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**Development Strategy: The State and Agriculture Since
Independence**

by

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DEVELOPMENT STRATEGY: THE STATE AND AGRICULTURE SINCE INDEPENDENCE

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Abstract

There is a widespread belief that India is currently in an agrarian crisis, with the spate of suicides by farmers several states since the 1990s seen as a tragic symptom of the crisis. In the large and growing literature on the crisis some common themes emerge: the role of systemic economic reforms since 1991, the opening of the Indian economy to external competition and investment after decades of insulation; the impact on India of implementing the Agreement on Agriculture of the Uruguay Round of Multilateral Trade Negotiations; the alleged neglect of agriculture in the planning process since the mid-eighties; the decline of public investment in agriculture in response to rising fiscal deficits at the Centre and the States; and above all, the slowing of the growth of agricultural output (particularly food grains) as well as a stagnation in yields per hectare of land since the nineties.

This paper argues that the fundamental factor that is at the root of the current state of agriculture is India's pursuit, until the 1991 reforms, of a state-directed, state-controlled and state-dominated development strategy of import substituting industrialization with emphasis on heavy industry and insulation from the world economy. This strategy completely ignored the lessons of economic history: successful development lies in the transformation of economic structure by shifting a substantial part of the large initial share of labour force in agriculture and other low productivity activities in the informal sector to more productive off-farm activities through rural and urban industrialization with emphasis on labour-intensive manufactures to supply growing domestic and world markets and raising agricultural productivity. Leap-frogging the labour-intensive manufacturing stage of development altogether and focusing on information technology intensive services sector to bring about the transformation is not simply not feasible. This paper elaborates this main point by looking at major policy interventions in agriculture since independence. It argues that there was no coherence, and little coordination among the centre, states and other policy making institutions in the decisions on the myriad interventions and their effectiveness in achieving their intended objectives was limited.

Keywords: Indian agricultural policy; economic reform; import substitution industrialization

JEL Classification No.: Q18; Q19

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1. Introduction

India is widely believed to be currently in an agrarian crisis. An official Expert Group claims that “Indian agriculture is currently passing through a period of severe crisis. Although some features of the crisis started manifesting themselves in certain parts of India during the late 1980s, the crisis has assumed a serious dimension since the middle of the 1990s. One of the tragic manifestations of the crisis is the large number of suicides committed by the farmers in some parts of India.” (EGAI, 2007, p13).

According to the expert group, both long-term structural and institutional as well as short term manifestations contributed to the crisis: “The long-term structural features are a sharp decline in the share of agriculture in the Gross Domestic Product (GDP) accompanied by a very low rate of labour force diversification away from agriculture... A large dependence of working population on land has also resulted in a steep decline in per capita land availability. The increasing pressure on land resources is accompanied by severe stress on the availability of water resources in the country and unequal regional distribution of available water. On the credit front, the functioning of the rural cooperative credit institutions has deteriorated in many parts of the country. The emphasis on economic efficiency has led to the neglect of social priorities in lending by the commercial and regional rural banks... The result is growing dependence on non-institutional sources of credit at very high rates of interest. Except for a few crops, the procurement mechanism does not serve the purpose of ensuring minimum prices to agricultural producers in many parts of the country.

The crisis has been exacerbated further by rapid environmental degradation and plateauing of the existing agricultural technology. The liberalisation of the economy has failed to give a big push to agricultural exports and to increase income and employment in agriculture. The gradual withdrawal of the state from active participation in development activities has resulted in a steep decline in public investment in agricultural infrastructure in general, and in agricultural science and technology in particular. This has resulted in deterioration of rural infrastructure, stagnation of agricultural research and development, and neglect of extension services.” (ibid, p. 13)

Some common themes emerge from the recent literature on agrarian crisis; the role of economic reform since 1991, particularly aspects of opening of the Indian economy to

external competition and the implications for India of the Uruguay Round agreement on agriculture; presumed neglect of agriculture in the planning process since the mid-eighties, decline in public investment in agriculture in response to rising fiscal deficits at the centre and states, and above all, the slowing of the growth of agricultural output, particularly food grains, as well as stagnation in yields per hectare since the early nineties.

Prime Minister Singh and Finance Minister Chidambaram have repeatedly commented on the crisis. Mr. Chidambaram is reported to have expressed concern at the slow growing farm sector and the need for policy attention to issues like stagnant farm yield rates in many major crops, declining per capita availability of food grains and the need for additional public investment, while claiming that “these issues are high on the agenda of the Government and though it has taken many initiatives on these counts, much more needs to be done.” [<http://www.hindu.com/2007/11/13/stories200711352621500.htm>].

Prime Minister Singh, in his recent address to the full Planning Commission, while stressing a renewed focus on agriculture, drew attention to the need to address the burden of subsidies on food, fertilizers and recently on petroleum. He said “Cabinet colleagues and the Planning Commission [have] to reflect what these mean for our development options and what development options these subsidies are shutting out. Do they mean fewer schools, fewer hospitals, fewer scholarships, slower public investment in agriculture and poorer infrastructure? It is important that we restructure subsidies so that only the really needy and the poor benefit from them and all leakages are plugged.” <http://www.hindu.com/2007/11/12/stories/2007111250781500.htm>

The direct subsidies on food, fertilizers and petroleum in the budgets of central and state governments are substantial. The Centre spent Rs, 53,000 crores or 1.3 percent of GDP in 2006-07 on the three. Food subsidies accounted for little over 40 percent of the total. Estimating the shares of producers and the farmers in fertilizer subsidies is not simple. Still the share of farmers is unlikely to be small. Adding subsidies on food, indirect subsidies on sale of electricity and water from public irrigation to farmers at a price below user cost (or even free of cost in the case of electricity in some states) by the states and other myriad farmer-oriented subsidies, the total farm subsidy burden is large.

Central and State governments have intervened in agriculture massively. However, the interventions have not been effective in achieving their objectives. The objectives

not always clear and, different interventions were not often mutually consistent, let alone reinforcing each other, in achieving a common set of objectives at least social cost.

Policy interventions were made in a piecemeal fashion, by different institutions and by central and state governments. Although the five-year and annual plans were in principle the framework through which a coherent set of objectives and a coordinated set of policies could have been formulated, in practice this was not the case.

The interventions could be classified into four broad and meaningful categories relating to: (1) agrarian structure (land tenure, and ownership, land access through share-cropping and tenancy), (2) market structure (regulation of markets, restrictions on futures markets, and on the movement of agricultural commodities on private account within India across states and across districts within states, on foreign trade, state trading, and constraints on private trade) (3) prices of inputs and outputs (subsidies on transportation, fertilizer, irrigation water, electricity fuel and credit, procurement and subsidized sale through the public distribution system (PDS) (4) Public investment in irrigation and infrastructure and incentives for private investment in agriculture. The interventions were numerous, extensive, and varied over time in number and their severity in an unanticipated and unpredictable fashion, thus making decision making environment highly uncertain for those with vital interests in agriculture. Also states and centre intervened, often on the same issue. For example, the centre announces its procurement prices at the beginning of each season and many states supplement with their own add-ons to the prices announced by the centre and procure grain on their own account as well. Clearly, the chaotic policy interventions precluded their being mutually consistent in sub-serving a well-defined, inter-temporal social objective, though they were rationalized as such.¹

¹ The Constitution of India (1950) lays down the distribution of legislative (and policy making) powers of the centre states into three lists: Union list consisting of areas in which the parliament (and central government) have exclusive powers, a state list of areas in which the state legislature (and state governments) have exclusive authority and a concurrent list of areas in which both the parliament (central government) and the state legislatures (and state governments) have power with the important premise that Union law will prevail over state law. However, with the appointment of an extra constitutional body, namely the Planning Commission in March, 1950 through a resolution of the Central Cabinet soon after the adoption of the Constitution in January, 1950 and the institution of five-year plans formulated by the Planning Commission for articulating a national development strategy, the constitutionally assigned powers of the centre vastly expanded. The Finance Commission, a constitutionally mandated body, in its report in 1973 remarked “A national plan has necessarily to comprehend the entire range of developmental activities, cutting across the delimitation of powers between Centre and the states. In this process, the Government of India and the Planning Commission have acquired a voice even in matters recognized to be within the Jurisdiction of the States.” (Cited in National Commission on Agriculture (1976), Part II, p. 95). In the three decades and more since the report, the powers of the central government have expanded even further

Twenty-five years ago on the occasion of the Indian Statistical Institute's Golden Jubilee International Conference on Review of the Indian Planning Process, I presented a paper on "Was Agriculture Neglected in Planning" (Srinivasan, 1982). Although under plausible alternative meanings of the ill-defined phrase, "neglect of agriculture" I could not find such neglect, I concluded that the lack of neglect did not mean the absence of policy failures. I identified three interrelated failures relating to institutional change, employment generation (or labour "absorption" as it was called then) and in reducing, abject poverty. In discussing labour "absorption," I pointed out the fact that in the thirty years since 1950, the productivity of workers "absorbed" in agriculture has grown at a rate slower than those employed in non-agricultural activities. But it was beyond the scope of my paper then to analyze whether a different strategy of development could have resulted in a significant withdrawal of labor from agricultural activities and in accelerating the growth of output and employment in non-agricultural activities. Such an analysis is the theme of this paper.

