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Durgabai Deshmukh Memorial Lecture 2024

“The Agrarian Economy: Perceptions Versus Reality”

by
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**DURGABAI DESHMUKH MEMORIAL
LECTURE 2024**

**The Agrarian Economy:
Perceptions versus Reality**

Madhura Swaminathan



**Council for Social Development
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ABOUT CSD

CSD began its journey as an informal study group at the India International Centre in 1962 by a few prominent social workers and social scientists, under the leadership of the legendary freedom fighter and social worker Durgabai Deshmukh. It was registered as a society in 1970, with C.D. Deshmukh as President and Durgabai Deshmukh as Executive Chairperson and Honorary Director. A Southern Regional Centre (SRC) of CSD was set up in Hyderabad in 1967 by Durgabai Deshmukh which is currently funded by the Indian Council of Social Science Research (ICSSR) and the government of Telangana. Eminent Educationists and representatives of public institutions constitute the CSD society which guides its programmes. Council for Social Development is an ICSSR recognised Institution.

For over five decades, the Council for Social Development (CSD) has functioned as a non-profit, non-partisan, vibrant research and advocacy institutions, engaged in the issues of social development, especially the welfare of the marginalised. Through its programmes of research, seminars, publications, capacity-building and other initiatives, CSD actively participates in policy discourses on social development in India. It pursues its vision by undertaking studies and advocacy activities in key areas such as development education, health, rural development, governance, human rights, and social justice. Its pioneering efforts have helped shape planning, policy and programme implementation and foster critical ideas approaches and strategies designed to bring about social change.

Durgabai Deshmukh

Freedom fighter, social reformer, an indefatigable institution builder, member of the Constituent Assembly, the first woman-member of the Planning Commission, Durgabai Deshmukh's life was one of leadership and true empowerment. Born on July 15, 1909 in Rajahmundry in Andhra Pradesh, she was initiated into a life of politics and social reform early. At 12, she left school to protest against the imposition of English language education and later started the Balika Hindi Paathshala in Rajahmundry to promote Hindi education for girls. This was to be the nucleus of the future Andhra Mahila Sabha, the large social service organisation which laid the foundation of numerous educational institutions at the primary, secondary and tertiary levels. A follower of Mahatma Gandhi, she joined the khadi movement, and participated in the Salt Satyagraha as part of the Civil Disobedience Movement for which she was imprisoned. After her release, she went on to acquire a law degree and practiced at the Madras Bar for a few years in 1952, she married C.D. Deshmukh, then the finance minister of India, who earlier served as the Governor of the Reserve Bank of India.

In 1958, she headed the National Committee on Women's Education, and formed the Andhra Women's Association. As member of the Planning Commission, she mustered support for a national policy on social welfare which resulted in the establishment of the Central Social Welfare Board. As the Board's first chairperson, she mobilised a large number of voluntary organisations to carry out its programmes aimed at the education, training and rehabilitation of needy women, children and the handicapped. Alongside, she compiled the Encyclopaedia of Social Work in India, still an indispensable reference tool for researchers.

Durgabai Deshmukh was instrumental in setting up the Council for Social Development, Durgabai Deshmukh Hospital, Sri Venkateshwara College, among the other institutions. In recognition of her outstanding efforts to spread literacy and social change she was awarded the Paul G. Hoffman Award, the Nehru Literacy Award and the UNESCO Peace Award. Along with her husband, she received the Padma Vibhushan in 1975 for contribution to public affairs and social work. But beyond the accolades, Durgabai Deshmukh's true legacy lies in her spirit of sacrifice and unwavering commitment to social change.

The Agrarian Economy: Perceptions Versus Reality

Madhura Swaminathan
Abstract

In this lecture I provide evidence and argument to question popular perceptions about the agrarian economy, about farmers and farming.

