

"Freedom from Hunger" Lecture Series

The Political Economy of Farmers' Suicides in India

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The unprecedented agrarian crisis in India has now been affecting farmers across the country for nearly a decade. Yet the public and media reactions, as well as the policy responses, have been so intermittent that even now, comprehensive measures to address the systemic problems are yet to be taken. In the previous two years, the desperate condition of farmers in Andhra Pradesh and Karnataka was evident in the spate of farmers' suicides that dramatically highlighted the severity of the crisis -But the crisis was not, and still is not, local in scope or origin, but unfortunately national. The current travails of farmers in Vidharbha region of Maharashtra are now finding some mention in the more enlightened press, as did the decline in viability of cultivation in parts of Kerala. But the desperation of farmers in the north - say in Punjab and Rajasthan, or the increasing difficulties in the eastern region, are still not recognised adequately by government or prominent in public perception.

While suicides are the most dramatic and ghastly expression of the desperation among the cultivating community, these should not distract from the other manifestations of what has become a deep rural depression. There have been growing reports of hunger deaths in many parts of India, some of which have been documented by people in this audience today, and there is also evidence of very large-scale mass temporary migrations in search of work, on an unprecedented scale in rural India. The point is that all this has not simply happened on its own, or because of some inexorable workings of fate in the form of the working of global markets, but because of policies pursued in the past decade and more that have denied cultivators basic protection and exposed them to unfair competition as well as enhanced exploitation by private companies and traders in different ways. Further, these processes and policies are not specific to any particular area (although

the crisis has been most intense in states where the State Governments have most actively pursued neo-liberal economic agendas) but are common to a significant extent across all the regions. The only good news in this is that since policies have largely created this mess, it can be hoped that different policies can also help to solve the problems to a substantial extent.

Last year, in response to the apparent crisis in cultivation and the political upheaval it had generated, the then newly elected State Government of Andhra Pradesh appointed a Commission on Farmers' Welfare to investigate the causes and suggest policies that could stop the deterioration in farmers' conditions and reverse the situation. It started work in September and submitted its report in December, exactly a year ago today. Since I was involved in that Commission, I will base some of my remarks on that experience and analysis, which I believe has important resonances for the rest of the country as well.

Macroeconomic policies affecting agriculture

To begin with, however, let us consider the macroeconomic context and national level policies that have mattered. The policies of the central government since the beginning of the 1990s have had direct and indirect effects on farmers' welfare that have been generally adverse. The economic reforms did not include any specific package specifically designed for agriculture. Rather, the presumption was that freeing agricultural markets and liberalising external trade in agricultural commodities would provide price incentives leading to enhanced investment and output in that sector, while broader trade liberalisation would shift inter-sectoral terms of trade in favour of agriculture. However, there were changes in patterns of government spending and financial measures which also necessarily affected the conditions of cultivation. In particular, fiscal policies of reducing expenditure on certain areas especially rural spending, trade liberalisation, financial liberalisation and privatisation of important areas of economic activity and service provision had adverse impact on cultivation and rural living conditions.

The neo-liberal economic reform strategy involved the following measures which specifically affected the rural areas:

- Actual declines in Central government revenue expenditure on rural development, cuts in particular subsidies such as on fertilizer in real

terms, and an overall decline in per capita government expenditure on rural areas.

- Reduction in public investment in agriculture, including in research and extension.
- Very substantial declines in public infrastructure and energy investments that affect the rural areas, including in irrigation.
- Reduced spread and rising prices of the public distribution system for food. This had a substantial adverse effect on rural household food consumption in most parts of the country.
- Financial liberalisation measures, including redefining priority sector lending by banks, which effectively reduced the availability of rural credit, and thus made farm investment more expensive and more difficult, especially for smaller farmers.
- Liberalisation and removal of restrictions on internal trade in agricultural commodities, across states within India.
- Liberalisation of external trade, first through lifting restrictions on exports of agricultural goods, and then by shifting from quantitative restrictions to tariffs on imports of agricultural commodities. A range of primary imports was decanalised and thrown open to private agents. Import tariffs were very substantially lowered over the decade. Exports of important cultivated items, including wheat and rice, were freed from controls and subsequent measures were directed towards promoting the exports of raw and processed agricultural goods.

In terms of fiscal policies, the reduced spending of central and state governments was the most significant feature. Due to tax reforms, the tax/GDP ratio declined at central level. Central transfers to state governments also declined. State governments were forced to borrow in the market and other (often international) sources at high interest rates. As a result, the levels of debt and debt servicing increased in most of the states. In recent years, most state governments were in fiscal crisis and did not have funds for capital expenditures. This has been especially important since state governments are responsible for areas critical for farmers such as rural infrastructure, power, water supply, health and education. Meanwhile, at the central government level, capital expenditure declined as a share of

national income, and all public expenditure directed towards the rural areas fell both as a per cent of GDP and in real per capita terms.

The financial liberalisation strategy involved, to varying degree, the standard package such measures designed to make the Central Bank more independent, to relieve financial repression by freeing interest rates and allowing financial innovation, to reduce directed and subsidised credit, as well as allow greater freedom in terms of external flows of capital in various forms. These measures, especially reduced emphasis on priority sector lending by banks, effectively reduced the availability of rural credit and thus made farm investment more expensive and more difficult, especially for small farmers. In addition to declining credit-deposit ratios in rural areas, the shift of banks away from crop lending and term lending for agriculture, the reduction in the number of rural bank branches and less manpower for rural service provision all meant that the formal sector was increasingly unable to meet the requirements of cultivators. Farmers were therefore forced to turn more and more to private moneylenders (who are often also input dealers and traders) in more exploitative relationships. This has brought back the problem of interlinked markets in which control in one market (say, credit) allows control also in other related rural markets such as those for agricultural inputs and crop prices, as well as the labour market.

Trade liberalisation affecting Indian agriculture began in the early 1990s, with the progressive reduction or removal of trade restrictions of various types. The rupee devaluation of mid 1991, which heralded the neo-liberal economic reform process, was followed by the removal of export subsidies on agricultural commodities such as tea and coffee. Various other measures affecting trade were undertaken, as outlined above. The process accelerated from the late 1990s, in tune with WTO agreements, and involved liberalisation of export controls, liberalisation of quantitative controls on imports and decontrol of domestic trade. Quantitative restrictions on imports and export restrictions on groundnut oil, agricultural seeds, wheat and wheat products, butter, rice and pulses, were all removed from April 2000. Almost all agricultural products are now allowed to be freely exported as per current trade policy.

