

SPECIAL LECTURE

Towards a Manifesto for Reorganising Agriculture*

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I

INTRODUCTION

Professor Sharma, distinguished colleagues, ladies and gentlemen allow me to first of all thank the Indian Society of Agricultural Economics and the organisers of this conference, especially the conference President Professor Mahendra Dev, for doing me the honour of inviting me to deliver the first S.R. Sen. Memorial lecture.

Dr. Sen was one of our most eminent economists and also a civil servant who served with great distinction after joining the government as the first member of the Indian Economic Service way back in 1938. I think it would be fair to say that among all his many important contributions, both in India and abroad, his primary engagement was with the economics of agriculture. His publications in agricultural economics were well known and much cited (Sen, 1966, 1971). At various times he was also the President of this association, the Indian Society of Agricultural Economics, President of the International Association of Agricultural Economics, the First Chairman of the Governing Body of IFPRI, and Fellow of the American Society of Agricultural Economics. In the Government of India he was also instrumental in establishing the Agricultural Prices Commission, subsequently called the CACP, and the network of agro-economic research centres among other things. It is an excellent initiative of the Society to have instituted this special lecture in his memory.

On a personal note, I would like to say that I am particularly delighted to be here today because when I began my professional career over forty five years ago, I started out as an agricultural economist. One of the first professional conferences I ever attended was in fact an annual conference of this very society and one of my first publications was a paper on small farmers in the Indian Journal of Agricultural Economics. My subsequent research led me to many other branches of economics: development, planning, macroeconomics, fiscal policy, public finance and so on. Indeed a large part of my career was not as a researcher at all but as a development banker and also partly as an economist in government. So this lecture today is a kind of homecoming for me, when I again have the opportunity to share a few thoughts with my colleagues on the subject of our distressed small farmers.

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I should also spend a minute to explain the somewhat unusual title I have chosen for this lecture with some encouragement, I should say, from Prof. Chandrashekhara Rao. The term 'Manifesto' usually refers to the agenda of a political party or movement, not a staid academic lecture to a professional body. For much of this lecture I will be discussing what are arguably the two most urgent economic challenges facing us today, not just in India but globally: namely, the challenge of rising inequality and the challenge of employment. In addressing these issues I will contextualise them within the larger framework of how India's overall development process is working - or not working. And in that context I shall argue that our only hope for creating enough productive jobs over the next decade or so, and thereby containing the rise in inequality, is through a fundamental reorganisation of our agrarian system. However, no such re-organisation can be brought about merely as a policy from above. Certainly, public action will have to play a crucial catalytic role. But such a re-organisation can really only succeed as the outcome of a widespread and energetic farmers movement from below. Hence the title, 'Towards a manifesto for reorganising agriculture'.

II

INCLUSIVE GROWTH, INEQUALITY AND THE EMPLOYMENT CHALLENGE

But should not get ahead of the story. Let me start with the central question of inequality. In most emerging markets and developing economies, including India, growth policy documents routinely call for inclusive growth. But what do we mean by inclusive growth? There is a large literature, papers by Kakwani and others, dealing with the subject.¹ Without getting into this somewhat arcane debate let me base myself on a simple common sense definition. I would say growth is weakly inclusive if the income of the poorest one third of the population in a country is growing at the same rate as the average rate of growth of the economy or, in other words, if inequality is not rising. Conceptually it is quite possible that the income share of the poorest 30 per cent may not be declining but that of the next higher 30 per cent or 40 per cent is declining. Hence inequality, namely, the Gini coefficient, may be rising.

However, empirically such cases are likely to be quite rare. So I would choose the income share of the poorest one-third of the population, and say that growth is weakly inclusive if the income share of this poorest one-third of a country's population is not declining. I would say that growth is strongly inclusive if the income of the poorest one-third is growing faster than the average rate of growth of income in the country. In other words, the income share of the poorest one third of the population is rising and they are receiving more than their proportionate share of the fruits of growth, inequality is declining over time.

Unfortunately, the reality is that far from reducing inequality, growth has typically not even been weakly inclusive. In his Presidential Address to the Indian

Society of Labour Economics last year Prof. Mahendra Dev gave us a very comprehensive summary of the evidence in this regard. In both developing and developed countries the income share of the bottom 30 per cent has been persistently declining (Dev, 2017). As a consequence, income inequality, which has not been a major concern of mainstream economics in recent decades, has now emerged as a central concern during the last few years. By way of illustration, when Picketty published his treatise in 2014 on the inherent tendency of rising inequality under capitalism it became an instant best seller. Angus Deaton, who spent a major part of his career researching issues of inequality including here in India, received the Nobel Prize for economics in the following year, 2015.

