with purchased poultry feed which led to rising costs for the poultry owners and with their revenues falling they incurred considerable financial losses. As a result, birds were culled on a large scale. It is estimated that about 40% of the poultry producers closed down business. According to the All-India Poultry Breeders Association, the total loss for the poultry industry was around US\$ 3,333 million. Sale of fruits and vegetables also contracted significantly because of the decline in demand resulting from the loss of purchasing power experienced by a substantial section of the population on account of lockdown and the consequent loss of employment and income. Producers of the fruits like mango, litchi, melons and water melons which were harvested during the period of lockdown incurred massive losses because of the collapse of both export and domestic demand. The dairy sector also experienced a severe contraction in demand because of the closure of sweet shops, tea shops and restaurants. The demand for milk fell by 20-25 per cent during the lockdown and as milk sales declined milk dairies announced milk holidays.

Impact on farm-gate prices in the agriculture & allied sector: The pandemic and the subsequent lockdown had a significant impact on the farm gate prices of agriculture and allied sector commodities. National Agricultural Bank for Rural Development (NABARD) in their survey covering 560 districts across observed that in majority of the districts (54%) there was a significant decline in overall prices of agriculture and allied sector commodities while prices remained almost same in 23% of the districts. In a small portion of the districts (23%) there was an increase in prices. Though the farm gate prices at the all-India level declined across all sub-sectors but the extent of decline was not same. The highest decline in farm gate prices were observed in the poultry sector where prices declined by as much as 17.8%. This was followed by the horticulture sector where prices declined by 7.6%. The dairy sector also experienced a price decline of 5.6% as price of milk fell by Rs 5-9 per litre or more. The least decline in prices was observed in the agriculture (2.2%). However, the farmers, producing pulses, oilseeds, vegetables and fruits, were the hardest hit being forced to sell their produce at low prices to local traders because of disruptions in the functioning of markets. The decline in prices was the result of both demand contraction as also due to the disruption in supply chain resulting from shutting down of rural haats, markets, closure of shops and restrictions on movement of vehicles which prevented supplies

from reaching the buyers. The sectors like poultry and horticulture were further affected as they had to do distress selling at whatever prices were offered to them due to the perishable nature of their products.

Market scenario for agricultural inputs : The lockdown did have an adverse impact on the overall availability of agricultural inputs. (NABARD) in their survey observed that in majority of the 560 districts surveyed (58%), availability of agricultural inputs declined while in 38% of the total districts surveyed, the availability of agricultural inputs remained unchanged. However, only in 4% of the districts there was an increase in the availability of Agri-inputs.

The availability of agricultural inputs declined at the all-India level across all subsectors i.e. seeds, fertilizers, pesticides, rental agricultural machinery, fodder and cattle feed. The sharpest decline was in the availability of fertilizers (11.2%) followed by fodder/cattle feed (10.8%) and rental agricultural machinery (10.6%). Significant decline was also reported in the availability of pesticides (9.8%) and seeds (9.1%). Two factors combined to bring about the decline in the availability of inputs - one was the disruption in production due to lock down of factories and the other was disruption in supplies due to restrictions imposed on movement of vehicles, closure of shops and markets which sold the inputs. So availability of agri-inputs had declined across the States Now as the availability declined there was an upward pressure on the prices. The survey carried by (NABARD) across 560 districts found that the overall prices of agri-inputs showed an increase in majority of the districts (54%) while in (42%) of the districts the prices of agri-inputs remained unchanged and in a very small portion (4%) of the districts a decline was observed in the prices of agri-inputs. Though the prices of agricultural inputs increased across all the sub-sectors, the maximum increase took place in the prices of fodder/ cattle feed showing the highest increase of 11.6% followed by rental agri-machinery with an increase of 10.4% and this was compatible with the decline in their availability. The magnitude of increase in price was marginally less for seeds which was 8.8%.