This has been associated not only with the removal of quota control on imports, but the reduction of import tariffs, except in certain cases (such

as soya bean) where the tariff levels have reached the bound levels. In any case, the optimism surrounding the signing of the Uruguay Round agreement was such that for a range of important agricultural commodities, including rice wheat and oilseeds, the Indian trade negotiators had declared zero rates of tariff binding. After world trade prices of various crops started crashing from 1996 onwards, the Government of India was forced to renegotiate the bound tariff levels for as many as 15 agricultural items.

Tariff rates for most agricultural commodities were low or zero in the early 1990s, largely because quantitative restrictions on imports rendered tariffs irrelevant, and also because world prices were substantially higher than Indian prices over that period. Subsequently, and especially after 2000, tariff rates have generally been coming down, and (except in the case of soya bean) have been significantly below the bound tariffs. What is possibly even more significant, however, is that tariff rates have been relatively stable despite tremendous volatility in world trade prices, so that Indian agriculturalists effectively had to deal with all the volatility of world prices.

Table 1: Import tariff rates for selected agricultural commodities

	1991-92	1995-96	1999-2000	2000-01	2001-02	2002-03	Bound tariff
Non-basmati rice	0	0	0	92	77	70-80	70-80
Wheat	0	0	50	108	100	50	100
Maize	0	0	0	60	50	50	70
Pulses	10	10	5	5	5	10	104
Oilseeds	55	50	35	35	35		100
Soyabean oil	45	30	18	45	38	45	45
Groundnut oil	45	30	18	35	35	75	300
RBD palm oil				75	75	65	300
Refined palm oil				100	85	75-85	300
Cotton	35	50	40	25	35	5	
Sugar	35	0	40	100	60	60	150

Sources: Ramesh Chand (2004) based on Government of India data.

This meant that even as the uncertainties related to international price movements became more directly significant for farmers, progressive

trade liberalisation and tariff reduction in these commodities made their market relations more problematic. Government policy did not adjust in ways that would make the transition easier or less volatile even in price terms. Thus, there was no evidence of any co-ordination between domestic price policy and the policies regarding external trade and tariffs. For example, an automatic and transparent policy of variable tariffs on both agricultural imports and exports linked to the deviation of spot international prices from their long-run desired domestic trends, would have been extremely useful at least in protecting farmers from sudden surges of low-priced imports, and consumers from export price surges. Such a policy would prevent delayed reactions to international price changes which allow unnecessarily large private imports. It would therefore have allowed for some degree of price stability for both producers and consumers, which is important especially in dominantly rural economies like that of India.

In the absence of such minimal protection, Indian farmers had to operate in a highly uncertain and volatile international environment, effectively competing against highly subsidised large producers in the developed countries, whose average level of subsidy amounted to many times the total domestic cost of production for many crops. Also, the volatility of such prices - for example in cotton - has created uncertain and often misleading signals for farmers who respond by changing cropping patterns. It has directly affected soyabean and groundnut farmers due to palm oil imports. Import of fruits also and other commodities also affected the farmers. With increased trade liberalisation, reduction in cereal consumption became very pronounced. Also exports of items like cotton have increased volatility in supplies of cotton raw material, which have adversely affected hand loom and power loom weavers whenever yarn prices have increased significantly due to export of cotton.

In addition to these broad measures, other government policies had direct and indirect effects upon agriculture. The most significant related to the efforts at reducing subsidies which affected both agricultural producers and consumers, and the reduction of public expenditure which would have benefited cultivation. Thus, both food and fertilizer subsidies were sought to be reduced over this period. However, both of these

strategies, which involved raising the prices for consumers of both food and fertilizers, had undesirable and even counter-productive effects, leading to the paradoxical results of reducing consumption and simultaneously increasing subsidies!

In the case of food, the subsidy is essentially no more than the total losses borne by the Food Corporation of India, the central agency which is responsible for coordinating crop procurement according to the Minimum Support Prices declared by the government, and the issues prices of the Public Distribution System for consumers. The FCI is not an inefficient distributor - indeed, studies have shown that its margins are typically lower than those of private trade. However, it does carry losses, depending upon the extent to which prices are lower in the Public Distribution System and the off-take from that system. From 1997, there was an attempt to reduce these losses by increasing the prices paid by consumers for food under the Public Distribution System, and provide a targeted system of cheaper food for households deemed to be below the poverty line. However, the increases in food prices led to dramatic declines in off-take, because they were incompatible with the depressed purchasing power of consumers especially in rural areas. As a result, the FCI started holding larger and larger stocks of food grains, which added to total costs because the carrying cost of stocks is quite high. By the turn of the decade, this had created the appalling paradox of huge excess stocks of food grain held with the FCI, adding to costs and therefore to the losses, and therefore leading to substantially higher food subsidy, even as problems of hunger and malnutrition among the poor became more acute. The desperate need to reduce these food stocks led the government to promote exports of these food grains, especially wheat and rice, at vastly reduced prices, instead of feeding the hungry within India. This attempt to cut food subsidy therefore ended up perversely having adverse effects on all agents in the economy: it was bad for cultivators, for food consumers, and even for the government exchequer because it involved a larger total subsidy bill with less benefit to needy consumers.

In the case of fertilizers, the subsidy is actually paid to fertilizer producing companies, through a retention price scheme which ensures that the companies receive an 8 per cent margin over costs. While this has led many to argue that farmers are therefore not the beneficiaries of this

subsidy which ends up going to corporates, it is obviously the case that the subsidy allows domestic prices for fertilizer consumers to be lower than they would be in the absence of subsidy. Once again the initial attempts to cut the fertilizer subsidy had adverse effects in that the reduction of subsidy caused domestic prices to increase and in turn led to reduced consumption by farmers, often with detrimental effects upon yield. The price changes also involved increasing mismatch in usage as between nitrogenous and phosphatic fertilizers, with adverse consequences for immediate soil quality as well as longer term sustainability of cultivation.