The World Economic Forum, the annual conclave of the world's most powerful corporate and political leaders, now routinely identifies inequality as a major challenge for global economic growth. These powerful leaders of the capitalist world are by no means soft hearted socialists or communists dedicated to the welfare of the working class. But they flag their concern about rising inequality because they see that the adverse social and political consequences of rising inequality is now a major impediment to global economic growth.

But where do we stand with regard to inequality in India? Way back in 1974 T.N. Srinivasan and Pranab Bardhan compiled a series of papers which told us the story of poverty and inequality as it prevailed then. Last year the same two scholars, along with Abhijit Banerji and Rohini Somanathan, have published a revised volume that brings the narrative up to date (Banerjee *et al.*, 2017). I will not go over the same ground except for a few remarks that are relevant for my present purposes. Conventional cross-country comparisons of inequality seem to suggest that inequality in India is not as high as in some other neighbouring countries in Asia or some other emerging market comparators. However, as Bardhan and others have pointed out, that picture is quite misleading (Bardhan, 2013).

It is misleading because inequality in India is mainly estimated based on the NSS consumer expenditure surveys, and it is well known that for a variety of reasons these surveys underestimate the consumption expenditure of the rich, hence consumption inequality. More important, consumption expenditure is more or less equal to income for the lower income groups while it is only a fraction of income for higher income groups who save a significant component. The inequality of income is thus always greater than the inequality of consumption expenditure. Hence it is quite inappropriate to compare the Gini coefficient of consumption expenditure for India with that for income in other countries and conclude on that basis that inequality is less in India.

Unfortunately, we do not have a sufficiently robust database for measuring the inequality of income or wealth in India. However, comparing such estimates as are there, Dev points out in his survey that the income Gini is 20 points higher than the consumption Gini and that the wealth Gini is 40 points higher. There are also other ways of looking at inequality, e.g., in terms of the access to basic education,

healthcare, nutrition, etc. Mortality is probably the best summary indicator of well being since it captures the impact of all these different factors as Amartya Sen once pointed out (Sen, 1998). In a recent paper analysing the spread of education and healthcare in Asia I found that life expectancy is the lowest in India barring four countries: Afghanistan, Pakistan, Laos and Myanmar (Mundle, 2018). Based on appropriately adjusted cross country comparisons, Blanco Milanovich has recently claimed that among all the countries he analysed, income inequality is the highest India after South Africa (Milanovic, 2016a,b).

All such international comparisons are constrained by problems of data availability and comparability and India's precise ranking in the inequality pecking order is not really important. What matters is that inequality in India is very high. So the question arises, why is inequality in India so high? In some of my earlier work I have discussed the social and political roots of inequality in India as have others. In particular I refer here to the inequality entrenched in our caste system, going back over millennia, and the inequality embedded in what I have elsewhere described as India's soft developmental state (Mundle, 2017, 2018). It is a system shot through with the inherent contradictions of inclusive and democratic political institutions riding on highly unequal social and economic institutions at the base.

However, today I would like to focus on the economic roots of inequality in this country. The working poor of this country have no other resource to offer for their livelihood except their labour power. So the containment of economic inequality depends quite critically on workers having the access to decently paid productive jobs. The availability of such employment or the lack of it is the heart of the matter.

The employment picture in the country remains blurred considering that we have not had any NSS Employment - Unemployment survey since 2011-12. There are great expectations that clarity will return with the release of the first report in December or January of the new NSS Periodic Labour Force Survey. This new series will replace the earlier quinquennial surveys with annual surveys, and quarterly surveys for urban areas. But pending the release of this new series, we can form some rough assessments of the employment situation. Excluding children, the elderly, and subsidiary workers, projections of the last NSS survey would suggest that India has a core labour force of about 500 million persons, including 22 per cent women. This labour force is growing at an estimated 1.5 per cent per year, implying an annual addition to the labour force of around 7 to 8 million new workers every year (Ghosh, 2016). As against that, employment is probably growing at only around 0.7 per cent, assuming an average annual GDP growth rate of 7 per cent and an estimated employment elasticity of 0.1 as reported in the recently released 'State of Working India' report of Azim Premji University (Azim Premji University, 2018).