Agricultural labour Market : The pandemic and the subsequent lockdown had a significant impact on the supply, demand and wages of agricultural labour at all-India level. The lockdown resulted in a grave crisis of livelihoods for many daily-wage earners in the countryside. The situation of rural employment was already bad when the lockdown was imposed and the lockdown only aggravated it. According to, (Rawal, Kumar, et.al, 2020), during the lockdown unemployment rate in the country increased from 8.7 per cent in March 2020 to a whopping 23 per cent in April 2020. Only 30 per cent of the population was employed in any gainful activity in April 2020. Usually, a large proportion of rural workers migrate or commute to towns and cities to work in non-agricultural activities as construction labour, loading/ unloading workers in *mandis*, shop assistants, mechanics, hawkers, as well as salaried workers. Most of them, including those with salaried jobs in private establishments, are employed through informal contracts. With the announcement of the lockdown many of these workers were suddenly thrown out of work. Besides, there was a massive reverse migration as large number of migrant labourers returned back to their native places losing their jobs in other states. With so many migrant workers back in the villages and resident workers unable to commute to the towns, supply of labour in the villages increased considerably but employment availability shrunk as no economic activities other than essential activities were allowed during the lockdown. With the entire labour force becoming dependent on the employment availability within the villages the supply of labour exceeded the job opportunities and this pushed down the rural wages. At the All India level, dynamics of supply and demand in rural areas showed a mixed trend due to outflux of labourers from agriculturally advanced states to influx of labour in relatively backwards states. So when agricultural activities started reviving there was a shortage of agricultural labourers in some of the agriculturally advanced states whereas there was a surplus supply particularly in relatively backwards states.

Impact on Marketing of Agricultural Produce: Marketing of agricultural produce involves different activities. These are:

- a) **Procurement of food grains by govt. agencies**
- b) **Collection of harvested produce by private agencies**
- c) **MSP for the farmers and**
- d) **Organising of Local Markets/Haats.**

The pandemic and its related restrictions did have an adverse effect on all these aspects of agricultural marketing. As per the NABARD's survey at all-India level, conduct of weekly markets/haats had been affected adversely in nearly 87% of the districts surveyed whereas procurement by Govt. agencies had been adversely affected in 44% of the districts surveyed. This was mainly because of the complete ban on operation of rural haats by the administration to stop the gathering of people for checking the spread of the corona virus. Notably, the degree of impact on marketing of agricultural produce had witnessed some variations across different states with respect to each of the marketing aspects.

- a) **Procurement of food grains by govt. agencies:** Many districts reported headwinds in the procurement process of the Govt. agencies. In the survey carried out by NABARD, it has been observed that in 44% out of the 560 districts surveyed procurement of food grains by government suffered adversely, while in the remaining 44% of the districts surveyed there was not much impact on procurement by government. Though extensive steps were taken by the govt. for procurement of food grains even within the lockdown period and during the later part of lockdown period and movement of essential agricultural commodities were exempted from restrictions but even then, the farmers faced considerable problems regarding transportation of harvested produce to Mandis by road due to restrictions imposed on vehicular movement. This adversely impacted the farmers.
It was observed in the survey carried out by NABARD that in nearly 74 % out of the 560 districts surveyed the ability of the farmers' to haul their goods to Mandis through road transport were adversely affected. As a result the supply chains were broken which drastically reduced the market arrivals of agricultural goods. From the data available on the market arrivals of different commodities between March and September for the years, 2019 and 2020 it can be observed that market arrivals of all crops were lower in 2020 than in 2019. In case of paddy, lentil and vegetables like tomato, cabbage, lady's finger, and banana the market arrivals in 2020 constituted were around 75% of the market arrivals in 2019. In the case of wheat, barley, potato market arrivals in 2020 were between 50 to 75% of market arrivals in 2019. For wheat, the most important rabi crop, arrivals in 2020 was only 60.4% of that in 2019 . For all the remaining crops, market arrivals in 2020 were less than half of the market arrivals in 2019. Thus, farmers across the country suffered major economic losses.
- b) **Collection of Harvested Produce by Private Agencies:** It has been observed in the study by NABARD that collection of harvested produce by private agencies had been impacted adversely in nearly 81% of the 560 districts surveyed. Although movement of essential goods was exempted from the restrictions imposed during the lockdown, private transporters may have faced restrictions while traveling from cities to rural areas, which may have hampered their procurement activities. This have resulted in a severe impact on collection of harvested produce by private agencies.
- c) **Farmers Getting MSP for their produce:** The disruption in the system of agricultural marketing due to lockdown and the tardy progress of public procurement inspite of the measures adopted by the government for keeping the process of public procurement unaffected did compel the farmers to sell their produce at low prices. From the *mandi*-wise data available it can be observed that wheat was being sold

at prices considerably below the MSP. The same was with mustard, the prices during the period of the lockdown varied between Rs 3,700 and Rs 4,000 per quintal, while its MSP was Rs 4,425 per quintal. In most *mandis*, the price of chickpea varied between Rs 3,500 and Rs 4,000 per quintal, while the MSP was supposed to be Rs 4,875 per quintal.