Table 2: Domestic support provided to agriculture

Product specific support (as per cent of value of output)			
	1990-91	1995-96	1999-2000
Rice	-71.66	-52.59	-52.52
Wheat	-64.67	-242.35	-8.56
Groundnut	-34.25	0	-139.96
Soyabean	-58.06	0	0
Cotton	-566.67	-422.88	-192.79
Jute	-94.7	-131.04	-36.36
Sugar	24.36	-198.27	41.39
Non-product specific support (as per cent of value of output)			
	1990-91	1995-96	1999-2000
Irrigation	1.45	1.58	1.44
Credit	0.05	0.07	0.07
Fertilizer	0.92	2.08	2.47
Power	2.32	3.97	4.58
Seed	0.05	0	0
Total	4.73	7.7	8.57

Source: Calculations by G. S. Bhalla (2004)

In addition to this, throughout the 1990s and even subsequently, there have been attempts to raise other user charges of public services and utilities relevant for farmers, such as irrigation water charges, power (used to run pump sets for ground water extraction) and the like. While these

measures are typically under the control of state governments, the fiscal crunch of such state governments (itself a reflection of neo-liberal taxation policies and curbs on state borrowing) and the general atmosphere of reducing subsidies led many state governments to increase various user charges, especially for power to agricultural consumers. The farmers' backlash across India, expressed both through street mobilization and more recently through electoral verdicts for central and state government legislatures, has tended to reverse these measures as least as far as power tariffs are concerned. But in fact Indian farmers are far from being protected from rising input costs of various kinds, and the actual subsidies received by them are negative. It can be seen from Table 2 that product-specific support for most important crops has actually been substantially negative, and this more than outweighs any minor benefits from the non-product specific support.

Effects upon agricultural trade, cultivation and rural livelihoods

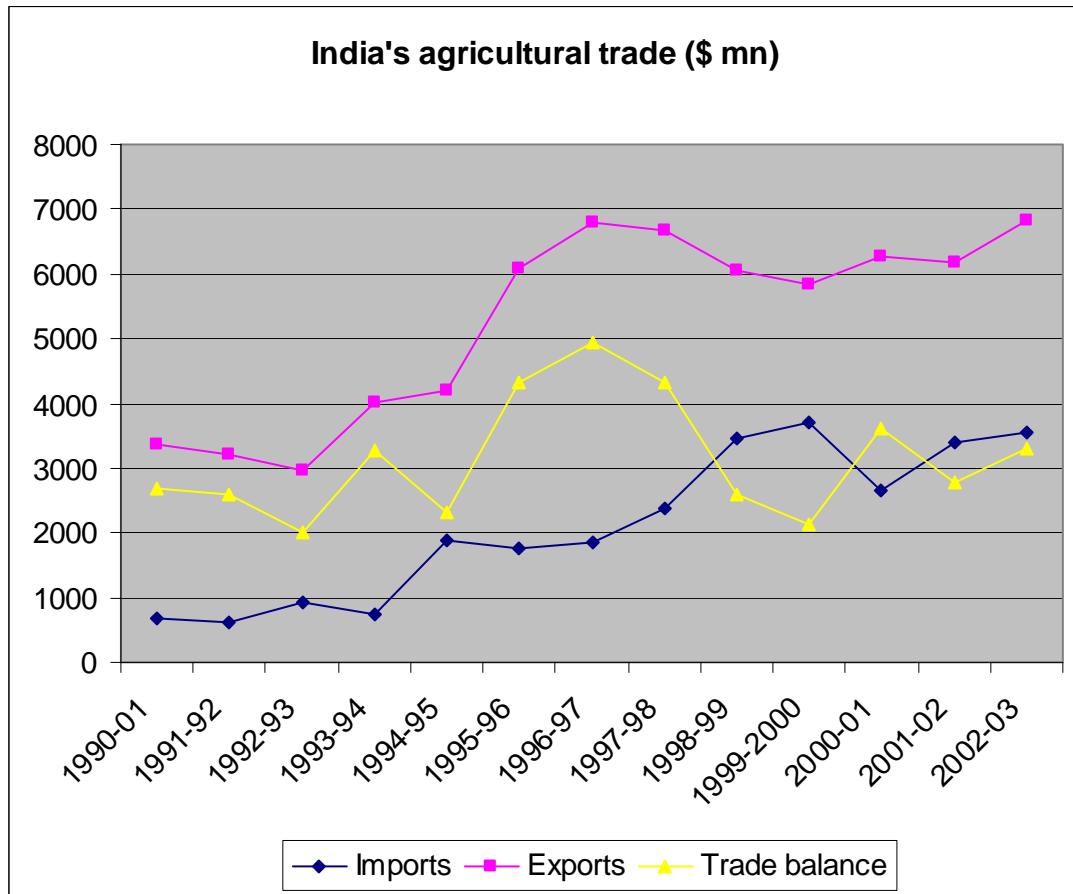
The impact of trade liberalisation on farmers' welfare works through various channels such as volatile prices, problems in imports and exports, impact on livelihood and other employment opportunities, etc. For farmers, perhaps the single most adverse effect has been the combination of low prices and output volatility for cash crops. While output volatility increased especially with new seeds and other inputs, the prices of most non-foodgrain crops weakened, and some prices, such as those of cotton and oilseeds, plummeted for prolonged periods. This reflected not only domestic demand conditions but also the growing role played by international prices consequent upon greater integration with world markets in this sector. These features in turn were associated with growing material distress among cultivators.

In a closed economy, lower output is normally accompanied by some price increase. Therefore, coincidence of lower production with lower terms of trade was very rare until recently. The pattern of lower prices accompanying relatively lower output reflected the effect of the growing integration of Indian agriculture with world markets, resulting from trade liberalisation. As both exports and imports of agricultural products were progressively freed, international price movements were more closely reflected in domestic trends. The stagnation or decline in the international

prices of many agricultural commodities from 1996 onwards meant that their prices in India also fell, despite local declines in production. This was not always because of actual imports into the country: the point about openness is that the possibility of imports or exports can be enough to affect domestic prices at the margin. However, imports also did increase, as the following chart indicates.

The combination of liberalised trade and reduced protection of other kinds certainly led to increased levels of exports and imports of agricultural commodities. As can be seen from Chart 1, while exports increased in dollar terms, so did imports, and so the trade balance shows no particular trend. However, the relatively steady increase in the total value of agricultural exports masks a range of differing forces which affected this value. From 1999-2000 onwards, some of the export growth is actually a form of distress sale at the macroeconomic level, as the publicly held stocks of food grains were sought to be disposed of through subsidized exports. Further, there were very sharp fluctuations in the unit value of exports because of very volatile international prices, as Table 3 indicates. So changes in export volume were necessary to ensure some degree of stability in total export values.