This lecture begins by examining the economics of farming in the context of the debates on Minimum Support Prices, countering the view that there is no profit squeeze in agriculture. I provide evidence on incomes from farming across regions, crops, socio-economic classes, and castes, to argue that the large majority of small farmers receive abysmally low incomes. In terms of price policy, the evidence shows that costs of production have risen faster than government-announced minimum support prices for most crops in most regions of India. Raising incomes of our “annadataas” (by means of price policy as well as other measures) is not only a moral commitment, but can spur rural demand and provide a multiplier effect to growth of the overall economy.

A second myth is that farming in India is highly subsidized and that there is in over-production of rice and wheat. I show that subsidies in India are low in comparison to the rest of the world, the European Union and North America, in particular. I also examine projections for different food crops to examine the question of “over production.” While there is undoubtedly urgent need for crop diversification, without improvements in yields of other crops such as pulses, switching out of rice or wheat will require a huge expansion of cultivatable land with consequences for the environment and biodiversity. Changing the cropping pattern in a feasible way will require a massive expansion of public policy including subsidies and investment in research and extension, among other things.

The third and last issue I take up is the invisibility of women workers in agriculture. I argue that women are playing an increasingly significant role in the agricultural economy, that official statistics are unable to capture. Using village level evidence, I identify key features of rural women workers, both as workers and as cultivators. Counting women workers better is the first step to recognizing their roles in agriculture and tailoring policy to meet gender concerns.

The Agrarian Economy: Perceptions versus Reality

I am very honoured to be delivering this lecture in memory of a great freedom fighter, lawyer, social reformer, policy maker, educationist, and activist for women's emancipation. She fought with deep conviction for many causes in her lifetime. In that spirit, this lecture is my attempt to provide an understanding of agriculture that can Serve Farmers and Save Farming (the title of the Final Report of the National Commission on Farmers). I do so by providing evidence and argument to question popular perceptions about the agrarian economy, about farmers and farming.

This lecture begins by examining the economics of farming in the context of the debates on Minimum Support Prices (MSPs). I provide evidence on incomes from farming across regions, crops, socio-economic classes, and castes, to argue that the large majority of small farmers receive abysmally low incomes. In terms of price policy, the evidence shows that costs of production have risen faster than government-announced minimum support prices for most crops in most regions of India. Raising incomes of our annadataas (by means of price policy as well as other measures) is not only a moral commitment, but can spur rural demand and provide a multiplier effect for the growth of the overall economy.

A second myth is that farming in India is highly subsidised resulting in over-production of rice and wheat. I show that subsidies in India are low in comparison to the rest of the world, the European Union and North America, in particular. I also examine projections for different food crops to examine the question of 'over production.' While there is undoubtedly an urgent need for crop diversification, without improvements in yields of millets and other crops such as pulses, switching out of rice or wheat will require a huge expansion of cultivatable land with consequences for the environment and biodiversity. Changing the cropping pattern in a feasible way will require a massive expansion of public policy including subsidies and investment in research and extension, among other things.

The third and last issue I take up is the invisibility of women workers in agriculture. I argue that women are playing an increasingly significant role in the agricultural economy, a fact which official statistics are unable to capture. Counting women workers better is the first step to recognising their roles and creating better employment and income opportunities for women in rural India.

India is still an agrarian economy: the majority of our people (69 per cent in 2001) live in rural India, and the livelihoods of 90 per cent of rural households are linked to agriculture, livestock, fisheries and other allied sectors. It is unconscionable that large numbers of rural households, particularly households engaged in farming, barely earn adequate incomes and face enormous precariousness in their livelihood.

In a recent ICAR lecture, Ramesh Chand (2021) argues that there is no evidence of a profit squeeze at the national level, though it may be the case in some states. I wish to differ and argue that there are clear signs of a profit squeeze, and of low and precarious returns from agriculture for the large majority of cultivators.