- d) **Organising Local Markets/ Haats:** It was observed in the study undertaken by NABARD that nearly 87% of the 560 districts surveyed experienced an adverse impact on organisation of local rural weekly markets/haats. A large proportion of districts were affected adversely due to a complete ban on opening of rural haats by the local authorities. Several north-eastern states including Manipur, Meghalaya, Mizoram and Tripura were very severely affected due to this.

Impact on Banking Activities: Banking activities carries immense importance for the livelihoods of the rural population. The basic banking services such as deposits, withdrawals, along with the timely availability of credit through Kisan Credit Cards (KCC) to farmers for enabling them to meet the working capital requirement is vital for the continuation of production in the agricultural sector. To have a proper understanding of the impact of COVID-19 on the banking services there is a need to look at the impact of Covid 19 on the different areas of banking services like **i) KCC, ii) Access to Basic Banking Services iii) Term lending and Recovery iv) Digital banking .**

i) Farmers' Access to Credit through KCC: It was observed in the NABARD's study that in majority of the 560 districts surveyed (59%) there was an adverse impact on the farmers' access to credit through KCC. Although provision of banking facilities were exempted from the restrictions imposed, yet there was an adverse impact on KCC disbursement. This may have been due to restrictions imposed on the movement of people, and fear of contracting corona virus through human contact and gathering. Several north-eastern states including Manipur, Mizoram and Sikkim were severely affected . Other major states where a higher proportion of districts surveyed were affected included Kerala (100%), Assam (75%), West Bengal (76%), Uttar Pradesh (75%), Bihar (73%) and Maharashtra (71%).

ii). Access to basic banking services: There has been a considerable impact on the access to basic banking services such as deposits, withdrawal, in rural areas on account of the lockdown. It was observed in NABARD's study that in nearly 50% of the 560 districts surveyed the banking services was adversely impacted. One possible reason for the adverse impact on basic banking services was the need for social distancing and the restrictions imposed on movement of people, thereby restricting their ability to reach banks. Some of the major states reporting higher proportion of districts being impacted adversely include Chhattisgarh (78%), Jharkhand (75%) and Maharashtra (68%).

(iii) Term Lending and recovery by Banks: This aspect of banking services was most adversely impacted due to Covid and related restrictions across the different Indian states. It was observed in the study undertaken by NABARD that in 89% of the 560 districts surveyed term lending by banks were considerably affected. In many smaller states/UTs, like A&N Islands, Arunachal Pradesh, Manipur, Puducherry, in all of the districts surveyed by NABARD the term lending were adversely impacted. The major Indian states where term lending were affected in a higher proportion of the districts surveyed included Haryana (100%), Himachal Pradesh (100%), Bihar (95%), Punjab (95%), Rajasthan (95%), Maharashtra (94%) and Madhya Pradesh (91%). The reasons for this could well have been the difficulties faced by bank officials in undertaking field visits for appraisal of the projects, reduced repayment capabilities of households due to present challenges and postponement of new investments/projects due to prevailing economic and health uncertainties. Regarding the state of loan recovery, it has been found by NABARD that in 94% of the 560 districts surveyed the recovery of loans by banks had been adversely affected. The imposition of lockdown, and restrictions on movement of vehicles seriously affected the price recovery mechanism for the agriculture sector in general and allied sector

like poultry, dairy, fisheries and horticulture in particular. Further, factors like reduced output prices and livelihood opportunities, lower remittances, all these led to a decline of the agricultural income which greatly impaired the repayment capabilities of farmers and rural people. This increased loan defaults considerably.

iv) Digital banking/digital financial Transaction: This is the only aspect of banking services which has been favourably affected by Covid and its related restrictions. It has been observed in the study undertaken by NABARD that in 63% of the districts surveyed digital transactions have shown a marked increase. People who otherwise didn't prefer digital financial transactions earlier have taken recourse to digital transactions due to restrictions imposed during the lockdown and this has gone a long way in digitisation of India economy.

Conclusion

The preceding discussion reveals that Covid19 and the lockdown had a significant impact on the Indian agriculture and allied sectors. The demand and supply bottlenecks, fall in the farmgate prices, difficulties in agricultural marketing resulted in enormous hardships to farmers and rural workers causing considerable economic losses and dealt a serious blow to India's rural economy. However, the impact of the crisis was not uniform in the rural economy. It was particularly severe on the economically weaker sections of the rural population like poor peasants and landless households who had to depend on the economically dominant sections both for credit and employment and the crisis further worsened economic inequalities in the villages (Ramkumar and Kanitkar, 2021). The shrinkage of employment opportunities in the villages and the decline of income resulting from crop losses, increased input prices and inability of the farmers to sell their produce at reasonable prices compelled the small and landless farmers to go for increased level of borrowing as they did not have adequate savings to fall back on. This substantially increased the debt burden on these marginalised sections of rural population whose loan repayment capabilities were already constrained. This greatly compromised their economic condition as they were staring at a debt trap. Realising the gravity of the problem, the government stepped in and initiated a host of measures to combat the situation. The measures consisted of both fiscal and legislative actions.