The expert group (EGAI 2007, p27) claims that "another important manifestation of the crisis in agriculture is the stagnant if not deteriorating, terms of trade for agriculture after the introduction of economic reforms". Ashok Mitra (1977, pp141-142) wrote in the middle seventies that "in recent years, the domestic terms of trade in the country moved continuously in favor of farm products in general and within the farm sector in favor of these specific crops that are marketed by . . . the richer sections of peasantry. This shift in terms of trade can be viewed as mirroring the political arrangement entered into by the urban bourgeoisie with the rural oligarchy . . . the developing shift in terms of trade in favor of the farm sector is a major price paid by the industrial bourgeoisie to cement their political arrangements with the rural oligarchy." It turned out that the rising trend in agriculture's TOT on which Mitra based his thesis of a grand alliance between the rural oligarchy and the urban bourgeoisie was confined to the sixties and was not seen either before or thereafter. (Srinivasan, 1982, pp 42-43) The expert group similarly over-interprets the short-term and reversible trends in terms of trade.

The main point of this paper is that, the fundamental or ultimate contributory factors to the current crisis arise from our ignoring the basic fact of economic history: successful economic development lies in transforming economic structure over time by shifting a large proportion of the initial population and work force dependent upon agriculture and other primary activities of low productivity to more productive activities. Historically this transformation was brought

about through industrialization, primarily manufacturing. Our development strategy, founded on import-substituting industrialization with emphasis on heavy industry, and rationalized by very long-term growth considerations in an economy insulated from world markets, not only delayed the transformation, but also created a self-fulfilling prophecy that the non-agricultural sectors would not grow at a rapid enough rate to provide more productive employment opportunities for an increasing share of the labour force in agriculture. For example, the National Commission on Agriculture (1976) stated “An overwhelmingly large proportion of the total labour force, i.e., about 72 percent, is employed as agricultural workers at present. Even in the most optimistic view of the creation of additional employment opportunities in the urban, non-agricultural occupations, the transfer of the labour force from agricultural to non-agricultural jobs will be rather slow. But the new labour force will continue to depend on agriculture and allied non-agricultural occupations even in 2000 A.D.” (NCA, 1976, Part III, p. 82).

In stark contrast to this pessimistic view, the memorandum of the Chairman Jawaharlal Nehru, to the sub-committees of the National Planning Committee of 1938, stated “more important is the planning of different kinds of industries, large, medium and cottage, which alone may effectively mitigate the present pressure on the soil. Within a decade the aim should be to produce a balanced economic structure in which about half the population would depend on agriculture (IIPR, 1988, p. 55 emphasis added). Alas, after six decades after independence, more than half (60 percent or so) still depend on agriculture.

Having failed thus far to expand the share of manufacturing in employment, to think that we can leap-frog the stage of manufacturing in development altogether and rely on the information technology-based service sector to bring about the missed transformation would be a pipe-dream. Also a focus on the agricultural sector, necessary and desirable though it is in the short and medium run, by itself will not address the fundamental failure of our development strategy.

In the rest of the paper I will elaborate my main point by briefly looking at the major policy interventions in agriculture.^{2,3} I will argue that these interventions more or less took it for

² I will not be covering interventions for which the direct targets were not producers, consumers, traders and other agents involved in agriculture. These include development programmes, integrated rural intensive agricultural development programmes, agricultural research and extension and public investment.

³ The literature in the English language alone on Indian agriculture, including reports of committees and commissions appointed by the government at various points of time such as the important Report of the Royal Commission on Agriculture in 1929 and the fifteen volume report of the National Commission on Agriculture of

granted that with projected population growth and a stagnant or at best slowly declining share of population dependent on agriculture, the absolute numbers of those employed (as cultivators, tenants and landless workers) will continue to grow. I will contend that even if one viewed the current situation as an agrarian crisis, ad hoc responses to it by modifying the existing set of agricultural policy interventions and adding new ones of the same type, without expanding and deepening the reform process and set the economy on a development strategy and path fundamentally different from that of the first from decades of planning, would not resolve the crisis.

2. Agrarian Structure: Land Tenure, Ownership, Tenancy and Cultivation.

2.1 Flirtation with Co-operative Farming: 1951-66

The committee on Land Policy, Agricultural Labour and Agricultural Insurance was considered by the National Planning Committee of the Indian National Congress had resolved at the end of 1940 that “the cooperative principle should be applied to the exploitation of land by developing collective and cooperative farms . . . collective or cooperative farms should be begun on ‘cultivable waste’ land, which should be acquired, where necessary by the state immediately” (IIAPR, 1998, p215).

After independence, the committee on agrarian reforms the Congress Party (chaired by J.C. Kumarappa) in its report of 1950, concluded that collective farming to be suitable essentially for the development of reclaimed waste land. It categorically rejected capitalist farming as its adoption in its view “would deprive the agriculturists of their rights in land [and] turn them into mere wage earners,” and was unenthusiastic about state or collective farming, except once again, on reclaimed waste land, and opted for individual peasant farming.

However the idea of cooperative farming surfaced in the form “cooperative village management” in the First Five Year plan (1951-56) with the village as the unit of land management with individual families or groups of families cultivating blocks of land allotted by the village management body. Dandekar (1974, p. 53) acidly comments that “This was a rather naive concept based on a utopian notion of a village and plain ignorance, or unwillingness to see the truth, about village community functioned.”

1976, debates in the two houses of Parliament and state legislatures, as well as reports in the news media, is very vast and diverse. I cannot and will not pretend to cover this vast body of writings. I will draw selectively only on some of the major contributions that are essential to my argumentation.

The Second plan (1956-61), according to Dandekar “offered lip service though with less conviction,” to cooperative village management and the third plan (1961-66) made no mention of village management and thereafter the concept was quietly dropped.

The problem of landless agricultural workers and the need to provide increased employment opportunities (on and off farm) were recognized by planners. Yet as Dandekar (1974, pp 84-85) points out ideas on increasing employment opportunities “were not very clear, in any case, they were not elaborated . . . what was said with respect to the landless workers in the First Five Year Plan was plainly evasive.” In particular, it was not understood that the industrialization strategy being capital intensive by its very design could not generate the rising employment opportunities for such workers. This basic lack of understanding led to the presumption that the problem of their employment had to be solved within the agricultural sector itself. Dandekar (1974, p. 87) adds that “the Fifth Plan (1970-75) emphasized that landlessness was a root cause of poverty and that access to land was a major source of employment and income; that such access could be achieved either by a more equitable distribution of land or providing security of tenure to tenants and share croppers who are the actual cultivators.” Dandekar stressed that the land reform policy, by keeping a growing rural population on land, simply created a growing population of non-viable farmers (small and marginal farmers). The history of land reforms reviewed illustrates this finding in the next section amply.

2. Land Reform

2.1 Abolition of Intermediaries

At the time of independence the prevailing land tenure system was complex going back to the Mughal era and earlier. P.S. Appu (1996, pp. xv-xii), characterizes it as follows: “The existence of rent-receiving intermediaries between the actual tillers of the soil at the bottom, and the government at the top, great inequity in the ownership of land, concentration of agricultural lands in the hands of the upper classes, widespread prevalence of insecure tenancies inhibiting the optimum utilization of the tenants’ land, a preponderance of miniscule uneconomic holdings and to the extreme fragmentation and subdivision of holdings.” The post-independence land reform agenda naturally included the abolition of intermediaries, tenancy reform, reducing concentration of land ownership and the consolidation of land ownership and the consolidation of fragmented holdings. However, not all items in the agenda were effectively implemented.

Appu (1996) concludes, that despite the inefficiency and slowness of its implementation, and resistance by intermediaries, the social and economic powers of the intermediaries came to an end with the implementation of legislation. However, he noted (Appu, 1996, p. 79) that the reforms had some major weaknesses: it allowed the intermediaries to retain a substantial amount of land for their “personal cultivation,” a term that was so “loosely defined in the legislation that no rights were conferred on tenants-at-will and share croppers,” resulting in millions of tenants and under-tenants being evicted. Also the payment of compensation to the former intermediaries resulted in heavy public expenditure. (Appu, 1996, pp. 72-79)

2.2 Tenancy Reform

Tenancy reform in the post-independence period evolved over a period of several decades, with three important guidelines laid down in various five-year plans. These were (i) there should be an upper bound on rent at one-fifth of gross produce; (ii) tenants should be accorded permanent rights in the land they cultivate subject to a limited right of land owner to resume land under tenancy for “personal cultivation” and (iii) in respect of non-resumable land, landlord-tenant relationships should be ended by conferring ownership rights on tenants. Appu (1996, pp. 95-96)

Discusses the differing definitions of ownership in five year plans, and of tenants in the tenancy reform legislations of various states, in particular, whether share-croppers are to be deemed tenants, varied. The first plan defined small owners as those owning less land than a family holding and middle owners as those holding land in excess of a family holding but less than the limit for resumption for “personal cultivation” (three times the family holding). The second plan defined the “basic” holding as the minimum area needed for profitable cultivation, and a family holding as three times the basic holding. Owners of land less than a basic holding were to be deemed free to resume their entire holding for personal cultivation. Owners holding between one and three basic holdings would be allowed to resume half the area of their holding under tenancy, subject to a lower bound of a basic holding. The Second plan also elaborated the phrase of “personal cultivation” to mean such a cultivator bore the entire risk of cultivation, supervised it himself for a member of his family and supplied a minimum amount of labour himself. Although it was recognized that the supply of a minimum amount of labour is difficult to enforce in practice, the plan suggested that it should be an important criterion for land that is to be resumed for personal cultivation.