According to the Situation Assessment Survey of Farmers, the average monthly income of an agricultural household (from all sources) was Rs 6,426 in 2012–2013 and this rose to Rs 10,084 in 2018–2019 (Munjal, 2021). This is equivalent to a 56 per cent increase in nominal terms and an 18 per cent increase in real terms (using the Consumer Price Index for Agricultural Labour as deflator). Further, for all farmers with more than one hectare of land possessed, there was a decline in income from agriculture in real terms between 2012–2013 and 2018–2019. In absolute terms, the rise in crop income was of the order of 20–25 per cent across different size-classes, and in real terms, incomes fell by 3 to 8 per cent.

To illustrate, for a household with between 2 and 4 hectares of land, monthly income from agriculture were Rs 7,359 in 2012–2013 and rose to Rs 9,432 in 2018–2019, a nominal increase of 28 per cent. In real terms, agricultural incomes fell by 4 per cent.

Additionally, the rate of annual increase (in nominal terms) of incomes from agriculture has slowed down: from 20 per cent between 2002 and 2012 (SAS 1 and SAS 2) to 12 per cent between 2012 and 2018–2019 (Narayanamoorthy, 2021). In short, the evidence is clearly of a slowing down in growth of absolute incomes from agriculture, and of a fall in real terms in net incomes from agriculture.

It is therefore totally unsurprising that agricultural households relied on multiple sources of income for survival. The share of crop income in total household income was around one-half (46–58 per cent) for those with 1–2 has or 2–4 hectares (Munjal, 2021).

The unviability of agriculture for the mass of cultivators also emerges from smaller independent studies. Drawing on data from 17 village studies conducted by the Foundation for Agrarian Studies, Arindam Das and I identified two key features of small farmers (defined here as those with an operational holding of less than 2 ha of irrigated land or 6 ha of unirrigated land) (Das & Swaminathan, 2018).

First, in all but one village, a section of small farmers suffered losses in crop incomes in the reference year. The proportion was over 30 per cent in rainfed villages (the exception was an irrigated rice-wheat growing village in the Gang Canal region of Rajasthan). In short, not only was there variability in income across farmers but a significant section made losses from farming. Secondly, net incomes from crop production could not ensure a minimum subsistence income (derived on the basis of minimum wages) for a majority of small farmers. Thirdly, tenant households, those who have little or no ownership of land, typically dalit households, who cultivate leased in land, face several constraints resulting in higher costs and lower returns than owner-cultivators. Putting these findings together, the conclusion that emerges is that small farmers, who constitute the majority of cultivators in India get very low returns from crop production and, face high variability in crop returns.

This conclusion is substantiated by data showing that costs of production have risen faster than output prices. Official statistics show a decline in the profitability of major crops in a majority of states in the last two decades. This finding is based on an analysis of data from the Comprehensive Scheme on Costs of Cultivation/Production of Principal Crops of India (CCPC Scheme) for 10 crops (paddy, maize, urad, gram, arhar/tur, rapeseed and mustard, groundnut, soyabean, sunflower, and sesamum) over 20 years (2000 to 2020).

Profitability as measured by the ratio of gross value of output to costs declined for all the selected crops during the last decade. For example, profitability of paddy was 1.87 (when evaluated at Cost A2 that comprises all paid-out costs) at the start of the 2000s (2000–2002), rose to 2.2 in 2008–2011 and fell back to 1.89 in 2017–2020. In absolute terms, incomes fell from Rs 12,343 per hectare in 2008–2011 to Rs 11,090 per hectare in 2017–2020 (all values in 2000–2001 prices). If economic costs are considered (i.e. Cost C2, which takes into account the imputed costs of owned land, family labour, and fixed assets), the all-India average real

income for paddy was a mere fourteen hundred rupees – 5386 rupees in today's prices – in the triennium ending 2020.

Accounting for all costs, farming of urad, soyabean and sunflower were loss-making activities. The highest net incomes were received by growers of rapeseed/mustard (Rs 4,000 per hectare at Cost C2 and Rs 9,317 at Cost A2) [Rs 9317 corresponds to Rs 36,056 at 2024 prices].