Fiscal measures by the government

The government announced a massive fiscal package complementing the monetary support from RBI for bringing out the economy from the Covid induced shock. A stimulus package of Rs 20 lakh crore constituting around 10% of the GDP was announced on May 12, 2020. The package termed as Atmanirbhar Bharat touched almost every sphere of economic activity and agriculture was an important part of it. Rs 30,000 crore additional funds were provided through NABARD for helping the small and marginal farmers in their post-harvest activities for Rabi and Kharif crops. Besides, under the PM Kisan Credit Card Scheme Rs 2 lakh crore concessional credit was provided to boost farming, animal husbandry and fisheries which were expected to benefit 2.5 crore farmers (Puri, Misra et.al 2022). To increase employment opportunities in the rural sector for absorbing the increased flow of labour due to reverse migration an additional funding of Rs 40,000 crore was provided to MGNREGS over and above the Budgetary estimate. Free food was provided to the migrants not having NFSA cards and state ration cards which involved a cost of Rs 3500 crore which was expected to benefit 8 crore migrants (Puri, Misra et.al 2022).

Legislative measures

Observing the tremendous hardships which the farmers faced during Covid in trying to sell their crops at remunerative prices as the agricultural marketing system was unable to function properly because of the restrictions imposed, a number of state governments promulgated ordinances to bring about changes in the state-level Agricultural Marketing (APMC) Acts through which agricultural markets are regulated. The

ordinances which later became Acts amended the provisions of Agricultural Marketing Acts doing away with the requirement of all agricultural trade to happen in regulated markets and enabled private traders or corporates to freely negotiate prices with farmers in the villages. The ordinances introduced changes to the Essential Commodities Act (ECA) considerably easing out controls on the supply and hoarding of cereals, pulses, oilseeds, edible oil, onion and potato etc. and allowed barrier-free trade within and between states outside the premises of the markets notified under APMC Acts thereby opening the way for big traders to have bilateral negotiations with farmers. Besides, changes were also introduced to facilitate and regulate contract farming (Rawal, Kumar, et.al, 2020). The objective of such changes is to enable the farmers to have options to sell their produce to buyers through direct negotiation with them so that the buyers can procure their produce even if the regulated markets are unable to function in extraordinary circumstances. This will ensure that the farmers' income flows continue even in times of such adversities.

However, concerns have been expressed in certain quarters that such amendments to the state level agricultural marketing acts may result in corporate penetration in the agricultural sector (Rawal, Kumar, et.al, 2020). It has been felt that even though the state level agricultural marketing Acts which were implemented as a deterrent against malpractices in the markets or hoarding has not been without problems, but bypassing the Acts altogether and formalising bilateral negotiations outside the provisions of the APMC Acts may only strengthen the monopoly power of corporate buyers, traders and commission agents and it may not bring the desired benefit to the farmers. However, only time will tell which way the changes in the Acts have worked.

Agricultural sector – The future role

The fiscal stimulus package may have been able to lessen the impact of Covid on the agricultural sector to some extent and also mitigate the sufferings of the economically weaker sections of the rural population and this could have worked in making agricultural sector the least affected of all the sectors of the economy on account of Covid. If we look from the point of view of relative performance of the different sectors of the Indian economy then the agricultural sector really stands out as it has registered 3.6% growth in 2020-21 and 3.9% growth in 2021-22 weathering the Covid storm when all the other sectors of the Indian economy suffered contraction. But there is little room for complacency. Because if we look from the absolute point of view this is considerably lower than the 6.3% growth rate which was achieved by India's agricultural sector in 2016-17 after reversing the negative growth of -0.2% in 2014-15. So it has been a considerable push back for the Indian agricultural sector from its desired growth path and it will not be a very easy task to come out of the shock and reach the peak pre-covid levels and move ahead. This may take a considerable amount of time. But the agricultural sector needs to make up for the losses at a fast pace because only a sound agricultural base is a necessary pre-condition for the Indian economy to achieve the much needed 8%-9% growth in its GDP and sustain it and move ahead in the long-run.

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