Appu (1996, p. 91) wryly remarks that “all these meticulous exercises in hair splitting in verbal juggling aimed at reconciling the conflicting interests of landowners and tenants ignored the realities of the power equation in the countryside and the character and capability of the administrative machinery . . . the basic fact is that the policy of ‘land to the tiller’ could not have been carried out without hurting the private property rights. But the policymakers were unwilling to wound and afraid to strike.” India’s planners from the fifties, are also guilty of Appu’s charge.

2.3 Trends in land ownership and tenancy

Before concluding the discussion of tenancy and turning to land ceiling legislation, a brief look at the trends in tenancy and ownership is useful the relevant data are presented in tables 1-5 and Figure 1. Several conclusions emerge from these data. First, the incidence of tenancy as measured by percentage of households leasing in, percentage of area (out of total area owned), leased in or leased out has been steadily decreasing from 1971-92 to 2003 (Table 1). Second, the percentage of tenant holdings as a proportion of operational holdings and the percentage of area leased in every category of the size of operational holding (marginal, small, semi-medium and large) has been declining during 1960-61 to 2002-03 (Tables 2 - 4) with one exception that the percentage area leased in marginal holdings remained unchanged between 1991-92 and 2002-03. Third, sharecropping has been the dominant farm tenancy accounting for roughly 40% of the leased in area since 1960-61, except for 1970-71 when it was 48%. The proportion of leased-in area under fixed produce rent and also under fixed money rent, after declining between 1960-61 and 1981-82, has been increasing since then (Table 5). Fourth, Figure 1 shows the trend in the absolute number of tenant holdings and the leased-in operated area. After declining until 1981-82, both increased thereafter, though not in proportion to the increase in total number of operational holdings.

NSS (2004) claims that “though the measures of land reform undertaken since independence appear to have deterred the growth of exploitative tenancy, there is still a huge proportion of tenanted land in total operated area. What is most remarkable about farming in rural India is the significantly high proportion of total tenanted operated land by a small proportion of holdings.” NSS does not define what is meant by exploitative tenancy, let alone what its growth would have been in the absence of land reform. Nor does it say why the observed concentration in leased-area is unduly high. It is true that marginal farmers operating less than one hectare of land account for 10 percent of operational holdings and 30 percent of

leased in land. The 30 percent of holdings operating more than one hectare account for 70 percent of leased land (Table 2). As compared to the share of operated area at 23 percent and 77 percent respectively (NSS, 2003b, Table 3.4) for the two groups, leased in area is more concentrated. There is some evidence of eviction of tenants and resumption of land for personal cultivation by landowners in the sharp fall in the percentage of tenant holdings from 25.7 to 15.2 (Table 3) and in area leased from 10.6 to 7.2 between (Table 4) 1970 and 1981-82 in the decade of the Green Revolution as compared to the stability of these percentages prior to 1970-71.

Perhaps the most successful of tenancy reforms is “Operation Barga” introduced by the left front government of West Bengal after its assumption of power in 1977. This programme registered the share-croppers (bargadars) and assured their rights. It is widely believed to have contributed to the remarkable acceleration of growth in the output of rice from an average of 2.85 percent per year during 1950-51 to 1975-76 to 4.45 percent per year during 1976-77 to 1998-99. Output of food grains also showed statistically significant, though less dramatic, acceleration in growth between the two yeasts. The primary contributor to the remarkable achievement is the acceleration in growth of yield per hectare of land (Sengupta, et al., 2004; Tables 5, 7, 12 and 14).

It would be hasty to conclude from the observed acceleration in output and yield growth that it was mostly due to the land reforms (particularly tenancy reforms) of the left front government since 1977 Bardhan and Mookherjee (2007) argue that first, the extent of tenancy in West Bengal was too small to explain the acceleration in growth of total output through acceleration of output on tenanted land. NSS data show leased-in land to total operated had declined from 12.3 percent in 1981-82 to 9.3 percent in 2002-03. Moreover, the effects of tenancy reform could be confounded with the effects of many other changes that took place at the same time, such as changes in the market environment or in farm input supply programmes delivered by the government that may have been correlated with the tenancy reform. Further, there is a possibility that reform was implemented in villages with more progressive farmers and the decision whether to register or not by tenants might have been driven in part by productivity improvements arising from reasons unrelated to the registration programme. Their own study was based on a disaggregated data from a panel of farms spanning 1981-95 from 89 sample villages. Their main finding is that while there was a statistically significant effect of tenancy registration (Operation Barga) on productivity of tenant farmers, there was also a large general

equilibrium spillover effect on non-tenant farmers. Thus “the productivity effects of tenancy reforms were overshadowed by farm input services and infrastructure spending by local governments” (Bardhan and Mookherjee, 2007, p. 1). Also “the predicted effect of the programme on average farm yields at the level of village was only 5%, substantially smaller than the effects of farm input supply programmes . . . But the incidence of leasing being very low, the aggregate impact of this was small (ibid, p. 33).

Operation Barga of West Bengal illustrates that registering tenants and effectively protecting their legitimate and legal rights alone could improve the productivity of tenant farmers modestly. However, with the incidence of tenancy for the country as a whole being small in 2003 with only 6.5 percent of the operated area being leased in (Table 4), the effect of tenancy reform, though appropriate and desirable, on overall productivity of agriculture will be small.

2.4 Ceiling on Land Ownership

The policy on ceiling on land-ownership and agricultural property has been driven solely by consideration of social justice in a context. Appu, writing in 1972 (reproduced as Appu, 1996, p. 268) put the case simply and eloquently. “In this country a simple and effective means for ensuring a measure of social and economic justice will be radical redistribution of land. The country’s industrial sector being small, even if the future programmes of industrialization meet with a great measure of success, for years to come the bulk of India’s population . . . will have to depend on agriculture for its livelihood. In such a situation social and economic justice calls for a more equitable distribution of the available agricultural land.” (Emphasis added).

The origin of the policy of ceilings of landholdings in the post-independence era is the report in 1950 of the Kumarappa Committee on Agrarian Reforms. It influenced all subsequent debates as well as legislation relating to ceilings over several five-year plan periods prior to and after the Green Revolution. The Committee evolved three norms for holdings sizes: Basic, Economic and Optimum. The economic holding was defined as one that would, based on the prevalent agro-economic conditions, afford a reasonable standard of living to the farmer and his family, provide full employment to his family, and a pair of bullocks. Under the assumption that the rehabilitation of the large number of uneconomic holdings would not be feasible, the committee defined a smaller holding than an economic holding, called “basic” and deemed it viable.. While viability considerations determined the minimum size of holding as the Basic holding, social justice considerations led the committee defined an upper limit or ceiling as three

times the size of Economic holding, which it called the Optimum holding. In effect, the committee expected holdings below the Basic holding to be exempt from any land ceiling laws and only land above the Optimum holding was to be acquired by the state.

Khusro (1973), noting that by the end of the 1950s almost all Indian states had enacted land ceiling legislation, uses the cliché lack of political will for the lack of effective enforcement of the legislation.. He justified of the need for ceiling “for the sake of releasing lands for distribution to the landless and the marginal farmers” (p. xix). He shared the common pessimism about being able to reduce the agricultural population and the land-man ratio in agriculture altered to any significant extent. He concluded that “The process of a net shift of agricultural population will have to be at work before the impact of the shift can be registered, not to mention the all-important fact that for many years the process may not begin at all. If substantial net shifts . . . are ruled out, it becomes necessary . . . the need for a more effective absorption of agricultural population within the agricultural sector” (pp. 98-99). Khusro offered his own nine point agenda of an integrated strategy for a new agrarian structure, incredibly assuming away his own assertion about lack of political will for enforcing land reform legislation.

The success of the Green Revolution in its first decade in the western half of the Indo-gangetic plain has spread in the eighties in the eastern half and that the agrarian scene in the nineties was radically different from that at independence. The distinguished agricultural economist, late Professor Dantwala believed that land reform was a lost cause and late Professor Dandekar believed that ceiling laws should be abrogated and that all restrictions on the leasing of agricultural land should be removed. Appu quote Dandekar as having said “one must admit that [ceiling on land holdings] has totally failed, that it has been circumvented by various means . . . one need not be surprised. The surprising thing is that it was accepted . . .” (Appu, 1996, p. 208). Other distinguished agricultural economists such as V. S. Vyas, Hanumantha and Rao, also recognize the need for a rethinking of land reforms, but surprisingly they believe that there is still a role for ceiling laws.