That estimate may be somewhat optimistic. Labour Bureau's surveys available up to 2013-14 and 2015-16, which are methodological somewhat similar to the earlier NSS surveys, indicate that there was virtually no growth of employment at all during those years (Government of India, 2016). Some private sources such as the CMIE

suggest that the situation has not improved since then. Even allowing for some inaccuracy in these estimates, it is fairly certain that far from being absorbed in new jobs, a large proportion of the new workers have been added to the pre-existing backlog of unemployment and underemployed.

We are all aware that using conventional concepts of employment and unemployment is quite tricky in the Indian context since the poor cannot afford to remain completely unemployed. They will take on any work that is offered, even for a pittance, just to survive. In this environment open unemployment has to be combined with disguised unemployment or underemployment in low productivity, low paid jobs to get a proper sense of the true scale of unemployment. The *India Employment Report of 2016* estimated that there were 13 million persons openly unemployed and another 52 million persons were in disguised unemployment in 2011-12. Further, Ajit Ghosh, the principal author of the report, argued that there were some 52 million potential workers, all women, who had withdrawn from the workforce in the absence of decent work being available, resulting in the sharp decline in the labour force participation rate for women. If decent, properly paid work became available this group would also be available for work. Adding together those openly unemployed, disguisedly unemployed and temporarily out of the labour force, Ghosh arrived at an estimated backlog of some 117 million persons in 2011-12 (Ghosh, 2016).

This backlog will have grown further during the last few years because of net annual additions to the labour force as I have explained earlier. To absorb this backlog over a period of say 20 years would require an additional 7 to 8 million new jobs per year. In other words, adding together new workers plus gradual absorption of the backlog, the desired additional employment per year would be around 15 million new jobs, requiring a 3 per cent growth in employment as compared to the actual estimated growth of only 0.7 per cent growth I mentioned earlier.

How on earth can we expect such a quantum acceleration in the growth of employment? The way this could work is through what we might call a highly dynamic Lewis process, attributed to Nobel Laureate Arthur Lewis who laid out the simple but fundamental dynamics of the development process (Lewis, 1954,1955). In a two-sector model, the more productive non-agricultural sector experiences growth which is driven by the investment of savings, namely, the surplus of income over consumption, in the sector. Its expansion draws in unlimited supplies of surplus labour from a low productivity agricultural sector.

Labour is surplus in the agricultural sector in the sense that its productivity at the margin is negligible. This is what we call disguised unemployment because such labour may appear to be employed but is in fact not adding much to output. Withdrawing such labour would make little difference to total output in agriculture. The surplus labour is unlimited in supply in the sense that such transfer of labour from agriculture to non-agriculture can go on for a large volume of labour before it begins to affect the level of output in agriculture. The wedge between subsistence

level incomes in low productivity agriculture and somewhat higher wages in higher productivity non-agriculture is the incentive that drives the transfer of labour from agriculture to non-agriculture.

I am using the term transfer rather than migration because the move from farm activities to non-farm activities can occur within rural areas, without a physical migration from rural to urban areas. Interestingly, we can also have physical migration from one agricultural geography to another, without any labour transfer from agriculture to non-agriculture. Indeed this does happen on a fairly significant scale in India, driven by interregional wage differences, as was documented in the 2016-17 *Economic Survey* (Government of India, 2017). However, typically the large bulk of such labour transfer would in fact take the form of rural to urban migration.

This is the simple version of the Lewis model that you are all familiar with. The trouble is that in India this Lewis process is not working or not working at anywhere near the dynamic pace that is required to step up the employment growth rate to 3 per cent or even 1.5 per cent, the rate of growth of labour supply, compared to the 0.7 per cent at present. Though the share of agriculture in GDP has come down to around 17 per cent, it still accounts for nearly half the labour force. The transfer of the workforce from agriculture to non-agriculture is moving at a snail's pace compared to the pace at which the structure of output is changing. What accounts for this? To address this question we need to understand the employment situation both at the destination as well as the origin, i.e., the non-agricultural sector as well as agriculture.

III

EMPLOYMENT STRUCTURE AND POLICY BIAS IN THE NON-AGRICULTURAL SECTOR

In the Lewis process it is the high productivity organised non-agricultural sector which is supposed to lead the growth of employment. There is some evidence from the Annual Survey of Industries to suggest that at least in industry the organised sector has indeed grown faster than the unorganised sector. However, much of that increase has been in informal employment within the organised sector. Moreover, the organised sector accounts for only about 15 per cent of total employment.