Chart 1: India's agricultural trade in value terms



Source: Government of India, Economic Surveys, various issues

Table 3 show the extent of price volatility faced by Indian exporters of agricultural commodities from the early 1990s onwards. While the price variations have been most marked for tea, they have been extremely volatile for all the other crops. Data on cotton prices faced by cultivators indicate similarly high rates of fluctuation. What is noteworthy is, as mentioned above, that such variation typically had very little to do with domestic harvest conditions. And much more to do with international prices. Cultivators were exposed to volatility which not only added greatly to the uncertainties associated with farming, but also generated price signals that were wrong or misleading. Since Indian farmers are known to have very elastic responses to relative price signals in terms of changing acreage, this caused large and often undesirable shifts in cropping pattern which ultimately rebounded on the farmers themselves. Thus, the phase of high cotton prices in the mid 1990s was associated with a widespread shift towards cotton cultivation, even in many areas with soil and climatic

conditions not ideally suited to growing cotton. The subsequent collapse of world cotton prices from the very late 1990s onwards was a major factor contributing to the material distress of cultivators in cotton growing areas. In dry land areas, traditional staple crops such as millets and sorghum were abandoned in favour of oilseeds such as groundnut which require more irrigation and purchased inputs, and which have also faced major volatility in crop prices. As a result, the inevitable uncertainties associated with weather fluctuations were compounded by further problems of extremely volatile crop prices, which were no longer inversely related to harvest levels but followed an international pattern. Further, this dramatic volatility of output prices - and the stagnation/collapse of some harvest prices from 1997 onwards - has been associated with continuously rising prices of inputs.

Table 3: Indices of unit value of exports
of some agricultural commodities

	Coffee	Tea	Oilcakes	Rice	Fish
1990-01	100	100	100	100	100
1991-92	84	76	74	89	91
1992-93	70	67	105	61	85
1993-94	90	89	111	105	94
1994-95	160	85	100	85	104
1995-96	176	288	117	55	97
1996-97	151	214	149	70	85
1997-98	175	87	148	121	77
1998-99	130	87	94	58	99
1999-2000	107	77	105	75	90
2000-01	86	71	134	82	82
2001-02	80	67	138	59	

Source: Ramesh Chand (2004)

Such exposure to global price volatility has been associated with a growing reliance on private debt, because of the lack of extension of institutional credit, coupled with growing inability to meet debt service payments because of the combined volatility of crops and prices. This in turn has led to loss of assets, including land, by the small peasantry. This has been so marked that the proportion of rural households without any land increased dramatically over the 1990s, and by 1999-2000 accounted for around 45 per cent of rural households according to National Sample Survey data. The

pervasive agrarian crisis has been most harshly illustrated by the increase in suicides by farmers, which amounted to nearly 10,000 cases across India by the end of 2004.

In addition, there has been a deterioration of conditions of food security associated with the shift away from cultivation of traditional staples and towards cash crops, as well as a sharp decline in per capita food grain absorption to the low levels last seen only in the late 1930s and again in the early 1950s, which were both periods of extreme rural distress. Table 4 gives some idea of the extent of such decline in both per capita food grain output and availability over the period since the early 1990s. It is evident that both output and availability have fallen, but the decline in per capita availability has been even sharper than for output, and that this has been marked for both cereals and pulses. Consumption data based on the national sample surveys suggest that both food grain consumption and total calorie consumption have declined substantially over the period, in the aggregate and even for the bottom forty per cent of population in terms of expenditure classes.

Table 4: Per capita output and availability of food grain

Average of triennium ending March	Net per capita output (kg)		Net per capita availability (kg)		Per capita total food grain availability	
	Cereals	Pulses	Cereals	Pulses	Kg per year	Grams per day
1992	163.43	15.34	162.8	14.2	177.0	485
1995	166.74	14.85	160.8	13.5	174.3	478
1998	162.98	13.93	161.6	12.6	174.2	477
2001	164.84	12.87	151.7	11.5	163.2	447
2002-03 only	161.63	11.67	144.5	10.6	155.15	425

Source: Utsa Patnaik (2004)

While the falling viability of cultivation has been an important reason for this, the collapse of rural employment opportunities, especially in agriculture but also in non-agriculture, has also been a major factor in the pervasive agrarian distress. The National Sample Survey on Employment and Unemployment, of which the 55th Round was held in 1999-2000, indicates a dramatic decline in the rate of employment generation in the latest period. The rate of growth of employment, defined in terms of the Current Daily

Status (which is a flow measure of the extent of jobs available) declined from 2.7 per cent per year in the period 1983-94 to only 1.07 per cent per year in 1994-2000 for all of India. This refers to all forms of employment - casual, part-time, self-employment, everything. For permanent or secure jobs, the rate of increase was close to zero. In rural areas, the decline in all employment growth was even sharper, from 2.4 per cent in the previous period to less than 0.6 per cent over 1994-2000. This included all forms of employment, as principal or subsidiary activity and for part days work. This was well below the rate of growth of population. In both rural and urban areas, the absolute number of unemployed increased substantially, and the rate of unemployment went up as well. The daily status unemployment rate in rural India as a whole increased from 5.63 per cent in 1993-94 to 7.21 per cent in 1999-00, and was more than 15 per cent in some states. In addition to this, there was a sharp decline in the rate of growth of labour force. More people declared themselves to be not in the labour force, possibly driven to this by the shortage of jobs.

A significant part of the collapse in employment occurred in agriculture, where the employment elasticity of output growth (the extent to which additional output creates additional demand for jobs) declined from 0.7 in 1983-94 to only 0.01 in 1994-2000. This was related both to growing mechanization of agriculture and to the cropping pattern shifts mentioned above. But even non-agricultural employment growth was slower than before. Aggregate employment elasticity of output fell from 0.52 to 0.16 over the same two periods.

Some of this was because of the decline in public spending on rural employment programmes since the mid-nineties. As a percentage of GDP, expenditure on both rural wage employment programmes and special programmes for rural development declined from the mid-1990s. The total central allocation for rural wage employment programmes was already only 0.4 per cent of GDP in 1995-6, but it declined further to a minuscule 0.13 percent of GDP in 2000-1.