2.5 Utter failure of land reforms

Even after four decades or more of land reforms, not much has changed in the distribution of land ownership except for the predictable decline in average area owned from 1.78 ha per household in 1961-62 to 0.73 ha in 2003 due to the demographic pressure. However, the proportion of landless households has remained at around 11 percent over four decades

(NSSa, 2003a, statement 2). The gini coefficient of concentration of land ownership has remained virtually constant at around 0.72 (NSS, 2003a, statement 3), the share in total number of rural households (of total owned area) owning less than a hectare of land has increased in four decades from 66 percent (8 percent) to 80 percent (23 percent) and that of households owning more than 10 hectares has decreased from 3 percent (28 percent) to 0.5 percent (12 percent) during the same period (NSS, 2003a, statement 3).

The distribution of operational holdings, gives a picture of access to land through tenancy, does not show much of a change either except for the doubling of the number of operational holdings from 51 million in 1960-61 to 101 million in 2002-03 and more than halving of the average area per holding from 2.63 ha to 1.06 ha during the same period again due to demographic pressure. The share of holdings of less than a hectare of land (of total operated area) went up from 39 percent (7 percent) to 70 percent (22 percent) in four decades and the share of holdings of more than 10 ha of area (of total operated area) decreased from 4.5 percent (29 percent) to 0.8 percent (12.5 percent) during the same period (NSS, 2003b, Tables 3.2, 3.3 and 3.4). The gini concentration ratio rose from 0.583 and 0.586 respectively in 1960-61 and 1970-71 to 0.629 and 0.641 respectively in 1980-81 and 1991-92 and then fell to 0.624 in 2002-03 (NSS, 2003b, Table 3.5). There was a faster rise in the share of small and marginal holdings as well as their shares in total operated area. Interestingly in West Bengal, the share of marginal holdings (of total area) and the area operated by them rose much more to 88.8 percent (58.3 percent) between 1970-71 and 2002-03 as compared to corresponding shares of 69.8 percent (22.6 percent) at the All India level. Moreover, the gini concentration ratio fell substantially from 0.494 in 1981-82 (to which it had risen from 0.433 in 1970-71) to 0.430 in 1991-92 and further to 0.313 in 2002-03. This confirms the success of operation Barga of West Bengal. In Kerala there has been a steady fall in concentration ratio from 1970-71. (NSS 2003b, Table 3.6) While the performance of West Bengal and Kerala is expected in this regard, surprisingly Bihar and Jharkand also show a fall in the gini ratio after 1981-82. The two most agriculturally developed states of Punjab and Haryana show the most prominent rise in the concentration ratio since 1970-71. In Punjab the share of land in large operational holdings began to rise after falling between 1970-71 and 1991-92, while in Haryana it fell between 1970-71 and 1981-82 and then rose between 1981-82 and 1991-92 only to fall substantially thereafter. (ibid, Table 3.6) The differences across states in trends in the distribution of operational holdings do not overturn the

conclusion that overall, land reform policies had only a very modest impact. It is the pressure of growing number of households cultivating limited land, that explains the change in the distribution of ownership and operation. This pressure is the inevitable result of our industrialization failing to develop labour intensive manufacturing to supply domestic and world markets.

2.6 Interventions in Prices and Markets for Agricultural Commodities and Agricultural Inputs

Government interventions were extensive, diverse, but without a single overarching objective to guide and bring coherence. Nonetheless, the interventions could be broadly divided into those that are related (i) to the public distribution system (PDS) for food grains and essential commodities; (ii) to the attaining of self-sufficiency in food grains; (iii) to support the adoption of the high yielding varieties (HYVs) of seed with an assured supply of irrigation and intensive use of fertilizer and pesticides; (iv) to international trade in agriculture; (v) restrictions on futures markets; and (vi) agricultural taxation.

Two observations are in order prior to a discussion of a few of the interventions. First, poverty eradication and ensuring social justice always have been the overarching objectives of policy in India. This does not mean that all policies rationalized by invoking the objectives either were the best compared to alternative policies that could have been used to subserve the same objectives or they were effective in reaching the poor for whom they were intended. Second, given the experience with dependence on food aid from the U.S. under P.L. 480, and of being subjected to the threat of withholding of aid in order to punish India's opposition to the Vietnam War at a critical time when India suffered two serious and successive droughts in 1966 and 1967, the objective of attaining self-sufficiency in foodgrains at the shortest time was rational. However it is arguable whether the objective should have been self-reliance in the sense of having the resources to import food on commercial terms when needed rather than doing away with imports altogether as self-sufficiency implies. Also, I would argue that it should have been foreseen (but was not) that the policies (e.g., subsidies on fertilizer, irrigation and electricity, price supports, credit subsidies, etc.) that were introduced in support of the successful adoption and use of the Green Revolution technologies would create vested interests in keeping them in place, even after the need for them had diminished significantly.

The interventions relating to PDS and their evolution over time illustrates many of the problems such as the changing objectives, failure in large part to reach the intended beneficiaries, rising budgetary costs because of the inefficiencies of the Food Corporation of India (FCI) that was responsible for the PDS, and the implicit costs of distortions created in support of PDS policies.

The origins of PDS go back to the Second World War. Over time it has been extended to all of the country, with no means testing and targeting. Only recently a means test was introduced, for dividing the households into two groups -- those below the poverty line (BPL households) and above the poverty line (APL households) with the extent of subsidy being higher for the BPL households.

The needed supplies for the PDS were acquired at a lower cost than otherwise by cordoning off states and districts within states that were deemed food surplus along with a ban on movement of foodgrains by private traders between states and between districts within states. The central government set the quantities of food grains to be procured for the PDS and the procurement prices.^[1] Until years after the Green Revolution, procurement prices were below the post-harvest market prices so that farmers faced an implicit tax if they sold to the system. The PDS therefore acquired its supplies through a system of compulsory levies on wholesale wheat traders and rice millers.

A system of minimum support prices (MSP) at which the government stood ready to purchase any amount offered was also instituted so as to protect farmers from a price collapse in bumper harvest years, and also to encourage them to adopt yield raising new technology without fear of a price collapse. MSPs were set below procurement prices. But over time, the distinction between the two disappeared and in effect, the government stood ready to and in fact did purchase whatever was offered at the announced procurement prices. Inevitably, this led to political pressure, which the government rarely resisted, for raising procurement prices, and for lowering quality standards for the grains to be procured.

Food Corporation of India (FCI), the public sector agency, procured the grains, stored them, and transported them for distribution. The cost of storage and transportation as well as the overheads of FCI were added on to the procurement price to determine the "economic cost" of procurement. The price at which food grains are issued by the Central Government to states for distribution to BPL and APL families are the "issue prices," with the Central Government

reimbursing the difference between the economic costs and issue prices to the FCI. This is the food subsidy, which amounted to 0.63 percent of GDP in 2006-07. Inefficiency in FCI and increases in procurement prices raise the subsidy cost at unchanged issue prices.

The second objective of the procurement system is to ensure price stability through the maintenance of buffer stocks[2]. With government purchasing any amount offered at minimum support prices, the stocks with the government soared in years of bumper harvest. In July 2001 stocks of rice and wheat rose to 61.7 million tonnes as compared to the operational stock of 24.3 million tonnes for the PDS. With rising stocks, costs of storage mounted and forced the government to allow exports of foodgrains by private traders with export subsidies as needed. By the same token at times when stocks were low there was pressure on market prices forcing government to allow imports by private traders, as in 2006-07. The purely domestic policies of the PDS, buffer stock for price stabilization and ever increasing minimum support and procurement prices, adversely affected international trade policies of exports and imports of foodgrains..

A superior policy of cash transfer to the poor to enable them to purchase adequate food and other essential commodities, compared to the PDS was not considered seriously because of the belief that non-poor would claim to be poor to take advantage of the transfer. It was not examined whether such leakages would be much more than the documented leakages in the current PDS from the use of bogus ration cards and diversion of PDS supplies. In any case, as has been documented in many studies, for well known reasons significant numbers of the poor do not use the PDS in many parts of the country,. Yet, the vested interests in maintaining the current PDS and indeed expanding it are far too strong politically to abolish it in favour of much better alternative safety nets for the poor.

Ever since independence there have been many policy interventions aimed at raising agricultural output and yields, particularly of foodgrains, With their number and intensity of interventions increasing significantly after the onset of the green revolution.