This trend reflects the fact that costs have risen faster than value of output that is, in turn, determined by yields and prices. I want to highlight two issues here – the fact that minimum support prices or MSP do not cover full costs with an adequate return (the Cost C2+50 per cent formula proposed by the National Commission on Farmers), and that prices actually obtained by farmers are in many cases lower than Minimum Support Prices.

First, MSP does not provide adequate returns. In 2023–2024, as per the FAS Report, MSP for arhar was 78 per cent of C2+50 per cent and that for urad was 74 per cent. The ratios were 76 per cent for soyabean and 76 per cent for sunflower. The Government recently announced MSPs for kharif crops (for five cereals, three pulses and five oilseed crops). For arhar, the MSP for 2024–2025 is to be Rs 7,550 per quintal, which should have been Rs 9,756 or Rs 2,206 higher if ensuring Cost C2+50 per cent. Similarly the gap between MSP and C2+50 per cent is Rs 2,344 for urad and Rs 2,611 for sunflower.

Secondly, prices realised by farmers have been lower than the MSP for many crops, with the gap between the MSP and realised prices widening in 2017–2020, especially for pulses including urad, arhar and gram.

The last question I take up here is whether MSP is only benefitting a small proportion of Indian farmers, who are large farmers and farmers of Punjab and Haryana. A detailed analysis of procurement data by Prankur Gupta et al. (RAS, 11, 1, 2021) showed that MSP now benefits about 13 per cent of rice farmers and 16 per cent of wheat farmers (not 6 per cent as usually stated), that MSP now benefits farmers in Madhya Pradesh, Chhattisgarh and Odisha in addition to the traditional green revolution states, and small farmers (though less than large farmers) also benefit from MSP. MSP is not availed of by the majority of farmers, but its reach has expanded in recent years.

The second set of issues I take up is related to subsidies and production requirements. There is a widespread view in urban India that the production of agricultural commodities, rice and wheat, in particular, is highly subsidised, and has resulted in excess production and environmental harm. This view is held by a range of people including economists, policy makers, and journalists.

Let me begin with the first point: Is agriculture in India highly subsidised?

In 2017, the European Union spent about 74 billion dollars as agriculture subsidy, and the US spent 118 billion dollars (on 2 million American farmers). India's subsidies pale in comparison. In 2018, Indian agriculture subsidies totalled 56 billion dollars, covering hundreds of millions of farmers (and accounted for 1.6 per cent of GDP). I draw here on detailed calculations made by Sachin Sharma and colleagues.

A study by OECD in 2023, titled Agricultural Policy Monitoring and Evaluation Report, is highly instructive. Total support is defined as producer support (direct via budgetary support and via market support) + general services support + consumer support. In the US, total support was \$817 billion per year (2017–2021), of which 75 per cent went to agricultural producers. Overall, producer support was 17 per cent of gross farm receipts in 38 OECD countries. In India, producer support was negative (-15 per cent of gross farm receipts).

The Report goes on to state, 'net support to producers in India has been negative through the last two decades.' India provides subsidies for variable inputs such as electricity, irrigation, and fertilizers, and also direct cash transfers like PM KISAN (though the per farmer payout of Rs 6,000 is minuscule) but agriculture is taxed in many ways including by the fact that domestic prices in India are lower than in the world market.

In short, in India, it is consumers that benefit from subsidies not producers, whereas in the US both consumers and producers benefit. The OECD study showed (Buccholz, 2024) that consumers gained USD 163 billion and producers lost USD 100 billion in India, whereas in the US, consumers gained USD 74 billion and producers gained USD 41 billion (EU producers received USD 88 billion) in 2022.

After the signing of the WTO Agreement on Agriculture (in 1998), developing countries including India are constrained by two factors, what the West (or rather neoliberal economists) have termed trade or market distorting subsidies and the constraint imposed by historical legacy (past subsidy level).ⁱⁱ It is these unfair constraints that are leading to false arguments that Indian farmers are heavily subsidised. An Indian farmer received US\$ 282 in 2018 as compared to US\$ 61,200 received by the average US farmer (Sharma et al., 2022)!