This is probably why employment generation has emerged as not only the most important socio-economic issue in the country today, but also the most pressing political concern. The mandate of the recent elections is clear on this: the people of the country have decisively rejected policies that have

implied reduced employment opportunities and reduced access to and quality of public goods and services. This has led to the demand for and subsequent formulation of a National Rural Employment Guarantee Act, under which the central government would guarantee the provision of 100 days employment for every rural household, for a range of public works. This Act is currently under consideration by Parliament (although it may require major changes if it is truly to become a democratic instrument of rural economic regeneration).

The agrarian crisis in Andhra Pradesh

When the Commission on Farmers' Welfare visited nine districts of the state late last year, it was evident that agriculture in Andhra Pradesh was in an advanced state of crisis. Within this more general crisis, of course, there were substantial regional variations both in absolute levels of production and income and in the way that this crisis played out. In addition, the burden fell disproportionately on small and marginal farmers, tenant farmers and rural labourers.

The most extreme manifestation of this crisis was in the suicides by farmers, who are typically driven to this desperate act by the inability to repay debt incurred in the process of cultivation, which has become a volatile and economically less viable activity. But this was only the tip of the iceberg of generalised rural distress which had become prevalent across the state, and was also expressed in severe cases in kidney sales and hunger deaths in certain areas. The problems of farming were evident, ranging from frequent droughts and soil degeneration, to lack of institutional credit and insurance leading to excessive reliance on private moneylenders, problems in accessing reliable and reasonably priced inputs to problems of marketing and high volatility of crop prices. But the crisis was also reflected in other features of the rural economy: the decline in agricultural employment and stagnation of other employment, leading to reduced food consumption and forced migration of workers; the evident decline in per capita calorie consumption even among the poor.

Production indicators gave the first indication of the problem. The growth rate of aggregate agricultural output declined from 3.4 per cent per annum in the 1980s to 2.3 per cent per annum in the 1990s. Yield growth also

declined. For example, the growth rate of rice yield declined steeply from an annual rate of 3.1 per cent in the 1980s to 1.3 per cent in the 1990s; for cotton the corresponding figures were 3.4 per cent and 1.4 per cent. National-level studies estimate yields in Andhra Pradesh to have declined by 1.8 per cent per year in the 1990s. In addition, the volatility of yields has also been higher in the later period.

Meanwhile, prices of crops produced by farmers in the state had become much more volatile as they were more influenced by world market trends. From 1996, the falling international prices of many crops had their ripple effects in India even when the actual volume of imports did not increase, merely because of the possibility of such imports. There were also much sharper fluctuations in such prices, which changed sharply from year to year for some crops like cotton and groundnut. This created a pattern of shifting, uncertain and unreliable relative price incentives for farmers.

Despite all this, it was certainly not the case that agriculture in the state was stagnant over this period. On the contrary, there were very substantial changes most particularly in cropping patterns, as farmers across the state moved from traditional rainfed cereals to non-food cash crops. Table 5 gives an idea of the extent of the shift over four decades, but it should be noted that a substantial part of this change occurred in the more recent past. There were large reductions in the acreage under jowar and other millets such as ragi, and increases in the area under groundnut, other oilseeds and cotton. This shift towards more emphasis on non-food cash crop production reflected several forces. There was the obvious need for farmers' households to access more cash income in order to meet a range of cash expenses for immediate consumption and even for cultivation. In addition, there was a pattern of increasing expenditure on health. Cash crop production (including rice cultivation) typically entails more monetised inputs, such as seeds fertilisers and pesticides, and these were typically financed by incurring debt, most often with the input dealers themselves who also doubled as traders. Once such a money debt was incurred, cash crop production was further necessitated by the need to repay interest and principal, and it became almost impossible for farmers to move back to the old subsistence crops that did not command a market.

Table 5: Changes in Cropping Pattern
(per cent of cropped area)

Crops	North Coastal Andhra		South Coastal Andhra		Rayalaseema		South Telengana		North Telengana		Total State	
	1958	1998	1958	1998	1958	1998	1958	1998	1958	1998	1958	1998
Rice	38.9	33.0	40.5	48.6	9.1	11.1	14.8	23.9	20.8	29.5	23.1	30.5
Jowar	2.1	0.3	16.6	0.3	18.3	5.3	26.7	17.1	31.0	9.4	20.8	6.1
Other Millets	15.7	7.4	5.9	1.7	10.5	1.6	11.3	6.9	7.3	9.7	9.1	4.7
Pulses	11.0	13.4	9.1	14.8	6.5	5.6	11.8	14.6	15.1	12.0	10.7	11.9
Food Grains	66.9	54.4	72.1	65.4	44.4	23.6	64.4	62.5	74.2	60.6	73.1	53.2
Groundnut	7.1	9.5	3.6	1.8	20.3	48.3	10.5	9.5	8.0	5.3	10.5	15.3
Oilseeds	11.3	12.9	6.3	3.7	21.4	56.3	19.5	20.3	15.1	10.8	15.3	20.8
Cotton	0.2	0.7	0.8	7.0	7.9	5.2	0.4	8.2	4.0	17.6	3.1	8.2
Others	21.6	32.0	20.8	23.9	26.3	14.9	15.5	9.0	6.7	11.0	11.6	17.8

Source: S. Subramanyam (2002)

The technological problems of decelerating growth of crop output and volatile and falling net yields were dramatically accentuated by the changes in relative prices, such that, especially from the mid-1990s, output prices have stagnated or fallen while the costs of inputs have gone up very sharply. This created genuine questions regarding the viability of farming.