Although deriving a large output increase from the cultivation of HYVs required assured supply of water and substantial use of chemical fertilizers, there were no economies of scale per se in their cultivation. Also, millions of small and marginal farmers and tenants could benefit from adopting HYVs provided they could afford to purchase the necessary inputs, invest in irrigation, able to sell their products without heavy transaction costs and did not face a price

collapse in case they produced and marketed large amounts. But, because few small and marginal farmers had the ability to store their output beyond the harvest time and to purchase inputs on a cash basis, access to credit was important. Appropriately designed interventions for subsidies, credit, and in rural infrastructure and also irrigation for a limited period of time would have enabled millions of farmers and tenants in areas with a reasonably assured supply of water to adopt HYVs, raised output and improved the distribution of incomes.

Unfortunately the interventions were not well designed. First, all farmers regardless of the size of their holdings were entitled to the various subsidies. Thus, the fact that only the small and marginal farmers faced constraints in adopting the green revolution technology did not play any role in the design of interventions. Second, in part because the interventions were not targeted and in part because of their weaker positions in the rural power structure, the small and marginal farmers did not get their due share in the subsidies. Third, because the subsidies were not targeted, their overall budgetary cost was larger even allowing for the lesser participation of small farms. Fourth, the politically stronger large farmers acquired a vested interest, and exercised it effectively, for continuing and increasing subsidies. Fifth, the electricity subsidies, and not charging use cost for surface irrigation, exacerbated the negative externalities from falling water tables of common underground pool, rising water-logging and salinity because of poor drainage and pollution of drinking water from residues of fertilizers and pesticides. Sixth, once farmers adopted the new technology and realized its benefits in their own fields, the subsidies could not be and were not phased out, because the powerful vested interests in them. The net result was that the budgetary costs of the subsidies rose over time, with the gross subsidy on electricity sale to agriculture alone amounting to a little over 0.5% of GDP in 2007. Seventh, the administrative corruption involved in the dispensation of the subsidies was significant. Eighth and last, the National Rural Employment Guarantee programme, now being extended to the entire rural population, guarantees 100 days of unskilled wage employment supposedly on public works to each rural household opting for it, with a budgetary allocation of roughly 0.25% of GDP in 2006-07. Evidence thus far on the functioning of the programme is mixed: in some districts there have been large leakages of the budgeted amount through corruption. In others, poor have benefited. Even if the scheme had been uniformly successful, it is just a safety net for the poor, and certainly not a means for them to climb out of poverty once and for all.

To sum up, the distributions of land ownership and operational holdings have not changed substantially in spite of land reforms. The landless together with owners (or operators of) of small and marginal holdings continue to be the overwhelming majority of rural households. The area under tenancy has remained small and the impact tenancy reform has been extremely modest. The myriad subsidies to agriculture continue although their rationale has eroded over time and their budgetary costs soared. These facts have become common knowledge. Even an outside observer, such as Alan Greenspan (2007, p32), has noted that “Growth of agricultural productivity has slowed since the 1980s.... a highly subsidized government-directed agriculture that prevents market forces from adjusting acreage usage is the main culprit. The government in recent years has expended more than 4 percent of GDP on subsidies mainly on food and fertilizers, which state subsidization of power and irrigation has added measurably more.” Realist that he is, Greenspan remarks “Regrettably, the dismantling of large farm subsidies seem no more likely in Delhi than it does in Paris or Washington.” He could have added while Paris and Washington can afford them, Delhi cannot.

The most conspicuous failure of India’s development strategy is the failure to create adequate off farm jobs. Even as late as 2004-05 over 60 percent of usually employed rural males and even higher proportion of rural females are employed in agriculture. To quote Greenspan (2007, p320) again, “For India to become a major player in the international arena that it aspires to be, it will need to build factories that entice a very large part of its agricultural workers to urban enclaves, to produce labour-intensive exports the time honored path of the successful Asian Tigers and China.”

3. Agricultural stagnation, Indebtedness, External opening and Farmer Suicides

3.1 Deceleration of Growth in Agricultural Output

The expert group has claimed that “the most important manifestations of the crisis are deceleration of agricultural growth combined with increasing inefficiency in input use thereby affecting the profitability of agricultural production. ..., growth rate of GDP from agriculture decelerated from 3.08 percent during 1980-81 to 1990-91 to 2.61 percent during 1992-92 to 2002-03 at 1999-2000 constant prices. The annual growth rate for all crops taken together decelerated to 1.58 percent during 1990-91 and 2003-04 from a growth rate of 3.19 percent during 1980-81 to 1990-91 (EGAI 2007, p23).

The expert group, headed by a prominent econometrician, did not elaborate the deceleration is indeed a statistically significant. A comparison of the growth rate in the decade starting in 1980-81 with that in the decade starting in 1992-93 is arbitrary, except that the reform process started in a systemic way in 1991. A purely econometric analysis of the output that fluctuates from year to year because of weather would have looked for any structural breaks in the series. The group did not do such an analysis and also did not comment. The National Statistical Commission (2004) commented on the deterioration in the quality of agricultural statistics relating to area, yield and production, as noted by the National Statistical Commission(2004).

Vaidyanathan (2007a) provides a more sophisticated analysis of the data series. He subdivides the time span into three: the period 1950-70 covering the pre and the early phases of green revolution, the period 1970-87 covering dynamic phase of the Green Revolution and the liberalization period, 1987-2004. He fits linear quadratic and log-linear quadratic trends to the data series of real gross value added (GVA) in agriculture from National Accounts Series (NAS), gross cropped area (GCA) from Ministry of Agriculture and yield per hectare of land, defined as the ratio of output to GCA. He finds that the trend growth rate of output per annum was 2.4% during 1950-70, 2.7% during 1970-87 and 2.5% after 1987. In effect, there was no evidence of a significant deceleration in growth rate of output since 1987, although there is some evidence of an increase in volatility of output over time. Growth in crop area decelerated in each sub-period, but with different pace of deceleration. A progressive and sharp increase in volatility around the trend was observed. Vaidyanathan, comes to the appropriately cautious conclusion that, "Based on these estimates the current concerns about a sharp deceleration in growth of output and yields in the past decades would seem misplaced".

The trends in official indices of gross cropped area, production and yields tell a different story for the period 1987-2004. The annual rate of growth of index production was estimated at around 2.98% in 1950-70 and a lower 2.57% in 1970-87 with no significant trend during 1987-2004. Growth in area showed deceleration within and between the first two periods, again with no significant trend in the last period. Vaidyanathan finds that the correlation between the series of GVA and indices of production, etc., put together by the Ministry of Agriculture was higher than 0.95 during the first two periods, but dropped sharply in the last period.

The GVA, by definition, is not gross output. There are well known issues relating to the deflation of nominal value added to arrive at real GVA. The Ministry's indices are derived by weighting gross output of each crop by its share in gross value of output at base year prices, and therefore the series of real GVA and of index of production are not strictly comparable. However, the fact that the correlation between them dropped in the third period (1987-2004) after being high in the first two, suggests that the problems with data gathering and measurement which always existed, have apparently worsened in recent years, as alluded to by the National Statistical Commission. Vaidyanathan (2007a) is again absolutely right in saying that “pending a careful examination of the reasons for the [growing] differences between the series and the possibilities of reconciling them or assessing their relative merits, there is clearly warrant for caution in making inferences about recent trends in agricultural growth.”

3.2 Indebtedness of Farmers

The decadal surveys by the NSS of assets and liabilities provide a rich source of data on indebtedness of farmers and their access to institutional credit. The expert group drew extensively on this body of data. I will also very selectively draw on it to make a few points on rural indebtedness, sources of borrowing and interest rates in particular. First, the share of cultivators among rural households has steadily declined from 72.4% in 1971 to 59.7% in 2002 (NSS, 2005a, statement 2), with significant interstate variations in the decline. Second, land continues to be the largest component (68% in 2002 and 69% in 1971) of the asset portfolio of cultivators. Interestingly, non-cultivator households have increased the share of land in their portfolio from 32.3% in 1971 to 38.2% in 2002 (ibid, statement 2). Third, although following the nationalization of most commercial banks in 1969, their rural branches increased substantially, and after liberalization many new financial products were offered by banks, still the share of financial assets in the portfolio of cultivator and non-cultivator households did not increase from their low values. However because the share of non-cultivator households in rural households with higher share of financial assets in their portfolio increased, the share of financial assets in the portfolio of all rural households rose from 1.1% in 1971 to 2.2% in 2002. Fourth, the incidence of indebtedness (ignoring some minor issues of comparability over time), having drastically declined from 43% in 1971 to 20% in 1981, has increased slowly since then to 27%. There are substantial interstate differences in the extent of indebtedness, but the pattern of change over time is broadly similar across states. There is no evidence that the incidence of

indebtedness rose much more rapidly in the decade of the nineties than it did in the decade of the eighties (ibid, statement 29). However, the debt-asset ratio of rural cultivator households having declined from 4.13% in 1971 to 1.61% in 1991, increased in the nineties to reach 2.49% in 2002 (ibid, statement 35).

