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Globalization, Liberalization and Agrarian Distress: A Study of Suicides among Farmers in India

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Following the discursive principles of globalization, India systematically started liberalizing its economy from 1991 by adopting the primary policy instrument of the neo-liberal economic agenda, i.e., structural adjustment programme. Consequently, important domestic regulatory measures were either removed or slackened in the name of liberalization or economic reforms accompanied by an encouragement for free trade, technology imports and foreign direct investment. While it is claimed in the government policy pronouncements including some academic studies that the economic reforms has brought about huge potential for all-round economic development in India, the facts from rural India presents a conflicting picture. The process of economic reforms has in fact brought about a deep crisis in agrarian sector and consequently augmented the vulnerable and insecure condition of peasants and agricultural labour in rural India. This crisis manifests itself in different forms in contemporary India such as increasing rural violence in the name of Naxalite or Maoist and other such social movements, ongoing massive distress-led migration from villages, and innumerable cases of farmer/peasant's suicides. In this paper, based on data from government reports and academic research works, an attempt has been made to substantiate this observation by analyzing the social, political and economic state of affairs during the phase of economic reforms that has created conditions for suicides among farmers in the various parts of India.

Globalization, Global Institutions and Structural Adjustment Programme

The term globalization began appearing on a regular basis in the mainstream social science disciplines since the early 1980s. It began appearing primarily as a reference in the realm of economy for the growing free market but soon after included many political connotations such as weakening of the authority of the state and an emergent global governance system and cultural

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implications such as emergence of a homogenous global civil society and a global culture, and became part of public imagination in the form of an allusion to some specific events, such as the protests against World Trade Organization (henceforth WTO) in Seattle and the passage of the North American Free Trade Agreement (henceforth NAFTA). The term, in a very short span of time, became the cliché of contemporary times, and as Zygmunt Bauman writes it 'is on everybody's lips; a fad word fast turning into a shibboleth, a magic incantation, a pass-key meant to unlock the gates to all present and future mysteries' (Bauman 1998: 1). Consequently, this key idea of late twentieth century soon became an integral part of teaching, discussion and research the world over. Now there are numerous studies devoted to the issue of globalization which are too vast in scope and diverse in nature to be coalesced around a common set of statements regarding its nature, meaning, beginning, scope, impact, etc. (see, for example, Albrow 1996, 1997; Axford 1995; Beck 1999; Beynon and Dunkerley 2000; Giddens 1990, 1991, 2000; Guidry, Kennedy and Zald 2000; Harvey 1989; Held et al. 1999; Held and McGrew 2002; Hirst and Thompson 1996; Keck and Sikkink 1998; Kennedy 1993; Mittelman 2000; Robertson 1992; Rodrik 1997). However, despite variations, the studies share a common emphasis on the flows of capital, labour, information, technology, and culture globally. It is commonly thought that 'The term globalization captures elements of a widespread perception that there is a broadening, deepening and speeding up of world-wide interconnectedness in all aspects of life, from the cultural to the criminal, the financial to the environmental. At issue appears to be a 'global shift'; that is, a world being moulded, by economic and technological forces, into a shared economic, political, and cultural arena (Held et al. 1999). This apart, the globalization discourse also unmistakably believes that globalization provides an ideological framework for the proposed and well articulated neo-liberal solutions, in the name of liberalization or privatization or economic reform, to economic problems and insecurity or vulnerability confronted by societies at large in different parts of the world. The discourse also lists certain institutions and creates space for them to play specific predefined roles to realise the neo-liberal solutions in concrete terms. These institutions are mainly International Financial and Trade Bodies and Transnational Corporations.

International Financial and Trade Bodies include a number of Institutions and Agreements such as the Bretton Woods Organisations (International Monetary Fund (henceforth IMF) and the World Bank), the World Trade Organization (henceforth WTO), regional institutions like the Asian Development Bank, Free Trade Area of the Americas, Organisation

for Economic Co-operation and Development, multilateral agreements such as the General Agreement on Tariffs and Trade and Kyoto protocol**.** Of these Institutions and Agreements, International Monetary Fund and the World Bank are the most critical instruments for realizing the neo-liberal agenda. IMF supervises global macro economic affairs, lends with the purpose of realizing structural adjustment of national economies, and makes technical and institutional knowledge available to bring about stability in economic system worldwide. The World Bank offers development aid to national governments as well as aid to corporate bodies to improve their functioning by following structural adjustment programme. Thus, both organizations, with a commitment to neo-liberal ideologies and agenda, put emphasis on structural adjustment programme, and accordingly create the required environment and policy, and advice and oblige individual nation-states to privatise the process of production and governance and open their boundaries for Transnational Corporations, global markets and free trade. Transnational Corporations act as the main driver of the process of globalization in the economic realm. Their character is transnational, but they are in favour of retaining the nation-state so that they can use it as a tool to consolidate their operations geographically. Concurrently, the WTO through various rounds, particularly the Uruguay rounds, tries to provide a formal and universal shape to trade negotiations including farm trade negotiations worldwide. All three organisations (IMF, the World Bank and WTO) consult each other and work collectively to realize the neo-liberal economic agenda by restructuring the economy of nation-states through structural adjustment programme.