As we know from numerous sources, including the Report of the National Commission for Enterprises in the Informal Sector (Government of India 2009), the India Employment Report (2016), the Sixth Economic Census (2016), and surveys conducted by the World Bank (Joshi, 2016), 85 per cent of non-agricultural workers are crowded into tiny micro enterprises in the unorganised sector with meagre wages, poor working conditions and low productivity jobs. Nearly 99 per cent of the enterprises in this sector are establishments employing less than 10 workers. In fact two-thirds of them are own account enterprises and the average employment per establishment is only around 1 or 2 persons.

Productivity in the non-agricultural sector is about five times that in agriculture and this is also reflected in inter-sectoral wage differences. However, within the non-

agricultural sector productivity in the unorganised manufacturing sector is only about one-sixth of productivity in the organised manufacturing sector and productivity in the unorganised services sector is only about a third of that in the organised services sector. This is also reflected in unorganised sector wages, which are only a fraction of formal sector wages in industry and services. Hence the productivity and wage differences between agriculture and the unorganised non-agricultural sector, the relevant comparator, are quite narrow. There is, thus, no strong incentive to drive the movement of labour from agriculture to the non-agricultural sector. Not surprising therefore that a dynamic Lewis process of employment generation is not working in India.

Joshi (2016) point out that tiny enterprises with ten employees or less account for 80 per cent of workers in manufacturing, small enterprises employing 10 - 49 employees account for just 3 per cent of employment and medium enterprises employing 50 - 200 employees account for only another 6 per cent of employment. Large enterprise with 200 workers or more account for the balance 11 per cent of manufacturing employment. The structure of employment in the services sector is similar. This 'missing middle' structure of non-agricultural employment, with enterprises in the whole range of 10 to 200 workers accounting for less than 10 per cent of the workforce, is unique to India among Asian economies. What accounts for the overwhelming and persisting predominance of low productivity, low wage tiny enterprises with less than 10 employees in the employment structure of India's non-agricultural sector? My own view, like that of Vijay Joshi and many others, is that it is a man-made problem created by dysfunctional policies that have a strong anti-employment bias.

One of the early dysfunctional policies, well intentioned but ill conceived, was the reservation of a whole range of labour intensive industries for small enterprises and village and cottage industries. The intention was to protect employment, but the result was its very opposite. In preventing the organic growth of these small, village and cottage enterprises the policy also prevented the growth of employment in these enterprises. The policy has now gone but has left its shadow on the structure of manufacturing employment.

Another policy critics often refer to is the Industrial Disputes Act or IDA, which requires all firms employing 100 workers or more to secure state government approval before closing down operations or dismissing or laying off any workers. The policy is clearly a disincentive for medium enterprise to grow to sizes of 100 employees or more. If indeed this act was a binding constraint on firms growth we would see a bunching of firms just below the 100 employee threshold. However, there is no such bunching. Indeed there are very few firms between the sizes of 10 to 200 employees as I have mentioned earlier. And large firms in the organised sector have worked their way around this Act through informal or sub-contracted employment.

Far more important in my view are the Factories Acts of the States, which draw enterprises into the labour inspector's purview if they employ 10 employees or more. Hence, as I have pointed out earlier, 99 per cent of manufacturing enterprises remain below this threshold to stay out of the labour inspector's reach. Apart from IDA and the Factories Acts, there are altogether 50 central laws and 150 state laws relating to labour, implementing rules relating to these laws and a huge number of case laws. Not surprising that entrepreneurs try to stay below the reach of this legal maze.

Moreover, labour laws are only one aspect of the regulatory radar screen that enterprises try to avoid. Regulation covers everything from building permits, water and power connections to taxation, pollution, transportation of goods, etc. Armies of inspectors wield their discretionary powers as much for rent seeking as for regulation. A World Bank survey of enterprises indicated that inspector harassment and bribe seeking is one of the main impediments to enterprise growth (World Bank, 2011). Other major impediments identified by the survey included lack of reliable power supply, credit availability, the land constraint in urban areas and transportation in rural areas. It is the responsibility of the state to adequately provide public goods and eliminate the huge distortions prevailing in the markets for power, land, credit, etc. which have constrained the growth of enterprises and hence employment in the non-agricultural sector. But the state seems to have fallen short.