(This is not to deny that there are questions around the best forms of subsidies, and the ways to deliver them equitably, but these are not the subject of this talk.)

Turning to the production question, I argue that India is a large country (the most populous country in the world today), and must secure domestic food sovereignty, that is, ensure production to meet a large part of domestic demand for major food commodities. And, this was the achievement of the Green Revolution, an ‘epochal change’ in the production of rice and wheat. Not only does India now produce enough rice and wheat to meet the needs of our people, but the steady increase in production has lowered cereal prices, implying more of the budget available to consume other items. That this benefits consumers – in terms of availability and price – is often missed.

The rice-wheat success was followed in the 1980s with greater diversification and increased production of several food items, including milk, potato, fruit, and vegetables. Domestic production, however, failed to keep up with demand for two important food groups: pulses and oilseeds. While the production of cereals increased six-fold in 60 years (1961 to 2021), that of pulses only doubled.

Consequently, imports of pulses and oilseeds have shot up – 8 times for oils, and almost 20 times for pulses in the last 20 years. In 2021, India spent over 2,000 million dollars on import of pulses and over 11,000 million dollars on imports of edible oils. Last month, the Government of India announced that they were going to import 11 lakh tonnes of chana (Bengal gram) from Australia, as production is estimated to be lower this year than last year, and prices of chana increased by ten rupees a kilo over one year.

To understand India's production requirements, I turn to recent projections of demand and supply under different scenarios (growth at business-as-usual rates versus high growth) for 2030 and 2047 prepared by the Working Group Report on Crop Husbandry, Agricultural Inputs, Demand and Supply (Niti Aayog, 2024). In the case of rice and wheat, production can meet demand, and there is scope for export as well (especially of high-quality rice). In the case of pulses and oilseeds, prospects are not good unless we see yield improvement.

For example, with high income growth, demand for pulses will be 57 million tonnes in 2047 whereas production is likely to be lower (47–56 million tonnes). Edible oil demand will rise to 33 million tonnes whereas the moderate production path will lead to 24 million tonnes of output. Maize and nutri-cereal production is also likely to lag behind demand, whereas production of fruit and vegetables can meet future demand with accelerated growth of yields.

The big lesson, in my view, is that we need to invest in a diversified cropping system, without ignoring cereals. In the case of rice, in particular, there is scope for export (basmati and other varieties).iii Factoring in the uncertain effects of climate change (such as rise in temperature) implies that the task of ensuring yield growth even in rice and wheat cannot be taken for granted. As importantly, diversification requires augmentation of growth of output (and yield) for several crops.

There are a lot of environmental questions about farming that I am not going to deal with today. However, it is important to state that new production practices and technologies must move in the direction of better use of water (such as direct seeded rice versus transplanted rice), less use of chemicals and more balanced application of nutrients (whether by improved practices or new seeds which are pest-resistant or drought-prone). It is also important to note that without the green revolution success in yields, much more arable land would have been required to meet our food needs and this would have resulted in greater deforestation and loss of biodiversity. If today, rice or wheat were to be replaced by millets in a person's diet, we would need to double or treble the area under cultivation.

Women Workers

In this tribute to Durgabai Deshmukh, my last set of arguments pertains to the role of women in farming. There is a misconception that women's participation in the labour force, that is, in economic activity or the productive economy is low. This is because official statistics show very low women's work participation. World data for 2011–2012 show that only 29 per cent of women were in the labour force as compared to 69 in China and 53 in Indonesia (the world average was 53 per cent). Further, as per the national labour force surveys conducted, women's work participation in rural India has been declining for over two decades, halving from 48 per cent in 2004–2005 to 24 per cent in 2017–2018.

There has been a small reversal in recent years, to 42 per cent in 2022–2023.