The World Bank defines structural adjustment as 'reforms of policies and institutions covering micro-economic (such as taxes and tariffs), macro-economic (fiscal policy) and institutional interventions; these changes are designed to improve resource allocation, increase economic efficiency, expand growth potential and increase resilience to shocks' (cited in Skogly 1991: 755). Thus, the term structural adjustment refers to 'A programme of policies designed to change the structure of an economy. Usually, the term refers to adjustment towards a market economy, under a programme approved by the IMF and/or World Bank, which often supply structural adjustment funds to ease the pain of transition' (http://www.economist.com). In the early 1990s, J. Williamson (1993) coined the 'Washington Consensus' term to refer to the ten policy measures that make up structural adjustment programme, which are as follows:

1. **Observing Fiscal Discipline**: It means cutting back public expenditure and increasing interest rates on borrowing so that the government's expenditure is not more than its revenues and thus not running in deficit;
2. **Redirecting Public Expenditure Priorities**: It implies prioritising expenditure toward sectors offering both high economic returns and the potential to improve income distribution such as infrastructure, primary health and education;
3. **Reforming the System of Taxation:** It denotes lowering tax rates and broadening the tax base;
4. **Liberalizing Financial and Interest Rate**: It is directed toward boosting foreign exchange earnings;
5. **Making Exchange Rate Competitive**: It stands for devaluing national currency and is considered key to nurturing export-led and crisis-free growth;
6. **Liberalizing Trade**: It is designed in order to boost foreign exchange earnings by promoting exports in goods and services;
7. **Liberalizing Inflows of Foreign Direct Investment**: It is expected to attract foreign investment by eliminating trade barriers, and to facilitate imports;
8. **Privatizing Economy**: It is based on the premise that privatization can raise efficiency in different sectors of economy and improve the public finances;
9. **Deregulating Economy**: It is meant to promote more efficient allocation of resources including labour;
10. **Ascertaining Secured Private Property Rights**: It is based on the premise that secured private property right is a must for the free market and trade.

Economic Reforms and Agrarian Crisis

It is an acknowledged fact that rural India was an extremely backward social formation and faced numerous development-related problems such as landlessness and lack of resources and assets, poverty and indebtedness, lack of educational facilities and illiteracy, malnourishment and poor conditions of health and sanitation, etc. during the pre-economic reform phase. India's official approach to resolve these problems was critically disliked by several scholars, development agencies, and national and international financial institutions such as the World Bank (Parikh 1993, 1997; World Bank 1986, 1991; Pursell and Gulati 1993). It was argued that the official

approach deliberately created barriers to agricultural development or growth in agricultural surplus by skewing the terms of trade against agriculture through protectionist trade policies and an overvalued exchange rate. Therefore, liberalization or opening up of agrarian sector would lead to higher price or correct price of agricultural produce resulting into increase in incentive in agriculture and consequently in the growth of agricultural activities and agricultural production. Since India had major comparative advantages in diversifying its cropping pattern in favour of highly valued and universally sought-after crops such as fruits, vegetables and flowers, free trade and openness would maximize efficiency and gains in agrarian sector. In this context, it was also contended that the process of liberalization would make terms of trade favourable to agricultural growth in India by cutting down on subsidies and doing away with the policy of output support prices and procurement of food which was fiscally unsustainable and had usually suppressed prices of agriculture produce and proved inefficient and costly to farmers. The process of economic reform promised to make agrarian sector competitive, efficient and productive through deregulating agricultural credit, contract farming, raising land ceilings or putting an end to state-led land reform programme, private sector agricultural research and making non-government organization a partner in the agricultural extension system.

The data pertaining to agriculture in India in the last two decades clearly point out that the Structural Adjustment programme based economic reforms did not keep its promises, and in fact resulted into large-scale crisis in rural India by creating some new problems and exacerbating the existing ones. It happened because the process of reforms, contrary to the stated expectations, has had severe adverse effects on agriculture, the main occupation in rural India that currently employs around 57 per cent of India's population, which are as follows.