Rural households borrowed more than they repaid in 1971-72, 1981-82, 1991-92 and 2002-03, with differences increasing substantially, from being relatively small in 1971-72 (NSS, 2006, statement 2R and 3R). The proportion of households reporting cash borrowing, after falling from 29.3% (23.4%) for cultivators (non-cultivators) in 1971-72 to 20.6% (16.7%) in 1981-82, began rising steadily to 22.4% (18.4%) in 2002-03. However, there is no jump in the proportion between 1991-92 and 2002-03. The proportion of cultivator households reporting cash repayments fluctuated without trend. However, the proportion of non-cultivator households reporting repayments increased steadily.

The expert group (EGAI 2007, Table 3.2) reports that the share of institutional sources in the debt of cultivator households rose from 7.3% in 1951 to 61.1% in 2002, the most dramatic increase being from 31.7% in 1971 to 63.2% in 1981 after the nationalization of banks in 1969. Since 1981 it has fluctuated without trend. The share of moneylenders, having fallen from 69.7% in 1951 to 16.1% in 1981, began increasing thereafter, particularly in the nineties from 17.5% in 1991 to 27.8% in 2002. Also debt incurred for productive purposes (on farm and non-farm businesses), after having risen from 40.1% in 1961 to 71.6% in 1981, has fallen to 67.9% in 2002. Of the 8.7% increase in the proportion of non-productive debt between 1981 and 2002, 7.7% was accounted for by increase in household expenditure. Clearly, both the rise in the share of moneylenders in debt after 1991, and in the increase in the incurring of debt for household expenditures are undoubtedly disquieting. The incidence of indebtedness also increased after 1981, although there is no evidence of acceleration in the increase in the nineties. However, the debt/asset ratio of rural cultivator households, though it also increased in the nineties, is still very modest at 2.49% in 2002. In sum, the state of farmer indebtedness in the aggregate has indeed deteriorated in the nineties. There are also substantial interstate variations in almost every dimension of indebtedness and its trend over time. Unfortunately, the expert group did not attempt a causal analysis, nor to the best of my knowledge has anyone else.

The proportion of interest-free cash debt has declined from 18% in 1981 to 8% in 2002. The dominant share with a simple interest rate has remained stable at around 69%, with only 25

% at a rate of interest of less than 15% per year. Debt at compound rates of interest has doubled from 11% in 1981 to 21% in 2002, with 10% at interest rates between 10% and 15%, and another 10% at interest rates above 15%. Interest rates on rural cash debt from non-institutional sources were basically three: 18% free of interest, 33% at rates below 20% and 25%, and 40% at 40% or above. Interest on institutional debt was concentrated at two levels: 57% of debt was at rates between 10% and 15% and another 34% at rates between 15% and 20%. Clearly, the growth of the share of moneylenders in the debt after 1981 and the high rates of interest they charge make the evolving debt scene even more disturbing.

[1] The Agricultural Prices Commission recommended the procurement prices. To save space I will not discuss the add-ons by states to the procurement prices announced by the Centre and the procurement by states.

[2] The stock of foodgrains was also used for the food-for-work and a few other poverty alleviation programmes.

Develop

3.3 Agricultural Trade Liberalization

The expert group claims that “Agricultural trade has been gradually liberalised beginning with mid-1990s. All-India product lines have been placed under Generalised System of Preferences (GSP). By 2000, all agricultural products were removed from Quantitative Restrictions (QRs) and brought under tariff system. Canalisation of trade in agricultural commodities through state trading agencies was virtually removed and most of the products are brought under Open General Licensing (OGL).” EGAI (2007, p. 30)

This is a complete misunderstanding of India’s trade policies. First, the term GSP, used in of GATT/WTO, denotes generalized system of tariff preferences granted by developed countries on their imports of a subset of commodities from a number of developing countries. It has nothing to do with India’s tariff regime, unless the group has in mind the preferences that India grants to least developed countries. On QRS, what the group must have had in mind, was that in the Uruguay Round Agreement on agriculture, all restrictions on agricultural imports were converted into their presumed tariff equivalents. Many WTO members including India took advantage of this process to set tariff bounds on agriculture at very high levels, so that with these high bounds and the reduction in them that they committed to as part of the agreements had no effect on actual applied tariffs on a most favored nation (MFN) basis. For India, the simple

average bound tariffs by India on agricultural products was a whopping 114.2%, while the actual average applied level on a MFN basis in 2005 was only 37.6%. Nearly 90% of the bound tariff rates exceeded 50% (WTO, 2007).

Since the government has the freedom to raise applied tariffs to their bound levels at its discretion, a large gap between applied and bound levels creates uncertainty about trade policy. In its Trade Policy Review Report on India in 2007, (WR/TPR/S/182), the secretariat of the WTO refers to this uncertainty and notes that during the period of the review India substantively raised tariffs on 27 agricultural products and that India's use of state trading for food security, marketing and domestic supply seasons is unchanged. Imports of wheat, rice, maize and sorghum continue to be canalized through Food Corporation of India as of April 2006. Of course, the government can and does allow exports and imports by private traders, as it thought fit. The expert group simply asserted that canalization was removed without saying when this happened. As recently as in 2001 when mounting stocks led the government to allow exports of foodgrains, private traders needed permission to export. In 2007, to go by media reports, government has "allowed" wheat to be imported. The variation in trade policy with respect to vegetable oils is another example of short-term considerations influencing them.

An appropriate characterization of India's trade policy with respect to agriculture is not what the expert group claimed. It is primarily driven by short-term domestic price trends, with a rise in the domestic price of onions or of raw cotton leading to a ban on their exports, or rise in domestic prices (or stocks) of rice or wheat leading to their import (export). There is as yet no long-term liberalized trade in agriculture. The expert group was completely wrong in concluding that agricultural trade liberalization contributed to the crisis.

3.4 Investment in Agriculture

Gross Capital Formation in agriculture (GCFA) as a percent of agricultural GDP, both at current prices rose steadily from 10.3% in 2000-01 to 14.1% in 2005-06, having fluctuated around an average of 9.5% between 1990-91 and 2000-01 and 9.5% in the nineties before then.(EGAI 2007, Table 1.11) Because of the more rapid growth in non-agricultural GDP, GCFA as a proportion of GDP declined from 1.92% in 1990-91 to 1.37% in 1990-00 according to old GDP series and from 2.2% in 1999-00 to 1.9% in 2005-06 according to new GDP series (MOF, 2007, Table 8-19). The decline had begun in the 1980s when rapid growth in non-agricultural GDP began. The share of public sector in GCFA increased from around 18% to 24%

between 1999-2000 and 2005-06, having declined from its high value of 43.2% in 1980-81. (EGAI, 2007, Table 1.11) The decline in public sector GCFA is partly due to the decline in total public sector investment as a share of GDP during the period from the late 1980s. GCFA as a proportion of GDP did not decline in recent years, largely due to rises in private investment, which is widely believed to be more production than private investment. This suggests that the argument that decline in GCFA is a contributory factor to the crisis is not consistent with the data.

To sum up, among the contributory factors of the agrarian crisis cited by the expert group, only agricultural indebtedness has some firm empirical support. Others, including deceleration in output growth are not firmly established. Per capita net availabilities of cereals and pulses have fluctuated with no pronounced downward trend (MOR, 2007, pp. 5-21) and did not decline. The evidence of a decline in terms of trends for agriculture asserted by the expert group is unconvincing. In fact the ratio of the wholesale price index of manufactured products to the wholesale price index of agricultural products, has been declining since 1993-94, suggesting an improvement of agriculture's terms of trade (MOF, 2007, pp. S-64). The case of trade liberalization and decline in public investment in agriculture having contributed to the crisis is not supported by the data either.

3.5 Farmer Suicides

The data on farmer suicides analyzed presented by Nagaraj (2007) and cited in Sainath (2007a-2007d) are indeed tragic and alarming. However, Nagaraj (2007) does not include a deeper-causal analysis. A number of papers on the suicides have been published in the *Economic and Political Weekly* as well. EGA I (2007, Chapter 4) also discusses the available data.

Among the many studies, the only study that attempts an analysis of the factors that might be associated with the likelihood of an individual committing suicide is IGIDR (2006). The study refers to sociological (e.g., precipitating items) and neurological (e.g., predisposition to suicide) aspects of suicide, but its empirical analysis touches on only a few socioeconomic factors that might be involved but not in any depth. No information on neurological aspects was available to the analysts. The methodology of the study was deliberated at a workshop in which economists, sociologists, a psychiatrist, bureaucrats and media persons participated. It was largely based on a primary survey consisting of three components: household interviews, focus group discussion and village level information. The analysis compared a control group of

households that had not experienced a suicide but were similar to the households that had experienced a suicide, in terms of ownership of land and other assets. In all, 106 control households were identified in 103 villages. The households that had experienced a suicide cannot obviously be a random sample of the households from the villages studied, nor can the control group of households since they were in fact chosen to be comparable to the other households. Since most findings of the study are based on a comparison of the two groups of households, because of the non-random aspects of the samples one cannot generalize of the results of the comparison to the population of households of the study villages.