IV

THE SKILL DEFICIT AND THE ELITIST BIAS OF EDUCATION POLICY

Since I have argued that the slow growth of non-agricultural employment is a consequence of policy biases, it would follow that reform of these policies could set in motion the operation of a dynamic Lewis process of employment growth that has been missing so far. However, it would be quite unrealistic to expect such that reforms across a wide range of policies could come about over night. Moreover, even if these distortions were to be eliminated, there is an altogether different kind of policy failure which would still constrain the rapid growth of productive, well paid jobs. That is the failure of our education policy which has constrained the creation of a suitably educated and skilled workforce (Mundle, 2017).

Not so long ago a leading chamber of commerce celebrated the fact that the employability of Indian workers had increased to 40 per cent from 34 per cent a year earlier. Ironically, what that statistic also implied was that 60 per cent of the workforce were not employable in productive jobs! Perhaps that will not be so shocking if we note that only 5 per cent of the Indian workforce have any skill training at all and a mere 2 per cent actually can claim to have a certified skill as compared to around 70 per cent to 75 per cent in Europe and as much as 80 per cent and 96 per cent in Japan and South Korea.

Recognising the severe skill deficit, and building on a programme launched by the previous government, the present government launched the ambitious Pradhan

Mantri Kaushal Vikas Yojana or PMKVY. This programme aimed to train as many as 400 million workers in the 15-45 years age group over a seven year period. The results achieved are unfortunately underwhelming. In its submission to a Parliamentary Committee, the government indicated that as many as 17.6 lakh candidates had been trained under PMKVY till 25 April, 2016. However, only 5.8 lakhs could be certified as having successfully completed the training and less than 82,000 could actually be placed in jobs. Why has this skilling programme been so ineffective? Clearly, no serious skilling programme can succeed unless the trainees have the foundation of basic education that enables them to acquire such skills. However, the long standing neglect of primary and secondary education in India's education policy has greatly limited the access of our workforce to this required foundation of basic education.

As the earlier cited India Employment Report has pointed out, barely 10 per cent of the workforce has the tertiary level of education required for high skilled jobs. Hence, of the 16 million additional jobs desirable each year only 5 million could be high skilled jobs for workers with the required level of tertiary education. Another 30 per cent of the workforce have education up to secondary or higher secondary level that would enable them to undertake low skill jobs. The balance 60 per cent would only be suitable for unskilled jobs. That is exactly the same proportion that the chamber of commerce had classified as unemployable for productive jobs.

The elitist bias of India's education policy is evident not in the grand statements of policy goals but in the actual action on the ground. The National Policy on Education of 1968, based on the Kothari Commission report, called for free, compulsory education till the age of 14, with special attention to girls and children of deprived communities. The New Education Policy of 1986 announced a similar ambitious goal. But these remained unfunded mandates until the Right to Education Act of 2009 finally made free compulsory education a legal right for all children aged 6 to 16 years. It is only now, following this funded mandate, that India has achieved more or less universal primary education, more than a hundred years after the demand was originally raised in the famous Gokhale Bill of 1911.

Compare that with China, which had achieved this goal in the 1970s and Korea which achieved it by the 1960s and had even achieved universal secondary education by the 1970's. As of 2012 over a quarter of the Indian population was still illiterate compared to 5 per cent in South Africa, 4 per cent in China and only 2 per cent in Turkey among other emerging markets. On the other hand, the 13 per cent of population with tertiary education at the upper end is quite comparable to 10 per cent in China, 14 per cent in South Africa and 15 per cent in Turkey. Thus the 'missing middle' in the structure of non-agricultural employment discussed earlier is also, among other things, a stark reflection of the 'missing middle' in India's education profile.

The picture on learning outcomes is even more grim. The 2016 Annual Survey of Education Report indicates that 52 per cent of class 5 students could not read a simple

text meant for class 2. Similarly, 50 per cent of class 5 students could not do a simple subtraction meant for class 2. In 2008 students from Odisha and Rajasthan participating in the TIMMS global learning quality tests for mathematics and science were ranked 43rd and 47th out of 49 teams, with their performance 3 standard deviations below the OECD average. In 2009 students from Himachal and Tamilnadu, education wise two of India's best States, participated in the PISA global quality test. They were ranked 72nd and 73rd out of 74 teams, with their average performance in the bottom fifth percentile. India subsequently withdrew from such standardised global testing, claiming they had a Western cultural bias. But Asian countries like Singapore, Korea, Japan, Taiwan and China get top ranks in these tests and lately even Vietnam has been doing well.