Increasing Landlessness and Inequality in Landholdings

Under the neo-liberal policy framework, crop diversification became a desirable policy objective. Therefore, India shifted its cropping pattern from less-remunerative food grains to high-value and export-oriented cash crops. Such a change in the cropping pattern required an endorsement of economies of scale in agriculture. Thus, the policy prescribed concentration of land through purchase or leasing in by big landowners in the name of private firms (Ramachandran and Ramakumar 2000; Athreya 2003). That is why during the post reform period there has been an increase in the inequality of distribution of land owned. This apart, raising or

lifting of land ceilings for privately owned firms has accelerated land concentration in rural India and also reduced the amount of ceiling-surplus land to be supposedly distributed among growing landless people (Ramachandran and Ramakumar 2000). This trend in rural India has increased substantially land price and accordingly ousted small farmers out of land market. To quote S. Hirashima:

> If the land leased out from small and marginal farmers to progressive farmers or landlords, whose objective of renting in land is to take advantage of economies of scale, then it would be difficult to terminate such a contract when land has already become an integrated part of scale farming. The land would remain leased out, or ultimately sold out (Hirashima 2000: 3884).

Declining Productivity in Agriculture and Increasing Marginalization of Peasantry

During the post-reform phase the sectoral distribution of Gross Domestic Product (GDP) in India has seen a consistent declining share of agriculture. However, the shifting of associated labour force from agriculture has been much less than proportionate. In 2004-05, the share of agriculture in GDP was 20.2%, and the workforce employed in agriculture constituted 56.5% of the total workforce (see Table 1).

Table 1

Share of Agriculture in GDP and Employment

Year	Share of Agriculture in GDP at 1999-2000 Prices (%)	Share of Agriculture in Employment - UPSS (%)	Ratio of Worker Productivity in Agriculture to Non-Agriculture	Ratio of Worker Productivity in Non-Agriculture to Agriculture
1972-73	41.0	73.9	0.26	3.92
1993-94	30.0	63.9	0.24	4.12
1999-00	25.0	60.2	0.22	4.55
2004-05	20.0	56.5	0.20	5.12

Note: GDP denotes Gross Domestic Product, and UPSS denotes Usual Principal and Subsidiary Status.

Source: Central Statistical Organisation (CSO), National Accounts Statistics, Various Years, and National Sample Survey Organisation (NSSO), Various Rounds. Cited in Government of India (henceforth GoI) (2007), and Posani (2009).

The burden of this high percentage of agricultural labour force along with their much less inter-sectoral relative productivities gets further compounded because of a steadily contracting cultivable land area and a huge increase in the proportion of marginal landholders. During 1960 to 2003 the cultivable land area declined from 133 million hectares to 108 million hectares, whereas the number of holdings doubled from 51 million to 101 million (see Table 2). This has led to a sharp decline in the average size of the holding, leading to increasing number of marginal farmers from 39.1% in 1960-61 to 71% in 2003. This category of farmers operates only 22.6% of the total land. The number of small, medium and large farmers has declined during this period[2] (see Table 3). Such pattern of land ownership adds significantly to the agrarian crisis in India in terms of insecurity associated with cultivation of marginal land holding and the associated practice of sharecropping, high input costs, inadequate returns, and difficulties in accessing credit, etc. (Assadi 1998).

Table 2

Certain Key Characteristics of Operational Land Holdings

		1960-61 (17th Round)	1970-71 (26th Round)	1980-81 (37th Round)	1990-91 (48th Round)	2003 (59th Round)
1.	Number of Operational Land Holdings (millions)	50.77	57.07	71.04	93.45	101.27
	1. 1 Percentage Increase	_	12.4	24.5	31.5	8.4
2.	Land Area Operated (million Hectares)	133.48	125.68	118.57	125.10	107.65
3.	Average Land Area Operated (hectares)	2.63	2.20	1.67	1.34	1.06

Source: NSSO, Some Aspects of Operational Landholdings in India, Various Rounds.
Cited in GoI (2007), and Posani (2009).

[2] **The 59th Round of the NSS defines marginal farmers as those possessing 0.01-1.00 hectares small as those with 1.01-2.00 hectares. Large farmers were those with >10.00 hectares.**

Table 3
Changes in the Size Distribution of Operational Holdings and Operational Area

Category of Holdings	Percentage of Operational Holdings					Percentage of Operated Area				
	1960-61	1970-71	1981-82	1991-92	2003	1960-61	1970-71	1981-82	1991-92	2003
	(17th)	(26th)	(37th)	(48th)	(59th)	(17th)	(26th)	(37th)	(48th)	(59th)
Marginal	39.1	45.8	56.0	62.8	71.0	6.9	9.2	11.5	15.6	22.6
Small	22.6	22.4	19.3	17.8	16.6	12.3	14.8	16.6	18.7	20.9
Semi-medium	19.8	17.7	14.2	12.0	9.2	20.7	22.6	23.6	24.1	22.5
Medium	14.0	11.1	8.6	6.1	4.3	31.2	30.5	30.1	26.4	22.2
Large	4.5	3.1	1.9	1.3	0.8	29.0	23.0	18.2	15.2	11.8
All Sizes	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: NSSO, Some Aspects of Operational Land Holdings in India, Various Rounds. Cited in GoI (2007), and Posani (2007).