It turned out cotton was the traditional cash crop in the selected districts. The study claims that profitability of cotton cultivation has been declining over the years and attributes the decline to high subsidies by the USA leading to price distortions, low import tariffs in India and the failure of the monopoly cotton procurement scheme in Maharashtra. “Withdrawal of the state is evident from declining public investment in agriculture, poor government agricultural extension service, diminishing role of formal institutions in rural financial markets among others.” Unfortunately, the study does not substantiate any of these claims.

The age-adjusted suicide mortality rate (SMR) per 100,000 of population has remained in the range of 20-21 for males since 2001 while that for females has been declining since 1999. However, SMR for male farmers trebled from 17 to 53 between 1995 and 2004. Difference in incidence of suicides across caste and size-class of land holding are not statistically significant, though the rates for scheduled caste and scheduled tribe and for marginal and small farmers are slightly higher. Based on police records of cases of suicide, for male (females), 31 percent (41 percent) of suicides are attributed to family problems, 24 percent (20 percent) due to illness other than insanity, and 23 percent (20 percent) due to miscellaneous reasons. Economic problems accounted for 11 percent of the suicides of males and 3 percent of females from small farm households. The study is rightly cautious not to over-interpret these data since attributing to a single cause of an event which could have many interrelated causes could be highly subjective and can lead to measurement biases and errors.

Of the fourteen risk factors identified in the 111 suicides studied, the most frequent (87%) was indebtedness along with the associated harassment for repayment of loans, with next most frequent being deterioration in social status (74%). Crop failure was associated in 45% of the suicides. Most of the remaining 11 factors related to personal or family problems including

illness. At a minimum (maximum), at least 2 (at most 9) of the 14 factors were associated with the 111 suicides, the average being 4.8. In a step-wise logistic regression of log odds of a household experiencing suicide estimated in the study, outstanding debt and not owning a bullock are the two variables that raise the odds significantly. However, when the regression is restricted to household pairs with similar land holdings, only debt per acre is significant. On the other hand, when the regression restricted to same caste household pairs, not owning a bullock and family size are statistically significant. If we restrict the regression to pairs of households with similar land holdings and the same caste, only not owning a bullock is significant.

Unfortunately, not much can be inferred from the study about the agrarian crisis as being a contributory factor to rising suicides. After all any one, farmer or one with a non-farm occupation can accumulate debt for many reasons that he or she cannot service. While not owning a bullock is a serious constraint for a farmer, it is often the case that farmers sell off their bullocks to repay debt or when faced with a serious adverse shock to their income.

Contrary to simplistic assertions, including by the expert group, that the burden of debt and trade liberalization are the main causes of suicides, Vaidyanathan's (2006) analysis shows that no more than 20% of households were indebted even in the states where suicides were high or could have been affected by import liberalizations.

4. Summary and Conclusions.

It is widely believed that India is in the midst of an agrarian crisis. An expert group on Agricultural Indebtedness appointed by the Ministry of Finance and Chaired by the eminent econometrician Professor R. Radhakrishna, former Director of the Indira Gandhi research Institute for Development Research, Mumbai, firmly asserted that "Indian agriculture is currently passing through a period of severe crisis...the crisis has assumed a serious dimension since the middle of the 1990s. One of the tragic manifestations of the crisis is the large number of suicides committed by the farmers in some parts of India." (EGAI, 2007, p 13)

The expert group and contributors to the growing literature on the crisis have attributed the crisis to several factors: the role of systemic economic reforms of 1991; the opening of the Indian economy to external competition and investment after decades of insulation; the impact of India's implementation of its commitments under the Agreement on Agriculture of the Uruguay Round of Multilateral Trade Negotiations; neglect of Agriculture in the planning process since

the mid 1980s; the decline of public investment in agriculture; slowing of the rate of agricultural output; stagnation of yields per hectare of land and growing indebtedness of farmers.

The empirical evidence offered in support of most of these factors is weak, if not nonexistent, with one notable exception, namely growing farm indebtedness. First, the process of reforms did not directly impinge on the agricultural and rural sectors. However, the reforms could have affected the two sectors indirectly – for example, fiscal reform and consolidation could have affected public investment in agriculture adversely. In fact, total public investment as well as agricultural investment as a share of aggregate GDP fell in the 1990s. However fiscal consolidation in the form of reduction in fiscal deficits as a per cent of GDP happened only in the first half of the nineties after which the process was reversed. Moreover, faced with the task of reining in growth of public expenditures, the authorities chose to do it through cutting capital rather than current expenditures. For example there was no significant reduction in subsidies as a per cent of GDP. This being the case, it is not convincing to argue that fiscal reform forced a reduction in public investment in agriculture. In fact, agricultural investment as a per cent of agricultural GDP rose since 2000-01, so that the reduction as a per cent of aggregate GDP was due to faster growth in non-agricultural GDP relative to agricultural GDP. Also the growth of private investment in agriculture in large part mitigated the effects of the fall in public investment. To the extent that private investment is more productive than public investment, even if it did not substitute rupee for rupee of public investment, it could still have largely, if not more than, offset the output loss from the reduction in public investment.

The expert group completely misunderstood India's commitments under the Agreement of Agriculture of the Uruguay Round. Contrary to its assertion, according to the WTO's Fourth Review of India's Trade Policy early in 2007, even as of April 1 2006, canalization and state trading covered foreign trade in rice, wheat and other food grains and some vegetable oils. Although quantitative restrictions on imports were removed in 2002, after an adverse decision against their use by the WTO's Dispute Settlement Mechanism, many agricultural imports are included among the 300 items whose imports are being monitored since they are considered sensitive. WTO's Review points out that tariffs continue to be used in support of the overall goals of food self-sufficiency and price stability. Tariffs are raised or lowered from time to time depending on domestic market conditions. India bound its tariffs on agricultural products at a very high level in the Uruguay Round (simple average of 114.2%). With the average applied

MFN tariffs in 2005 being 37.6%, there was plenty of room to raise tariffs (up to the bound level) or down (to zero) according to the Government's discretion. Under the circumstances, it is inappropriate and a wild exaggeration, to claim that increased imports and the resulting competition from the implementation of India's commitments at the WTO have contributed to the agrarian crisis.

Although agricultural output growth had slowed in the 1990s as compared to the 1980s, there is no particular reason for this decadal comparison other than the fact that reforms were initiated in 1991. A more convincing periodization of the period 1950-2004 by Vaidyanathan (2007) leads to different conclusions about growth slow down during 1987-2004, depending on whether data on real gross value added by agriculture (GVA) from National Accounts or the Index of Agricultural production of the Ministry of Agriculture is used in the trend analysis. While GVA data do not support the hypothesis of growth deceleration either in output or yield per hectare of land in the period 1987-2004, the analysis with the Index does. As Vaidyanathan rightly observes, given the conceptual differences between the two data series and the well known deterioration in agricultural data collection and compilation, without an in depth analysis of the differences between the two data series, it will be premature to conclude that the hypotheses of growth deceleration and its contribution to the agrarian crisis, are well founded. Moreover, the data do not show any downward trend in the nineties in the per capita availability of cereals and pulses.

The NSS data show that the incidence of indebtedness among farmers has increased slowly from 20% in 1981 to 27% in 2002, although there is no evidence of a faster rate of increase during the decade of the nineties. Moreover, the share of the institutional sources of credit has been fluctuating since 1981 after rising dramatically from 31.7% in 1971 to 63.2% in 1981, in part due to the expansion of bank branches in rural areas after nationalization of banks in 1969. Unfortunately the share of money lenders, having fallen from 69.7% in 1951 to 16.1% in 1981 began rising thereafter reaching 27.8% in 2002. Debt incurred for production purposes also declined after 1981, most of the decline being accounted for by increase in debt-financed household expenditure. Thus the rise in the incidence of farm indebtedness, the share of money lenders as a source of debt finance and in the use of debt for financing household expenses is disquieting. Again without a sound casual analysis of these trends, which no one appears to have

attempted thus far, one can neither draw a firm conclusion, as the expert group has done, that they contributed to the agrarian crisis, nor dismiss the hypothesis that they did.

The contention of this paper is that the current agricultural situation, whether one describes it as a crisis or not, is the inexorable consequence of India's development strategy since 1950 until the systematic reforms of 1991. This strategy completely ignored the lesson of economic history that successful development involves transformation of the economic structure through massive shift of work force and population away from low productivity use in agriculture and primary activities and into manufacturing and other tertiary activities. India's industrialization focused on capital intensive import substitution across the board with emphasis on the development of heavy industries and insulation from world markets. This inevitably led to more than 60% of the rural work force still being engaged in agriculture and allied activities in 2004-05 after five decades of industrialization.

This contention is confirmed by the history of agrarian reforms since independence. Other than the abolition soon after independence of intermediary tenures, attempts at reforming land ownership and tenancy have not been very effective. Land reforms did not significantly change the distribution of land ownership and tenancy. Concentration in ownership holdings did not change and that in operational holdings has remained unchanged since 1970, after having risen somewhat from its level in 1960-61.