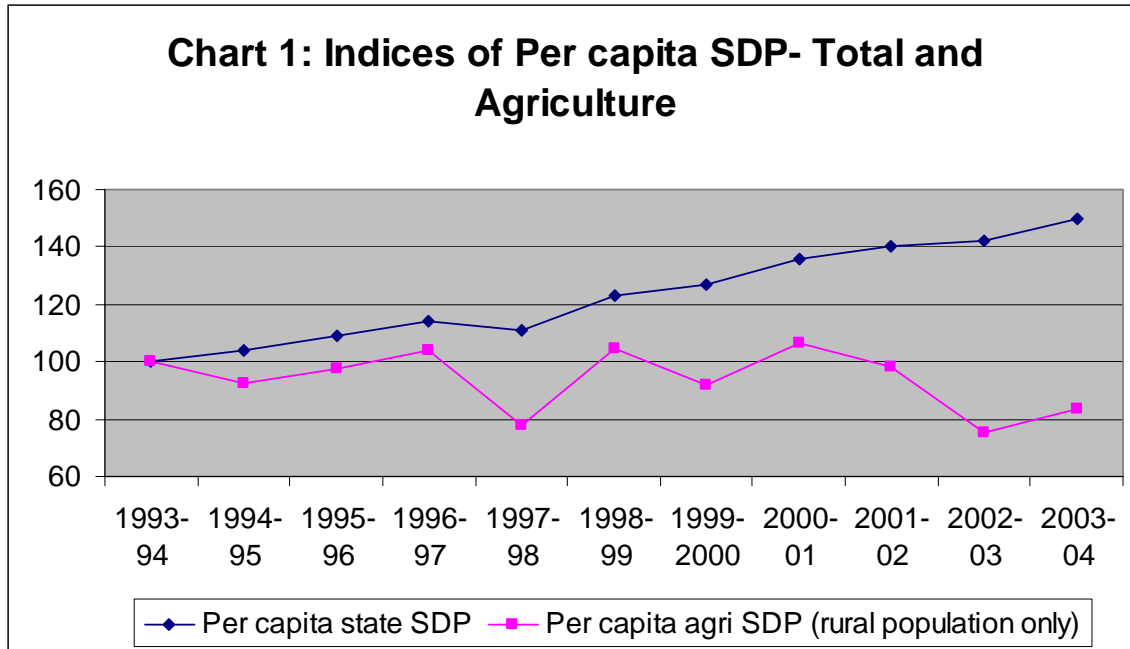
Table 6: Net income per hectare at 1971-72 prices in Andhra Pradesh

	Paddy	Groundnut	Sugarcane	Cotton
Early 70s	314	-		0
Mid 70s	81	-116		186
Late 70s	-36	-65	1056	638
Early 80s	150	-15	809	-
Mid 80s	140	-88	2194	-
Late 80s	215	-52	816	104
Early 90s	221	-9	1119	-
Mid 90s	227	-117	1563	474
Late 90s	167	-123	1139	-

Source: CACP, quoted by Directorate of Economics and Statistics,
Government of Andhra Pradesh

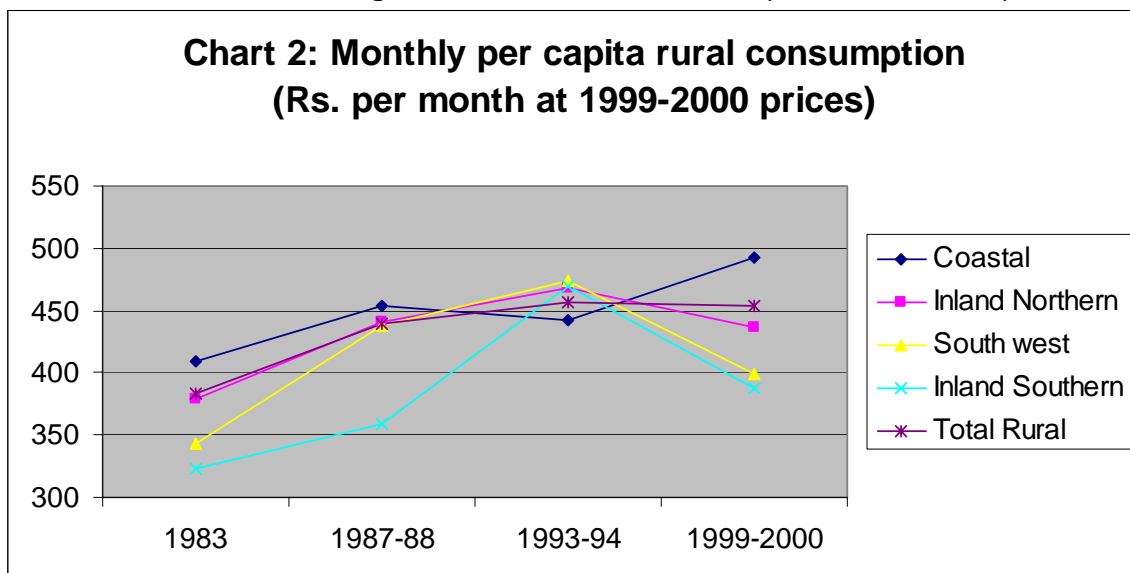
Table 6 gives an idea of the stagnation of returns and actual decline in returns from cultivation of several crops. In some cases, the subsequent patterns indicate both more losses from cultivation and greater volatility. The Commission on Agricultural Costs and Prices, Government of India (CACP) reports show that the returns from cotton cultivation per hectare in current prices were negative (a loss of Rs. 1641) in 1996-97 and only Rs. 72 per hectare in 1997-98, after taking into account the total costs. Since it is widely believed that the CACP underestimates many elements of cost in Andhra Pradesh, it may be that the actual situation was even worse than this already dismal picture.

When all this is combined with the effect of falling prices, it is not surprising to note that the share of GDP in agriculture in A.P. declined much faster than all India, and that per capita GDP from agriculture in constant terms barely increased after the mid-1990s and actually fell in recent years. Chart 1 indicates the behaviour of the index numbers for per capita income (that is net domestic product in constant 1993-94 prices) for all sectors and for agriculture alone. While aggregate per capita income increased moderately from 1993, agricultural income per capita of rural population shows no such increase, and has actually declined. In fact, between the triennium 1993-94 to 1995-96 and the triennium 2001-02 to 2003-04, per capita agricultural product actually declined by around 12 per cent.



Source: Calculated from NAS and Census of India

This was reflected in indicators of per capita consumption, which probably provide a more accurate picture of the real economic conditions in the countryside. Chart 2 indicates the trend in the four regions of rural Andhra Pradesh according to the NSS consumer expenditure surveys.



Source: NSS Consumption Expenditure Surveys

Note: The NSS regions correspond to the following districts:
 Coastal includes North Coastal Andhra and South Coastal Andhra;
 Inland Northern refers to North Telengana;
 Inland Southern refers to South Telengana and Kurnool and Cuddapah in Rayalseema);

Southwest refers to Anantapur and Chittoor in Rayalseema.

Aggregate per capita consumption for the rural areas of the whole state taken together increased marginally between 1983 and 1999-2000. But it is notable that there was hardly any increase since 1993-94, despite the moderate increase in per capita SDP indicated above. What is even more significant is that per capita consumption *fell* after 1993-94 in all the regions of rural Andhra Pradesh barring the coastal Andhra region. This fall was particularly marked for Rayalseema (comprising the Southwest and Inland Southern regions). So, in most of the rural areas of the state, average consumption expenditure actually declined in real terms in the period 1993-94 to 1999-2000. Even the rise in per capita income in Coastal Andhra may have an element of inter-regional inequality because of the differences between the backward North Coastal region and the advanced South Coastal region.