Nevertheless, women's participation in economic activity in rural India appears to be much lower than in many countries of the world. I argue that this characterisation is misleading and needs to be revised. Scholars have shown that standard labour force surveys underestimate women's work based on many reasons including the nature of women's work which is often home-based, intermittent, and in the informal sector. For example, women's work is predominantly seasonal. They often work as unpaid workers on family farms/enterprises, which are not properly recorded. When women intersperse child care or cooking with economic activity, say livestock raising, it becomes difficult to demarcate and measure economic activity. Women also tend to underreport their work given prevailing social and cultural norms. And, there are biases in data collection such as when a male respondent provides answers about the woman in the family.

An alternative method of data collection proposed is that of Time Use Surveys. These are surveys that collect data on all the activities conducted by the respondent in a day (24 hours). The question to a woman is not whether she is a 'worker' or engaged in any 'economically productive activity.' This way information is collection on all activities whether paid, as in the case of an agricultural labourer, or unpaid, as is the case of a women working on her own field.

Note that while a women's contribution to cooking, cleaning, other household maintenance, child care, elderly care, etc., is very important and

valuable (termed extended System of National Accounts or SNA), officially, this is still not counted within economic activity (SNA) in India. I focus on economic activity whether paid or unpaid including collection of water, fuel, fodder, and production of goods for self-consumption.

A national time use survey was conducted in 2019, and this showed that almost 50 per cent of rural women (and 88 per cent of men) were engaged in economic activity. A truer picture emerges from detailed village studies that I have been part of in collaboration with the Foundation for Agrarian Studies (FAS).^{iv} In 2017–2018, we chose two villages from southern Karnataka, Siresandra village of Kolar district and Alabujanahalli village of Mandya and selected 36 women from different social and economic classes. We then interviewed these women using a time use schedule twice a day for seven consecutive days in two seasons. As far as I know, this is a unique data set, giving 24*7 information for the lean and harvest seasons.

Let me take the case of Siresandra, a village in a semi-dry rainfed region of south eastern Karnataka, where sericulture and dairying were important activities in addition to crop production. There were two major caste groups in the villages: Adi Karnataka (Scheduled Castes) and Vokkaligas or Backward Classes (BCs). Using a daily-status definition of employment (that is, using major-time criterion for the reference week), we found near-universal work participation (over 90 per cent) during the harvest season. In short, when work was available on the fields, almost all women participated in field labour (either as hired workers or on their own farms). Work participation was lower (around 64 per cent) in the lean season. When there was less employment available in and around the village, fewer women reported themselves as workers. This led us to argue that the ‘reality was not of women opting out of the work force but of a crisis of regular employment leading to further invisibility of women’s work and greater vulnerability among women who sought work outside their villages’ (Swaminathan & Ramachandran, 2020, p. 2, italics in original).

So, where do we find rural women workers? Official statistics show that 75 per cent of rural women workers are in the agricultural sector, largely as ‘helpers’ on family farms. Again, a richer description of women workers emerges from field studies, and I highlight some features drawing on over 20 village surveys conducted by the Project on Agrarian Relation in India, of the FAS. These village studies allow us to study work within the context of class and caste.

First, and not surprisingly, women's participation in economic activity was high in manual worker households, that is, households whose main source of income came from wage labour. For example, in 17 of the 21 villages studied, women workers comprise 40 per cent of all workers in manual worker households. In five villages, across five states, women workers constituted more than one-half of all workers in manual worker households. In other words, in poor working class households, women equalled men in terms of participation in the labour market. An important additional point to note is that Scheduled Caste (SC) (and Scheduled Tribe where they were present) women comprised the majority of the rural male and female labour force. In most dalit manual worker households, women are in the work force. The participation of dalit women in the work force was higher than of women from other social groups.

Secondly, women manual workers were largely engaged in agricultural tasks, with less access to non-agricultural employment than men. In 15 of the 21 villages, the share of agriculture exceeded that of non-agriculture in the annual work calendar of women. It may be noted here that the main source of non-agricultural employment for women workers in rural areas is from the National Rural Employment Guarantee Scheme (NREGS).