Changing Cropping Patterns and Diminishing Food Security Status

With the opening-up of the economy, expectations of the export opportunities and higher world prices of agricultural commodities led many farmers to move into cash crops, away from food crops (Venu Menon 2006). Devaluation of the rupee made Indian exports cheaper and hence attractive on the world market, and further helped shifting from food crops into the cash crops (Christian Aid 2005). On aggregate, the total area of the country's farmland growing food grains declined by 18 per cent in the decade after 1990-91, whereas areas growing cash crops of cotton and sugarcane increased by 25 per cent to 10 per cent respectively (Shiva 2005). This process has led to a sharp decline in the food grains production and has seriously started threatening the status of India as a 'food secure' nation after 1990-91.

The proponents of economic reform argue that the slow-down in food grain or cereal production after 1990-91 does not reflect on structural crisis in Indian agriculture, but on the changing consumption patterns, from cereals to high-value products like fruits, vegetables, milk products, meat, eggs and fish, driven by higher incomes across different sections of our society during the phase of liberalization (Government of India 2005; Gulati and Mullen 2003; International Food Policy Research Institute 2005). This is also supported by data from the NSSO rounds which show that along with the slowdown in food crops production in the 1990s,

there was also a noticeable fall in the per capita consumption of cereals and an increase in the per capita consumption of fruits, vegetables, milk products, meat, eggs and fish in the rural India. However, there are many who do not buy this argument because this period has witnessed a sharp fall in the levels of per capita calorie consumption. NSSO data also show that the per capita per day calorie intake in rural India fell from 2266 Kilocalories in 1972-3 to 2183 Kilocalories in 1993-4, and 2149 Kilocalories in 1999-2000 (Patnaik 2001; Swaminathan 2006). This fall was more conspicuous among the poorer or weaker sections of society. Given the falling calorie intake along with a high level of malnutrition in rural India, the fall in food grain consumption can only be seen as a signifier of agrarian/rural crisis. Abhijit Sen suggests that among the relatively poorer sections, the share of income spent on food was increasingly squeezed in the 1990s by the growing shares of expenditures going towards health, fuel, transportation and education (cited in Chandrasekhar 2007).

Declining Growth Rates of Agriculture

Diminishing production of food grains is happening along with declining growth rate of agriculture in the post-reform period. The growth rate of agriculture by gross product (GDP from agriculture) fell from 3.08% during 1980-81 to 1990-91, to 2.57% during 1992-93 to 2005-06 (see Table 4). This included a fall to 1.3% in 1999-2000 and even a negative growth of -2% in 2000-2001 (Posani 2002: 22). The growth rate by yield of all crops taken together dropped from 3.19% during 1980-81 to 1990-91, to 1.58% during 1990-91 to 2003-04 (see Table 5). State-wise disaggregation of the data shows that this slowdown has occurred in most states except Bihar, Gujarat and Orissa. Even these states had a low base and the growth rates were very low (see Table 6).

Table 4

Growth of Gross Domestic Product (GDP), Sectoral GDP, and Per Capita Income

Year	Agriculture	Industry	Services	GDP at Factor Cost	Per Capita NNP at Factor Cost
1980-81 to 1990-91	3.08	5.79	6.54	5.15	2.82
1992-92 to 2002-03	2.61	5.82	7.65	5.85	3.89
1992-93 to 2005-06	2.57	6.05	7.72	6.00	4.10
1950-51 to 2005-06	2.54	5.19	5.40	4.26	1.94

Note: Growth is Compound Annual Growth Rate, and NNP denotes Net National Product.
Source: CSO, National Accounts Statistics, Various Years.
Cited in GoI (2007), and Posani (2009).

Table 5
Growth of Area, Production and Yield of Major Crops in India

Crop	1980-81 to 1990-91			1990-91 to 2003-04		
	Area	Production	Yield	Area	Production	Yield
Rice	0.40	3.56	3.47	0.15	1.14	0.99
Wheat	0.46	3.57	3.10	0.74	2.13	1.35
Coarse Cereals	-1.34	0.40	1.62	-1.58	0.25	1.87
Total Cereals	-0.26	3.03	2.90	-0.25	1.32	1.58
Total Pulses	-0.09	1.52	1.61	-0.87	-0.74	0.16
Food grains	-0.23	2.85	2.74	-0.44	1.16	1.11
Sugarcane	1.44	2.70	1.24	1.41	1.22	-0.16
Oilseeds	1.51	5.20	2.43	-1.07	0.18	1.26
Cotton	-1.25	2.80	4.10	0.82	0.15	-0.69
Non-Food grains	1.12	3.77	2.31	-0.09	1.20	0.62
All Crops	0.10	3.19	2.56	-0.25	1.58	0.90

Note: Growth is Compound Annual Growth Rate.
Source: Ministry of Agriculture, Area and Production of Principal Crops in India, Various Years.
Cited in GoI (2007), and Posani (2009).