This is quite consistent with the picture of growing difficulty of cultivation. But in addition to the agricultural patterns, the general stagnation of the rural economy and the absence of non-agricultural income generation possibilities contributed further to the deterioration of living standards in the countryside. Part of the problem in employment generation stemmed from agriculture itself - not only was this sector depressed, but the increasing mechanisation implied falling labour use per hectare of cultivation. It is not surprising that in this context, agricultural employment fell and total rural employment stagnated.

At first sight this appears to be incompatible with the general perception that rural poverty has declined and the official estimate that the actual incidence of poverty in the state in 1999-2000 was only 11 per cent. But most analysts agree that this is a gross underestimate. It is evident that the official poverty line of Rs. 262 per capita per month (in 1999-2000) implying Rs. 8.60 per day, was far too low to meet requirements of food and other necessities. In addition, per capita calorie consumption also declined. A further cause for concern is the composition of cereal consumption increasingly away from the more nutrient millets to rice.

The increase in the number of farmers' suicides was the most dramatic sign of extreme despair and hopelessness, and close to starvation

deaths as the most blatant indicator of the extent of rural devastation. The proximate cause of such suicides is usually the inability to cope with the burden of debt, which farmers find themselves unable to repay. In most (but not all) cases, the debt was contracted to private moneylenders, as the massive decline in agricultural credit from banks and co-operatives has reduced access especially of small cultivators to institutional credit. Further, large numbers of farmers - tenant, tribal farmers, women farmers and those without legal titles - have no access at all to formal credit and are forced to rely entirely on private lenders.

But the debt burden itself is only a symptom of the wider malaise. Cultivation itself has become less and less viable over time, as input prices in Andhra Pradesh especially have sky-rocketed, and farmers have gone in for cash crops with uncertain harvests and even more uncertain output markets. The opening up of agricultural trade has forced farmers to cope with the vagaries and volatility of international market prices, even while the most minimal protection earlier afforded to cultivators has been removed.

Public agricultural extension services have all but disappeared, leaving farmers to the mercy of private dealers of seed and other inputs such as fertiliser and pesticides who function without adequate regulation, creating problems of wrong crop choices, excessively high input prices, spurious inputs and extortion. Public crop marketing services have also declined in spread and scope, and marketing margins imposed by private traders have therefore increased. All this happened over a period when farmers were actively encouraged to shift to cash crops, away from subsistence crops which involved less monetised inputs and could ensure at least consumption survival of peasant households.

The crisis in water and irrigation sources can also be traced to these cultivation patterns. Over-use of groundwater - once again resulting from the absence of public regulation or even advice, as well as the shift to more water-using crops - has caused water tables to fall across the state. The prolonged period of poor and untimely rains in much of the state has exacerbated these problems and created crisis conditions. Declining public investment, inadequate maintenance and the regionally uneven pattern of spending, have all made surface water access also problematic. In consequence, there are now real problems with respect to even the current

economic viability of farming as a productive activity in most parts of rural Andhra Pradesh, not to mention its sustainability over time.

Other factors added to debt burdens that became unbearable over time. Production loans dominate in current rural indebtedness. But among the non-productive loans incurred by rural households, those taken for paying for medical expenses are the most significant. The deterioration of public health services and the promotion of private medical care have dramatically increased the financial costs of sheer physical survival and well-being, even among the relatively poor.

The crisis in agriculture in turn affected and been affected by the stagnation of other employment opportunities in the rural economy. The closure of many small-scale industries worsened the problems of people living in surrounding villages, as they lost possibilities of employment and chances for self-employed service activities catering to those industries and their workers. Handloom and other weavers have been adversely affected by the removal of public subsidies and the decline of co-operatives. Dairy and livestock rearing have also become less profitable (and even turned loss-making in some areas) because of the increasing costs of feed and unequal market relations into which small producers have been pushed. As a result, the share of rural non-farm employment in the state actually declined from 23 per cent in 1983 to 21 per cent in 1999-00, while for the country as a whole it increased from 18 per cent to 24 per cent over the same period.

This entire process is sometimes presented as a situation in which rural people have been "left out" of the process of globalisation, or have been "marginalised" or "excluded". But the problem is not at all that cultivators and workers in this state have been "left out". Rather, they have been incorporated and integrated into market systems that are intrinsically loaded against them, in which their lack of assets, poor protection through regulation and low bargaining power have operated to make their material conditions more adverse.

The causes of this widespread crisis are complex and manifold, reflecting technological and weather-related factors, changes in relative prices and reduced levels of public involvement. It is true that climatic shifts have played a negative role, especially in terms of generally lower

rainfall, more uneven and untimely rain and growing regional variation in the rainfall. However, the main causes are dominantly related to public policy, and in particular to an economic strategy at both central government and state government levels which systematically reduced the protection afforded to farmers and exposed them to market volatility and private profiteering without adequate regulation, reduced critical forms of public expenditure, destroyed important public institutions and did not adequately generate other non-agricultural economic activities. While this was true across most of rural India over the past decade, as we have seen, it was especially true in Andhra Pradesh.

The state of Andhra Pradesh had become almost a laboratory for every neo-liberal economic experiment, with a massive shift towards relying on incentives for private agents as opposed to state intervention and regulation of private activity, in virtually all areas. Ironically, this decline in the government's role took place at the same time that the state government was incurring massive external debts from bilateral and multilateral external agencies. Many of the problems in the economy of the state - in agriculture as well as in non-agriculture - can be traced to this reduction of the government's positive role and the collapse of a wide range of public institutions affecting the conditions facing producers.

Agriculture is a state subject and therefore state governments have more responsibility in agriculture development. For the past decade, the state government in Andhra Pradesh not only participated in but aggressively pushed liberalisation policies, and also neglected agriculture. In addition, however, it was also crucial in accelerating the deregulation and privatisation which also marked the central government's approach. The primary role of the public sector enterprises was to protect the public from the adverse impacts of market forces and provide them with goods and services at reasonable (and frequently subsidised) prices. The primary beneficiaries of this system were expected to be the poor segments of the population. But the state government in Andhra Pradesh systematically reduced the role of public investment, intervention and regulation, and expected private activity to deliver more favourable outcomes.