Thirdly, as noted at the beginning, the overall context is one of high unemployment. Barring three villages (a sericulture village in Karnataka, a village with a stone quarry in North Karnataka and an irrigated village in western Uttar Pradesh) in all the remaining 18 villages, the majority of women workers received less than 100 days of employment in a year (this includes days of family labour on own farm but not time spent on livestock rearing or other allied activities).

Fourthly, and this is very important for the future of rural India, large gender gap in wages persists. Wage rates for women are lower than the wage rates for men for specific agricultural operations as well as in aggregate. And, the gender gap in wages is higher for non-agricultural tasks than agricultural tasks. Let me illustrate the lowness of wages paid to women workers in rural India. The International Food Policy Research Institute (IFPRI) has estimated what it costs to buy a healthy diet (as recommended by the National Institute of Nutrition) and how much of a daily wage would have to be spent on this food intake. In 2011, the cost of a healthy diet was about Rs 42 in Gujarat and a daily woman wage worker in agriculture received Rs 42. In other words, a woman worker would have to spend her entire wage on food if she were to eat a healthy diet (and not

spend on any other member of the family or on any other item such as fuel or transport). The corresponding ratios were 97 per cent in Bihar and 70 per cent in Kerala.

The second and less discussed category of women workers is those engaged on family farms – directly in crop production but also in myriad allied activities such as processing, animal rearing, and so on. As Ramachandran (2020) argues based on PARI (Project on Agrarian Relations in India) data, women’s labour in peasant or farmer households is complex involving labour on own fields (family labour) or household enterprises, on others’ fields (as wage labour), and at non-agricultural tasks. We need more research on these gender-specific features of production, especially in the context of rising male migration. In many parts of India, women are de facto in charge of agricultural operations and livelihoods. Failing to recognize women in farming or women in livestock raising as decision-makers is a serious flaw in policy making.

Concluding Remarks

Friends, Indian agriculture is at an important junction. On the one hand, you have some arguing for removing subsidies because of market distortions, ‘pampering rich farmers’ or over-production of rice and wheat. On the other hand, you have environmentalists and NGOs arguing against modern agriculture be it use of chemicals or genetic advances and suggesting we go back to ‘natural farming’ or traditional agricultural practices.

On the ground, there is a small section of rich farmers but the vast majority comprises hundreds of millions of small farmers, cultivating anything from a few cents to a few acres, barely generating income from agriculture to meet their basic needs. And, women in rural areas becoming more and more important in agriculture and allied activities, both on own farms and as agricultural labour. For the vast majority of our small producers, we need to lower costs, raise yields and raise profits or returns. Increasing incomes of rural women and men cannot be viewed as a subsidy; it is a basic remuneration to those who are providing for our food needs, our ‘annadatas.’

To conclude, given (a) the low incomes of a large majority of small farmers, (b) the volatility of farm incomes with a significant proportion of

farmers especially in dry regions making losses, (c) the need to accelerate production of a diversified set of crops, and (d) most importantly, the fact that agriculture contributes to the livelihoods of hundreds of millions of households, the state must not only support agriculture but expand investment in agriculture. I have tried to argue that subsidies for agriculture are the norm across the world and if anything Indian subsidies are very low.

Two immediate steps can be taken. First, in line with the recommendation of the High Level Panel on Long Term Grain Policy (chaired by Abhijit Sen, and of which I was a member), as early as 2002, to make MSPs statutory and ensure that they provide adequate remuneration in line with the National Commission on Farmers. Statutory prices or legal binding prices are akin to the setting of Minimum Wages. They do not imply that all the output produced or marketed in the country will have to be procured by the government. Market transactions can occur but private players must pay the statutory price to growers, so the statutory MSP sets the floor price.