Table 6
Growth of Agricultural GSDP and GSDP across States

State	1983-84 to 1993-94 (at 1980-81 Prices)		1993-94 to 2003-04 (at 1993-94 prices)	
	Agricultural GSDP	GSDP	Agricultural GSDP	GSDP
Andhra Pradesh	3.05	4.58	2.80	5.63
Assam	2.12	2.69	0.51	2.93
Bihar	-0.45***	5	2.5	5.34
Gujarat	0.84***	6.18	1.13***	6.19
Haryana	4.86	5.89	1.77	5.96
Himachal Pradesh	3.08	5.86	1.3	6.53
Karnataka	3.54	5.21	3.12	7.1
Kerala	4.4	7.42	-2*	4.85
Madhya Pradesh	2.82*	3.39	0.23***	4.14
Maharashtra	5.39*	5.13	1.27	4.92
Orissa	-0.57***	6.19	0.17***	3.96
Punjab	4.62	5.13	2.15	4.13
Rajasthan	3.93	6.19	1.21***	5.32
Tamil Nadu	4.43	7.45	-0.60***	5.08
Uttar Pradesh	2.8	4.66	2.18	3.76
West Bengal	4.45	4.73	3.45	7.03
India	3.05	5.32	2.19	6.01
CV for states	58.72	25.43	102.88	22.75

Note: Growth is Compound Annual Growth Rate. GSDP denotes Gross State Domestic Product. All Growth rates are significant at 5 per cent but for * which is significant at 10 per cent and *** which is not significant even at 20 per cent. CV denotes coefficient of variation.
Source: CSO, Gross State Domestic Product, Various Years.
Cited in GoI (2007), and Posani (2009).

Diminishing Profitability of Agriculture

The post-reform phase has generally witnessed a fall in profitability of agriculture, notwithstanding a variation across crops and regions (Sen 2004; Sen and Bhatia 2004; Surjit 2008). Sen points out this trend has been significantly caused by a general slowdown in the diffusion of yield-increasing technologies and inputs and a slow rise in the prices of crops (Sen 2004). To quote Sen:

> During the 1980s, when yield growth was higher and prices of most crops tended to rise faster than the cost of living, the real per hectare margin of gross value of output (GVO) over cost…increased for all crops except maize… During the 1990s, with

> yield growth slowing down for most crops and prices of crops other than cereals and sugarcane rising slower than the cost of living, the real GVO-cost margin fell for most crops other than wheat, sugarcane, barley and tur… Across States also, increases in GVO-cost margins were less evident during the 1990s than during the 1980s (Sen 2004, 38).

V. Surjit (2008) in his study of farm business incomes from paddy cultivation in seven most important paddy-growing states shows that in four out of seven states, the growth rate of farm business incomes, which was positive in the 1980s, became negative in the 1990s (see Table 7). In other three states except Andhra Pradesh, the growth rate slowed down significantly in 1990s.

Table 7
Growth of Farm Business Incomes from Rice Cultivation, 1973-4 to 2002-3

State	TE 1983-4 to TE 1993-4	TE 1993-4 to TE 2002-3
Andhra Pradesh	0.5	3.5
Karnataka	1.8	-2.1
Orissa	3.7	-4.5
Punjab	1.6	0.4
Tamil Nadu	NA	0.9
Uttar Pradesh	3.3	-2.1
West Bengal	3.7	-8.0

Note: Growth is Compound Annual Growth Rate. TE denotes triennium ending, and NA denotes not available.
Source: Reports of the Commission for Agricultural Costs and Prices in various years. Cited in Surjit (2008).

Balamuralidhar Posani (2009) has reflected on the inter-sectoral terms of trade between agricultural and non-agricultural sectors (i.e., the ratio of total prices received by the agricultural sector to the total prices paid by it to non-agricultural sectors) to spell out that agricultural sector as a whole has lost in the process of economic growth. Based on official data he writes:

> Although the reforms in the 90s with policies such as devaluation of currency and ending of protection to industry were expected to benefit agriculture and improve its relative terms of trade (ToT), this has not really been sustained. The barter and income ToT became favourable to agriculture from 1984-85 until 1996-97, but thereafter they more or less stagnated. Likewise, the Input-Output Price Parity (computed by comparing the index of prices paid for agricultural inputs with the index of prices received for the

outputs), which was unfavourable to agriculture during the 80s and then turned favourable in the early 90s, has since 1994-95 remained lower than one hundred, indicating declining profitability of agriculture (Posani 2009: 24).