Why has India's education policy been such a failure? Among many factors, one is its strong elitist bias. By way of illustration, the ratio of per student expenditure in tertiary education to that in primary education is over 9 in India compared to less than 4 in Malaysia, 2 in Indonesia and only 1 in Thailand and Korea. A second factor is the policy focus on inputs and enrolment rather than learning outcomes. A third and most important factor is the lack of any incentives in the employment conditions of government school teachers to induce them to seek better student performance.

v

THE CHALLENGE OF THE SMALL FARMER ECONOMY IN AGRICULTURE

I have dwelled at some length on the anti-employment bias of our policies for the non-agricultural sector and the elitist bias of India's education policy to emphasise that these dysfunctional policies are the main barriers to the operation of a dynamic Lewis process of rapid labour transfer out of low productivity agriculture into well paid, high productivity jobs in the non-agricultural sector. If dysfunctional policies are the problem, then policy reform should be able to fix the problem. While at one level this is true, it takes years for the impact of such policy reforms to play themselves out. Even if we were to make the optimistic assumption, quite unrealistic in my view, that policy reforms will be initiated across the wide front I have delineated, it will take at least a decade or two before a strong Lewis process of rapid, productive and well paid employment growth gets underway in the non-agricultural sector.

Meanwhile, nearly half the Indian workforce is still dependent on agriculture. They have no option but to either transfer out to low skill, low productivity jobs in an already overcrowded unorganised non-agricultural sector or to fall back on agriculture. The former entails taking up jobs in industry or services for which the farm worker has no skills or experience, accepting low wages and poor working conditions, and often also living in miserable conditions in crowded, unhygienic slums in an alien urban environment. That this form of rural-urban migration is going

on at all, a tragic parody of the dynamic Lewis process that we imagine, is only a reflection of how miserable conditions are in the countryside.

The fundamental root of our agrarian crisis, as is well known, is the intense pressure of population on land. It has pushed the land:man ratio down to just 0.2 hectares of cultivable land per head of rural population (Government of India, 2015). The process of 'demographic differentiation' as land is handed down from one generation to the next, generation after generation, continues to push down the structure of land holdings. Today nearly 83 per cent of rural households are either entirely landless or own less than 2.5 acres of land. Another 10 per cent own up to 5 acres of land. At the upper end less than just 2 per cent of households own 10 acres of land or more, and a miniscule 0.25 per cent of households own over 20 hectares.

So the story of Indian agriculture is in the main the story of a massive class of landless or marginal farmers who account for over 80 per cent of all rural households. The tiny plots of land that dominate the structure of landholdings can no longer sustain whole families, especially under conditions of rain fed agriculture. With land fragmentation continuing unabated, agriculture has ceased to be a viable means of livelihood for most of these rural households.

The second root of the agrarian crisis is the scarcity of resources. Households operating their tiny plots of land do not have the resources to invest in infrastructure such as irrigation or farm machinery, to compensate for the scarcity of land. Without much collateral they find it difficult to secure loans from the formal banking system and are forced to fall back on moneylenders who charge usurious rates of interest except when family or friends step in to help. The sword of Damocles then hangs over their head, will they be able to pay back the loan?

The third element is the barrage of multiple risks to which these fragile households are continuously exposed. First there is the risk of weather. Except in the irrigated belts, farmers are still dependent on the rains. A drought, a weak or delayed monsoon or a flood means a drastic fall in farm outputs and incomes. Then there are pests and plant diseases that can wipe out whole crops. Finally, there is the price risk. If prices collapse farm incomes can fall even when there is a bumper harvest, leading farmers into the clutches of predatory traders. Small farmers living on the edge of survival do not have the capacity to bear such risks. If one or more of these disasters strike the consequences are terrible. It is well known that the incidence of farmer suicides is highly correlated with such episodes of collapsed farm incomes, especially if there is a pending loan to be repaid.

It is important to recognise that the major disabilities that most farm households face is because of the small size as individual family farms. They are unable to purchase or lease in land to farm on an economically viable scale because they lack the resources to do so. They are individually unable to invest in farm machinery and infrastructure, especially sustainable surface irrigation systems to compensate for their small size. At best they may be able to install a tubewell, but the massive proliferation of tube-wells has led to disastrous consequences. Over-exploitation of

ground water and plunging water tables are now a serious problem in several parts of the country. Small and marginal farmers are individually unable to secure bank credit at reasonable rates because they are too small to raise the required collateral as I have mentioned. Perhaps most important is their inability realise reasonable prices for their crops because individually they lack the countervailing power to face powerful and predatory traders.