The second is to step up public investment in agriculture including spending on agricultural research and extension. While numbers vary depending on the data series (see Shetty, 2022), the broad trend is that Gross Capital Formation (or Investment) in Agriculture has declined as a share of total GCF since the early 1980s (from 12–20 per cent in the 1950s–1970s to 7–10 per cent in later years).

Looking deeper we find that public investment (or gross capital formation) in agriculture has changed very little, averaging around 14 per cent of total agricultural investment over the last decade (Agricultural Statistics at a Glance 2019–20) and has actually declined as a share of agriculture GDP (while private investment has risen). While private investment is welcome, public investment differs in qualitative terms (surface irrigation versus groundwater irrigation with implications for costs of irrigation for small farmers). There is ample evidence to show that public investment crowds-out private investment (Dhawan, 1997).

Further, India's expenditure on agriculture R&D is abysmal. Gross expenditure on R&D in India has been a meagre 0.7 per cent of GDP. Agriculture's share of this has remained constant at about 10 per cent (DST, 2019). Despite the fiscal constraints facing state governments, it is important to note that of R&D expenditure on agriculture, forestry and

fishing, the expenditure by states combined exceeds that by the central government (Research and Development statistics at a glance).

The problem of inadequate expenditure on agriculture R&D is compounded by the lack of dissemination of agricultural research. Data from the Situation Assessment Survey of 2018–2019 show that, first, only 49 per cent of agricultural households received technical assistance from any agency or individual. Further, technical assistance from government-supported institutions reached around 16 per cent of cultivators in the kharif season and 12 per cent in the rabi season. Government supported institutions included government agents, Krishi Vigyan Kendra, Agricultural University, Kisan Call Centre, FPO and Cooperatives. And, access to public extension information was lower in 2018–2019 as compared 2012–2013. While there is need to re-invest in extension systems, new ways of doing so need also to be imagined.v

In this discussion, I want to underline one point, ‘do some have to lose for others to win?’vi Providing higher incomes and incentives to producers of pulses does not mean that we have to lower incomes of wheat producers, or raising investment in R&D does not mean reducing price support. This is a false dichotomy based on the assumption that we have fixed resources for agriculture. India spends too little on the agrarian economy, and this situation must be amended.

Friends, I hope my lecture has cleared some of the common misperceptions about the agrarian economy.

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ⁱ Gross farm receipts is value of production plus producer support minus market support.

ⁱⁱ In 2018–2019, subsidies on public stockholding came to 17 billion dollars of the 22 billion dollars spent on green box support.

ⁱⁱⁱ As an aside it may be noted that the ban on export of non-basmati white rice since last July has actually hurt consumers in poor countries of the world, especially in sub-Saharan Africa and South Asia. 70 per cent of rice imports of Senegal, for example, come from India.

^{iv} For details of this Project, please see, www.fas.org.in/women-work-agriculture.

^v In a special issue of the *CSI Transactions on ICT* that I co-edited, we put together examples of a variety of applications of digital technologies to assist dissemination of information to cultivators including women and poorer and less literate section of cultivators; see Swaminathan and Swaminathan (2018).

^{vi} This was a phrase used by Zadie Smith in the Louisiana literature podcast when discussing the decline of social services in the UK.

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2000	Leela Dubey	Social Development and Social Research
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1997	Leila Seth	The Girl Child and Social Development
1996	Vandana Shiva	Trading Our Lives Away: Free Trade, Women and Ecology
1995	Kiran Bedi	Concept of Management in Government
1994	Karan Singh	Population and Social Development in India
1993	Vina Majumdar	Women and the Political Process
1992	Suma Chitnis	The Institutionalisation of Social Purpose



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She is a founding member of the *Review of Agrarian Studies*, a peer-reviewed journal on theoretical and empirical issues in agrarian studies. She was a member of the Government of India's High-Level Panel on Long Term Food Security. She is currently a Member of the Kerala State Statistical Commission. She has served on the Committee of Development Policy of the Economic and Social Council of the United Nations. She serves on the board of trustees of the International Rice Research Institute in Los Banos, the Philippines.



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