Wearing Away of Real Incomes of Farmers

The empirical case of late 1990s and 2000s also militates against the argument that claims that during the phase of economic reform the terms of trade will increase real incomes of farmers by leading a significant increase in the prices of crops. However, there was, actually, erosion in the real incomes of farmers because prices of crops fell sharply after 1996-97, largely as a result of the sharp fall in the international prices of primary commodities. The comparative growth in the prices of primary commodities during 1990-91 to 1996-97 happened primarily because of the rising administered (procurement) prices of food grains, particularly rice and wheat. This apart, in the post-reform period when the prices paid by the farmers for consumer goods (i.e., Consumer Price Index for Agricultural Labour –CPIAL) are compared with the prices they receive for their crops, it becomes obvious that farmers have been facing an erosion of real incomes because the rise in aggregate price index for consumer goods has been higher than the rise in price index for agricultural commodities (Government of Andhra Pradesh 2007, Mishra 2007, Posani 2009). This has resulted in declining relative living standards of farmers, particularly for small and marginal farmers whose incomes are clearly inadequate to meet consumption expenditure (see Table 8).

Table 8
Monthly Per Capita Income and Consumption by Size-Class of Holdings, 2003

Size-Class (hectares)	Income (Rs)	Consumption (Rs)
< 0.01	1380	2297
0.01 – 0.40	1663	2390
0.41- 1.00	1809	2672
1.01- 2.00	2493	3148
2.01-4.00	3589	3685
4.01-10.00	5681	4626
>10.00	9667	6418
All Sizes	2115	2770

Source: National Sample Survey Organisation (NSSO) (2005).
Cited in Mishra (2007), and Posani (2009).

Slowdown of Exports and Increased Uncertainty vis-à-vis Cultivation

Contrary to the promise of economic reforms, India has witnessed a major rise in imports, rather than exports, of agricultural commodities after the mid-1990s. This has significantly narrowed down the difference between the rupee value of farm exports and imports. According to the Planning Commission estimates, the ratio of dollar value of agricultural exports and imports fell from about 5 in 1996-7 to 2.2 in 2003-4. The share of agricultural exports in total merchandise exports declined from 21 per cent in 1996-7 to 12 per cent in 2003-4. The ratio of agricultural exports to the GDP from agriculture also fell from 7.6 per cent in 1995-6 to 6.9 per cent in 2003-4 (GoI 2005).

The rise in the imports many a times led to a sharp fall in the domestic prices of many primary commodities such as cotton, tea, coffee, spices and many fruits and vegetables. It happened due to greater integration of our agrarian sector with the international market which has displayed a sharp fall in the international prices for most agricultural commodities after the East Asian Crisis, absence of quota controls as in the pre-WTO period, and the ineffectiveness of low tariffs (Bhalla 2004; Ghosh 2005). A sharp fall in the international prices made imports cheap and exports uncompetitive. Integration with the international market, that led to an alignment of domestic and international prices, also made, following the volatility of international prices, the prices of agricultural commodities in the domestic market volatile (Patnaik 2002; Ghosh 2005). This has created some serious problems in the agrarian sector such as an increase in the uncertainties vis-à-vis cultivation and prices of primary commodities that will significantly erode competitiveness of Indian farm exports in the post-WTO period.

The Reduction of Input Subsidies

The provision for state subsidies on inputs is meant to enable farmers to modernize agriculture by adopting new technologies and inputs including seeds and to bear the associated risks. That is why the provision of state subsidies on these inputs contributed considerably to the success of Green Revolution (Sen 1992). This provision proved to be quite inclusive leading to significant benefit to marginal and small farmers (Acharya and Jogi 2004). However, with the fiscal reforms that followed liberalization, there has been decline of state subsidies on inputs. The reduction of state subsidies on inputs is considered to be one of the most important reasons for the erosion of profitability of agriculture and the consequent agrarian crisis during the phase of economic

reforms. The government used roughly 1.6 to 1.9 per cent of the GDP for subsidies on inputs in the early 1990s, which it reduced to about 1.3 to 1.4 per cent between 2003 and 2006. So far as the share of state subsidies on inputs in the agricultural GDP is concerned, there has been an increase in the share of subsidy on electricity whereas the share of subsidies on fertilizer and irrigation in agricultural GDP has fallen after the late 1990s, and particularly in the 2000s (see Sen 1992; Acharya 2000; Acharya and Jogi 2004).