The set of interventions introduced in the seventies to support the adoption of high yielding varieties, primarily of rice and wheat, was driven by the need to attain self-sufficiency in food grains. While successful in achieving it, the interventions by their very design created vested interests that successfully lobbied for their perpetuation and increase. The net result was an increased burden on the fisc of subsidies to food, fertilizers and electricity. The interventions associated with the PDS for food grains, motivated primarily by consideration of social justice and providing access to food for the poor, were not cost effective as compared to other policies such as cash transfers for achieving the same objectives with the intervention. The political economy of PDS also precluded reforms of the system to make it more cost effective. Most importantly, the two sets of interventions associated with the PDS and self-sufficiency in food promoted concentration on cereal agriculture rather than diversification into other crops. The net result is that while consumer demand is shifting away from cereals, the policies on the supply side are still focused on cereals.

The focus of future policies has to be to promote labour intensive industrialization in rural and urban areas to supply rising domestic and global demand. Although the growth of the service sector, particularly that of IT enabled services, has been impressive, it would be foolhardy to believe that service sector growth alone would bring about the needed economic transformation in the long run. Of course in short to medium run, effective policies for increasing agricultural productivity and relieving farm distress are essential.

The Eleventh Five Year Plan has increased the allocation of resources for agriculture significantly as compared to the tenth plan. An increase in resources, if is not accompanied by policy changes that make the use of resources more effective than in the past would obviously limit what can be achieved with the increase. Vaidyanathan's (2007 b) notes on the agricultural strategy in the eleventh plan emphasizes this point, through he does not phrase the issue in this way. He points out that the plan's target of achieving a 4% annual growth of agricultural output is very unrealistic as compared to the growth record of 1950-2004 or of recent decade or no. Of course, past growth record is no predictor or a constraint on a more ambitious future growth target, if the latter is associated with the new set of policies different from the past. After all, India was able to accelerate its GDP growth significantly to over 9 percent during 2005-06 to 2007-08, as compared to the so called "Hindu rate of growth" of around 3.75% per year during 1950-80, Vaidyanathan suggests that the policies proposed in the eleventh plan do not differ radically from those of the past, but are merely "more of the same". He stresses that institutional weaknesses have limited the effectiveness of past policies. Availability of adequate moisture is a major constraint on the use of yield raising (land augmenting) technologies, particularly in rain fed areas accounting for a large share of gross cropped area. Land quality has deteriorated because of imprudent use of water in irrigated areas (in large part due to policy created incentives). For both reasons a shift away from current irrigation practices and from the pattern of investment in creating irrigation capacities is called for. The eleventh plan focuses mostly on accelerated expansion of irrigation facilities along the same lines as in the past. Vaidyanathan argues that in the past their implementation has been plagued by serious deficiencies due to lack of accountability and transparent implementation. The plan offers no evidence to believe that these deficiencies have been eliminated.

Vaidyanathan points out that "the notion high output prices and input subsidies protect the incomes and livelihood is misplaced. The best way to raise rural in assess and employment is

through increasing agricultural productivity” Although policies to increase agricultural productivity are no doubt desirable, realistically, raising productivity and incomes of the rural poor consisting of non-viable farmers and landless cannot be brought about without enabling them to shift from agriculture by creating more productive off farm activities, many of which could be rurally based. With fewer unviable holdings and workers on land, restructuring of cultivation on larger, consolidated and viable holdings would be possible thereby raising productivity.

The generation of off-farm employment activities at an adequate pace and amount will not come about without a change in industrialization and foreign trade policies. Also without efficiently functioning land markets and distortion free markets for agricultural inputs and outputs, the small land owners will not be able to divest their land holdings and the needed restructuring of farms into viable holdings will not come about. Had there been an efficient system of land ownership records and a network of thick and efficient markets for land, anyone wishing to acquire land currently in one private use (for example in farms) for another private use (say in SEZs) would have been able to do so at a fair market value without the state having to intervene in a heavy handed and inequitable fashion. Slogans such as no farm land should be allowed to be put to any other use are mere slogans without rationale. A rational policy would insist on land being put to its best social use either for farming or elsewhere.

Even after the reforms of 1991 that decisively broke away from insulation from world markets, India is still one of the most protected among developing countries. Our bound tariffs are high and much above their applied levels particularly compared to China. FDI inflow to India continues to be far less as compared to China. China has used FDI in its exporting activities to become the second largest merchandise exporter in the world with a share of 8.8 percent of world exports in 2007, while India was the 26th largest with a share of just 1 percent. Even before China was admitted to the WTO in 2001, it had gained a market share in exports of labour intensive manufacturers, such as garments, fabrics and leather products. India’s market shares remained stagnant or declined during the same period. Dooley et al (2004) note that China had about 200 million unemployed workers. To bring them into the modern labour force and for political stability they estimate 10-12 million new jobs have to be created each year in urban areas, with 30 percent of which will be in the export sector. In their global model, China will be able to do this in a world of plausible rates of capital accumulation and rates of return along a

smooth adjustment path. Feenstra and Hong (2007) in their evaluation of Dooley et al (2004) find that export growth during 1997-2002 accounted for a third of the employment growth of 7.5-8 million workers per year in China. Although during 2002-05 exports grew faster, and in principle explain the entire employment growth, taking into account the employment generation from the rise in domestic demand, especially for investment, exports still accounted for a third of the total employment. The two authors do not say whether part of the investment growth was itself induced by export growth. Still 2.5 million a year or so in new jobs from exports are still large. India's total exports in a year in recent years has been less than just the increment in China's export in year! India's export growth has obviously not been the driver of growth of GDP or employment.

To be able to generate rapid growth in off-farm employment, India has to engage in labour intensive rural and urban industrialization, in part focused on supplying export market. This would require further opening to the world markets and FDI, and removal of infrastructural constraints such as power, rural and urban roads and ports. Shifting the policy focus to one of moving millions from the farms to more productive activities off-farm will not only accelerate growth, but will make it more inclusive as well. Merely chanting the mantra of "inclusive growth" as the eleventh plan does, as if it is a new vision, is like chanting mantras for anything else – to seek divine intervention to bring about a change with having to do anything one self. I will leave it to other to judge whether invocatory chants are productive.

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Table 2

Percentage of tenant holdings and area leased in by broad size-class in 2002-03

ALL-INDIA size class (ha) or category	Rural		
	% of tenant holdings	% of area leased in	% share in leased- in area
= 0.002	4.7	3.1	0.1
0.002 - 0.5	10.9	9.3	12.3
0.5 - 1.0	12.0	8.3	17.9
marginal	9.8	8.6	30.3
small	10.7	6.8	22.1
semi-medium	10.3	6.3	21.8
medium	7.8	4.2	14.6
large	13.8	6.1	11.2
over 1.00	10.2	5.8	69.7
all sizes	9.9	6.45	100.0

Source: NSS (2003b) Report No.492

Table 3

Changes in the percentage of tenant holdings by category of operational holdings, 1960-61 to 2002-03

ALL-INDIA	Rural				
	percentage of tenant holdings				
category	60-61 (17th)	70-71 (26th)	81-82 (37th)	91-92 (48th)	02-03 (59 th)
marginal	24.1	27.0	14.4	9.3	9.8
small	25.1	27.8	17.9	14.9	10.7
semi-medium	23.6	24.8	15.9	12.2	10.3
medium	20.5	20.0	14.5	13.1	7.8
large	9.5	15.9	11.5	16.7	13.8
all	23.5	25.7	15.2	11.0	9.9

Source: NSS (2003b) Report No.492

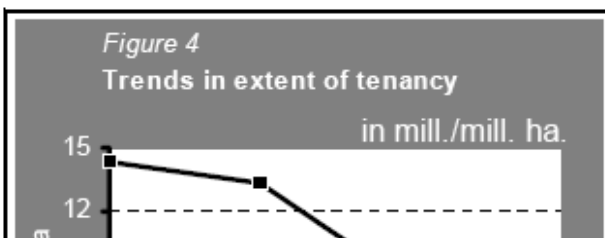
Table 5

Trends in percentage distribution of leased-in area by terms of lease

ALL-INDIA	Rural						
	percentage distribution of leased-in area						
terms of lease	60-61 (17th)	70-71 (26th)	81-82 (37th)	91-92 (48th)		02-03 (59 th)	
				incl. n.r. cases	excl. n.r. cases	incl. n.r. cases	excl. n.r. cases
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1. fixed money	25.6 (23.2)	15.4 (12.7)	10.9 (11.9)	19.0 (23.3)	22.7	29.5 (26.0)	29.8
2. fixed produce	12.9 (12.4)	11.6 (10.5)	6.3 (7.6)	14.5 (17.9)	17.4	20.3 (19.2)	20.6
3. share of produce	38.2 (42.0)	47.9 (50.7)	41.9 (38.7)	34.4 (42.1)	41.1	40.3 (43.3)	40.8
4. other	23.3	25.1	40.9	32.1	18.8	9.9	8.8
5. all terms	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: NSS (2003b) Report No.492

Figure 1:



Source: NSS (1993)