Recently there has been an animated debate about the appropriate Minimum Support Price or MSP. Should it be 50 per cent mark up over cost $C2 + FL$ as recommended by the Swaminathan Commission or should it be 50 per cent mark up over cost $A2 + FL$, the basis adopted by the government, which excludes the imputed rental value of owned land and farm machinery? In my view logically $C2 + FL$ should be the basis for determining MSP not $A2 + FL$. But the more important point is that this arcane debate is largely academic with little bearing on ground realities.

To announce a minimum support price for crops which the central or State government does not procure is meaningless. Even in the case of cereals like wheat and rice, and now to some extent pulses, where the announced support price is actually supported through assured government procurement, these prices are realised by large farmers and mostly traders who sell the grain to the FCI, state procurement corporations or their authorised agents and now NAFED in the case of pulses. The individual small and marginal farmers do not have the scale to transport their grain to the district headquarters or large mandi towns where the procurement centres are located. They usually sell their crop at much lower prices at the farm gate to professional traders who then aggregate and sell the grain to procurement agents at the declared support price.

In the case of other crops, especially perishables like fruits and vegetables, the situation is much worse. The small and marginal farmers are forced to sell their produce at very low prices in regulated markets to traders cartels who control the Agricultural Produce Marketing Committees or APMCs. Ashok Gulati, a former chairman of the CACP, and Ritika Juneja have estimated that farmers typically get only 25 per cent of the price that consumers pay for agricultural produce in the retail markets (Gulati and Juneja, 2018a) . In other words traders appropriate a 300 per cent mark up over the price that the farmer realises!

Governments adopt various schemes to give some relief to farmers. MNREGA is the most ambitious of these schemes, supplementing the incomes of millions of poor rural households. Then there are crop insurance schemes, drought relief schemes, the occasional loan waivers and many others. However, these are schemes for providing relief. They are not strategic programmes for reviving a landless and marginal farmer based agrarian economy that is collapsing.

Unable to survive on the land, millions of aspirational young men are making their way to the towns and cities in search of jobs, drawn by the make believe glamour of city life as portrayed in 24x7 television to which they are now exposed. But there are not many decent new jobs in the non-agricultural sector as I have

explained earlier. And even if those jobs did exist, these young migrants would not have the skills required to undertake those jobs. So from their marginalised existence in the village they move to another marginalised life in the cities. Disappointment and frustration soon turns to anger and we see around us an increasingly fractious and brutalised society. The agrarian crisis is gradually morphing into a social nightmare.

VI

WHAT IS TO BE DONE?

Is there some way of extricating ourselves from this downward spiral? In the long term we can hope that a dynamic Lewis process of productive, well paid employment growth in the non-agricultural sector will gather momentum. However, as I have explained earlier, for the next decade or two agricultural households will have to fend for themselves within the agricultural sector itself, even as continuing population growth further shrinks the already very small average size of land holdings.

I have argued that the roots of the crisis in India's agrarian system derives from the small size of the average Indian farm, the inability of the average farm household to eke out a viable livelihood from their tiny plots of land. The strategic challenge therefore is to find a way to offset the disabilities of the Indian farmer which mostly arise out of the smallness of the typical Indian farm. An approach that addresses this issue but has only had limited traction in India so far as the institution of farmers producer co-operatives.

If farmers voluntarily constitute their own co-operative institutions, which can be further aggregated into a hierarchy of such co-operatives, these co-operatives could overcome most of the disabilities arising from the small size of individual household farms. The first and most important perhaps is the potential countervailing power of such institutions to confront traders cartels in distorted agricultural product markets. They can bargain for a larger share of the final consumer price than what they currently receive. An important new contender in this market is the corporate mass retailer, whether domestic or international, who can procure directly from the producer co-operatives to supply its retail chains or e-markets. In such a competitive market environment for farm produce, where the traders cartels now have to contend with the market power of these new corporate retailers and the countervailing power of producer co-operatives, farmers should be able to realise better prices for their produce.