Because of the decline in public investment in agriculture, fixed capital formation in agriculture (which had recorded high growth in the

1980s) declined in absolute terms in the 1990s and thereafter. The area under public sources of irrigation, e.g., canals declined in the nineties due to deceleration in public investment and public neglect of traditional water sources. No new major irrigation project was taken up in the last nine years and several pending projects were not completed.

In the case of watersheds, the state government followed the extensive approach of thinly covering many watersheds instead of the intensive approach of covering few watersheds, which made many watersheds ineffective. The state government also spent lot of funds on the "Neeru-Meeru" watershed programme which had some successes but generally did not yield the desired results, again because of the reliance on private contractors and corruption. Because of decline in surface and tank irrigation, ground water use has increased significantly increasing costs for farmers and bringing down the water table in most parts of the state. Power reforms increased the cost of power in the state. Although farmers paid only a flat rate (which increased from Rs. 50 to Rs. 300), they had to incur heavy losses in terms of erratic power, low voltage and burning of motors.

There was also a neglect of research and extension. The intensity of government investment in agricultural research and education in the state (at 0.26 per cent of its agriculture GDP during 1992-94) was lower than for the other three southern states and was just around half of that for All India (0.49 per cent for centre and states together). Public expenditure on extension, which is borne by the state government, declined in absolute terms in the nineties. It was only 0.02 per cent of the state's GDP during 1992-94, as against the All-India average of 0.15 per cent. There was an attempt to privatize extension services. As a result of these policies, extension services are currently in bad shape in the state. With the virtual breakdown of the extension machinery and lack of access to institutional credit, small and marginal farmers became increasingly dependent upon the private trade for credit and extension services. At the same time such agents were subject to less regulation than before, leading to circumstances in which resource-poor farmers became victims of exploitation by such agents.

By the late 1990s, the looming agricultural crisis was recognised to be substantially the consequence of inadequate agricultural services, including extension, reliable seed supply, quality pesticides, machinery, proper soil survey-testing, soil conservation, market information and market intelligence. However, despite this, the state government of that time refused to recognise this or take palliative measures. With this approach of the state government, it is not surprising to find that many public institutions affecting agriculture were systematically eroded or destroyed. Some important government corporations and cooperative institutions in the state were closed, allowed to run down, or simply handed over to the private sector. These institutions, such as A.P. Irrigation Development Corporation, A.P. Agro-Industries Corporation, A.P. Seeds Development Corporation, Cooperative Sugar Factories, Cooperative Spinning Mills had played an important role in helping the farmers and providing more secure markets for some produce. The running down of these institutions therefore also affected farmers adversely.

Similarly, privatisation of education and the health sector have had adverse consequences for farmers. In the delivery of health and education, the reductions in spending and reduced quality of public services has led to the increase of private sector activity which has created segmented markets for rich and the poor. Higher income groups have moved to private sector while the state has been offering services at usually much lower standards of efficiency and quality to the lower income groups. This impact has been felt strongly in the health and education services and has translated into an equity issue. The poor have also been affected by higher drug prices.

The agrarian crisis in the state was widely recognised to be responsible for the massive electoral earthquake in April 2004 which not only unseated the ruling BJP-led government at the Centre but also meant that the previous ruling party at the state government was comprehensively defeated. Indeed, the victory of the opposition Congress Party even in the national elections, and its consequent ability to lead a coalition government at the Centre, was related to the complete sweep of the Parliamentary seats in Andhra Pradesh. The Congress party also came into power at the state. The local leadership of this party had made rural distress a major plank of its electoral campaign and had promised to take steps to change state

government policies in a pro-farmer direction. This is why the new state government in Andhra Pradesh has recognised the magnitude of the agrarian crisis and has already made clear its intention to redirect state policy bearing in mind the need and interests of farmers.

There are a number of positive measures which the state government has already instituted, including the relief package for families of farmers who have committed suicide; Help Lines for farmers in distress; free power to all agricultural connections and the waiver of power dues, in ease the heavy cost burden on farmers; the moratorium on loans to give farmers some breathing space; the effort to increase institutional credit; a new seed bill to improve regulation of private seed supply, and so on. These have all been necessary and important measures, and have certainly alleviated the worst effects of the crisis for the farmers in the state. However, the crisis in agriculture is so deep and widespread, that in spite these positive measures, the conditions of farmers remain precarious, as evidenced by the continuing suicides despite various relief measures. Much more will be required to make material improvements in the conditions of farmers. In particular, the destruction of various rural institutions has been so complete that it will take time, resources and effort to rebuild them and to generate new ones that can serve farmers and rural workers. In all this, a combination of state and central government policies is required.

Policy conclusions

While the issues are complex and require detailed investigation of each area, they generally reflect not only structural conditions but especially the collapse of public institutions that affects farmers and farming. It is evident that solutions to the current agrarian crisis require interventions in six important areas, which would do the following:

- correct spatial inequities in access to irrigation and work towards sustainable water management
- bring all cultivators into the ambit of institutional credit, including tenant farmers
- shift policies to focus on dryland farming through technology, extension, price and other incentives

- encourage cheaper and more sustainable input use, with greater public provision and regulation of private input supply and strong research and extension support
- protect farmers from high volatility in output prices
- emphasise rural economic diversification, to more value-added activities and non-agricultural activities.

Therefore, a comprehensive strategy for the regeneration of agriculture would require more than simply addressing trade policies, and would necessarily involve a wide range of public interventions, which in turn means a substantially increased role for public investment and regulation in rural India. However, even trade policies need to be adjusted in order to provide some protection from dramatic price volatility as well as excessive competition from potential imports. For example, the introduction of a system of variable tariffs and if necessary Quantitative Restrictions on certain agricultural commodities, would at least ensure stable import prices that protect domestic cultivators and their livelihood. It is important to exploit the possibilities of using "Sensitive Products" currently under way in the AoA negotiations in this respect. A domestic market price stabilisation fund is also important for ensuring stable prices. An effective system of Minimum Support Prices is more necessary than ever, as is the extension of institutional credit. Most of all, rural public institutions that protect cultivators, provide more productive employment possibilities and improve the quality of life of the rural population have to be created or rebuilt. This requires not only a more nuanced attitude towards trade liberalisation, but also a general shift in public economic strategy away from excessive determination by neoliberal marketist approaches.