Since state subsidies on inputs rationalizes the ratio between the output price and the input price in favour of farmers, any reduction in the subsidies adversely affect farmers because they have to pay more for inputs. There is a thinking that point out that the adverse impact caused by the rise in input price can be compensated by raising the output or procurement price of primary commodities by the government (Parikh 1997). However, this argument is not sustainable because a large number of farmers in India are small and marginal farmers who hardly generate a marketable surplus; most of their production goes into household consumption. This apart, procurement operations of the government is limited to certain regions in certain states (see Sen 1992; Acharya 2000; Acharya and Jogi 2004). Notwithstanding the above arguments, there is a genuine scope for reducing subsidies without raising input prices through an improvement in the efficiency of production and management in the fertilizer, power and irrigation sectors which is ironically not being paid adequate attention by the liberalized regime in India.

Lastly, cultivation of cash crops particularly of the high yielding varieties, which is a fast growing practice during the phase of economic reforms, requires much greater amounts of water, fertilizers and pesticides. However, with the reduction of subsidies on these inputs following fiscal reforms farmers' reliance on the market for these inputs increased substantially. Since the market prices of these inputs have risen considerably in the recent past, there is a sharp rise in the overall cost of cultivation. For example, the price per tonne of urea, diammonium phosphate (DAP) and muriate of potash (MOP) were Rs. 2350, Rs. 3600 and Rs. 1300 respectively in 1990-91, which increased to Rs. 4830, Rs. 9350 and Rs. 4455 respectively in 2003-04. The prices of cotton and chilli seeds went up by 400% (Rao and Suri 2006). This apart, the new Intellectual Property Rights regime after WTO forbids the reuse of the seeds from the current harvest for the next planting, and therefore compels farmers to purchase the seeds anew each time (GoI 2006).

Declining Gross Capital Formation in Agriculture

Capital formation, an essential element of growth of any sector, is manifested in different forms in agriculture such as development in irrigation system and rural infrastructures. A number of studies have indicated that a larger part of the post-reform period has seen a noticeable fall in gross capital formation (GCF) in agriculture in India (Shetty 1990; Chand 2000; Gulati and Bathla 2001; Sawant, Daptardar and Mhatre 2002; Thulasamma 2003, Posani 2009). Table 9 shows that the share of agricultural GCF in total GCF and Gross Domestic Product (GDP) fell from 16.1% and 3% in 1980-81 to 7.3% and 2.4% in 2005-2006. This was mainly due to a sharp decline in the share of public sector GCF and inability of private sector to fill the gap. Posani also writes that 'Simultaneously, there was a big fall in the rural share of total development expenditure from 11.7% of GDP in 1991-92 to 5.9% in 2000-01. This translates into less state support and hence increased expenditure by rural families on things like health and education' (Posani 2009: 26).

Table 9
Gross Capital Formation in Agriculture at Current Prices

Year	Total GCF (Rs. Crore)	Public Sector GCF (Rs. Crore)	Private Sector GCF (Rs. Crore)	Share of Public Sector (%)	Share of Private Sector (%)	GCF in Agriculture as Per cent of Total GDP	GCF in Agriculture as Per cent of Agriculture GDP	GCF in Agriculture as Per cent of Aggregate GCF
1980-81	4342	1876	2466	43.2	56.8	3	9.2	16.1
1990-91	15839	3586	12253	22.6	77.4	2.8	10.5	11.5
1995-96	17392	5952	11440	34.2	65.8	1.7	6.9	6.3
1999-00	50151	8670	41481	17.3	82.7	2.6	11.2	9.8
2000-01	46432	8176	38256	17.6	82.4	2.2	10.3	9.2
2001-02	60366	10353	50013	17.2	82.8	2.6	12.4	11.1
2002-03	61883	9564	52319	15.5	84.5	2.5	13.1	10.1
2003-04	61827	12218	49609	19.8	80.2	2.2	11.6	8.4
2004-05	70786	13610	57176	19.2	80.8	2.3	13.2	7.6
2005-06	83952	---------	---------	---------	---------	2.4	14.1	7.3

Source: CSO, National Accounts Statistics, Various Years.
Cited in GoI (2007), and Posani (2009).

Traditionally in India public investment in agriculture has encouraged private investment by farmers. That is why whenever public investment increased, private investment also increased. This complementarity between public and private investment was clearly visible till 1980s (Shetty 1990; Storm 1993; Dhawan 1998). During the economic reform period this complementarity has been largely disturbed; though there has been an increase in private investment, public investment has noticeably declined. In fact, it appears that the rise in private investment in agriculture is caused by a significant fall in public investment. This observation is well established by the fact of falling public investment in canal irrigation and a rise in private investment in ground water, such as in tube wells.