The second area of co-operation is collective borrowing in credit markets. Producer co-operatives, where producers monitor each other for debt servicing compliance, would not only be able to access loans from credit institutions but do so on more favourable terms than the individual farmer, who may even be denied access to such credit. Collective purchase or renting and time sharing of farm machinery such as tractors, combine harvesters, generators and portable pump sets is a third possible area of co-operation. An informal market for renting farm machinery already

exists. Producer co-operatives could rationalise the operation of such markets and ensure timely availability of such machines at reasonable rates for the farmers. They may even be able to collectively invest in sustainable small irrigation systems that are beyond the capacity of the individual farmer.

A fourth potential area of co-operation, which again already happens informally, is co-operation in labour pooling during peak agricultural operations. This stops short of land pooling, which is a difficult and sensitive matter, but could eventually move in that direction once farmers gain confidence in the producer co-operatives and in each other within each base level co-operative unit.

Producer co-operatives can go further and institutionalise their own experiments in improved farming practices, including organic farming. Of course such co-operation would not be limited just to crops but also include dairy, poultry, fisheries, etc. It can also extend to post-harvest operations, such as cold storage, distribution cold chains or other off-farm businesses.

Is the idea of a producer co-operative that improves farm practices, raises productivity and realises better prices for farmers just a romantic idea or is it grounded in reality? Authors like Agarwal (2018), Deininger (1993) and others have written about the institution of producer co-operatives in different forms in a very diverse set of countries including France and Germany, countries in eastern Europe and central Europe, Nicaragua in Latin America, Kenya in Africa, Bangladesh in South Asia. In India itself we have the dramatic success story of the Kaira District Co-operative Milk Producers Union, better known as the Amul story. Kaira's dairy farmers were able to realise 75 per cent to 80 per cent of the price paid for milk by consumers as compared to the 25 per cent norm I mentioned earlier (Gulati and Juneja, 2018b). The success of Amul led to the milk co-operative movement being scaled up to the national level as Operation Flood under the National Dairy Development Board in the mid-1960s and India saw a phenomenal growth of milk production.

Amul is not the only success story of farmers co-operatives in India. The Radhakrishna Committee Report on Credit Related Issues Under SGSY has reported at length about the success of the Kudumbashree programme in Kerala and a similar programme of the Society for Eliminating Rural Poverty in undivided Andhra (Government of India 2009a).² Both are programmes led by women's self help groups organised around accessing credit. Both now have hundreds of thousands of such self help groups at the sub-village level which are aggregated into higher level institutions through democratic processes. Both institutions have also extended into other activities including land pooling for crops, organic agriculture, dairy, fishery, marketing and off-farm activities. The report also points out that such co-operation initiatives exist in embryonic form in other states such as Tamil Nadu, Odisha, Uttar Pradesh and several states in the Northeast.

It is important not to romanticise the concept of farmers producer cooperatives or to trivialise the challenges of this approach. The obvious question to ask is why this

approach has not had more traction either in India or abroad if indeed it offers such great possibilities. Also, it is telling that India is now by far the largest milk producer in the world, way ahead of the United States and China, but milk co-operatives account for only about a quarter of the country's total milk production (Gulati and Juneja, 2018b).

My own view is not that this approach is not feasible but that it has not been scaled up because of collective action failure. In both Kerala and Andhra, the state governments played a catalytic role though leadership remained with the self-help groups. In the case of the Amul co-operative, it flourished under the dynamic leadership of Kurien as its managing director, but it enjoyed strong political support during the initial decades first from Sardar Patel and Morarji Desai and later Lal Bahadur Shastri.

It seems to me that the institutional approach of producer co-operatives is a viable strategy to offset the disabilities of the small farm economy which is at the root of India's agrarian crisis. However, this approach cannot gain momentum without concerted collective action. Governments, especially state governments, will have to play a catalytic role in nurturing such institutions. At the same time this approach cannot succeed as a policy imposed from above. The experience so far indicates that such an approach can only succeed if it is led by a strong farmers movement mobilised from below. The success of Amul is well known. What is less well known is that it all started way back in 1945 as a political agitation by the dairy farmers of Kaira against the monopsony of a private company, Polson, supported by the then colonial government, which exercised its market power to purchase milk from the dairy farmers of Kaira for a pittance. Today we once again need a manifesto for a powerful small farmers movement to reorganise agriculture from below.

NOTES

- 1) See among others Kakwani (1980), Barro (2000), Kraay (2004), Kanbur and Spence (2010), Anand *et al.* (2013).
- 2) See also Centre for Economic and Social Studies (2017).

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