Decline in Public Investment in Agricultural Research and Extension and Irrigation

Historically, public investment in Agricultural research and extension in India has been seen as creation of 'public goods'. Vaidyanathan (2000) opines that the widespread specialized state-funded agricultural research centres under the India Council for Agricultural Research and the Agricultural Universities, working with and through the National Extension Service, have contributed historically to the growth of agricultural productivity by specifically developing and diffusing knowledge, skills, better varieties of seeds and practices. This trend reversed during the phase of economic reforms. Liberalization led to a drastic decline in the growth rate of public spending on agricultural research and extension. The growth rate of public spending on agricultural research and extension during 1980s to 1990-2005 has fallen from 6.3 and 7 per cent to 4.8 and 2 per cent respectively (see Table 10). To compensate the decline, private sector investment in research and extension was encouraged; 100 per cent foreign equity was allowed in the seed industry, and import of seeds was permitted for research purposes under the Open General License (OGL). The government withdrew subsidies on extension services to create a favourable field for private players in seed industry and biotechnology firms. The gradual declining of state-support also means that several state-run agricultural institutions or corporations which had provided support including skills to farmers, particularly small and marginal farmers, disappeared or became largely inactive due to shortage of funds.

Table 10
Growth in real public expenditure on agricultural research and extension, 1960s to 1990-2005

Period	Research and Education	Extension and Training
1960s	6.5	10.7
1970s	9.5	-0.1
1980s*	6.3	7.0
1990-2005	4.8	2.0

Note: Growth is Compound Annual Growth Rate. 1980s* denotes that the figure for the 1980s is for 1980-94 for Extension and Training.
Source: Balakrishnan, Golait and Kumar (2008).

However, decline in public investment in agricultural research and extension and consequent changes have proved to be disastrous for agriculture in India. According to a Planning Commission review, the sluggish growth in Indian agriculture during the phase of economic reforms was significantly caused by 'unresponsive agricultural research, nearly broken down extension [and] inadequate seed production, distribution and regulation' (Government of India 2005: 197). A commission, constituted by the state of Andhra Pradesh, has also noted that the collapse of public agricultural extension services has been one of the most important contributory factors to the generalised agrarian crisis in the state (see Government of Andhra Pradesh 2004).

Though there has been a clear shift in cropping patterns towards cash crops that requires more water for cultivation, the total net irrigated area remained stagnant (GoI 2007). Referring the situation in Andhra Pradesh, Posani writes that ‘it actually declined from 43.5 lakh hectares in 1990-91 to 37.1 lakh hectares in 2004-05 (GoAP 2007). Successive state governments have grossly neglected investment in surface irrigation infrastructure. Consequently there has been an increase in private investment in exploiting ground-water sources (mainly bore wells), which have been growing relative to canal and tank irrigation’ (Posani 2009: 29). This has added heavily to the cost of irrigation or cultivation, made agriculture a highly risky enterprise, and ‘led to overexploitation of ground-water and a falling water table, forcing farmers to deepen their wells every few years’ (Posani 2009: 29).

The Decline of Social and Development Banking and the Return of the Moneylenders

One of the most essential components of the economic reforms is financial liberalization which has altered the objective of the nationalization of commercial banks in 1969 in India. The project of nationalization of commercial banks included a supply-led policy of social and development banking in the rural areas. As a result, the nationalized commercial banks emerged as main formal institutions of credit provision in rural India, and tried to correct the deeply imperfect rural credit market by financing agriculture at an affordable controlled interest rate (Shetty 1997; Ramachandran and Swaminathan, 2001; Chavan 2005). It helped farmers, particularly small and marginal farmers, in their attempt to adopt the costlier new technologies, high yielding variety seeds and farming practises, a critical component of the Green Revolution that largely solved India's food problems.

The national effort based on a supply-led policy of social and development banking to help farmers came to a rapid end with the implementation of the recommendations of Narasimham Committee on Banking Reforms post-1991. The committee asked mainly to disconnect monetary policy from the objective of redistribution, decontrol rates of interest, and for a permission to close rural branches to rationalize branch networks. The committee redefined priority lending and by doing so it squeezed credit lines to farmers. A number of scholars argue that the Narasimham Committee report based financial liberalization after 1991 led to (a) large-scale closure of commercial bank branches in rural areas; (b) a broadening of inter-state inequalities in credit provision with a sharp decline in the proportion of bank credit in underdeveloped regions; (c) a sharp fall in the growth of credit flow to agriculture; (d) an increased exclusion and marginalization of the disadvantaged and dispossessed sections of the population such as small and marginal farmers from the formal financial or credit system (Ramachandran and Swaminathan 2005; Shetty 2006; Chavan 2005, 2007; Posani 2009). To quote Posani, 'In Andhra Pradesh the proportion of bank lending to agriculture fell from 43% in 1998 to 26.7% in 2003, covering only one-third of the credit needs of the farmers. Even mandates of special lending to SCs, STs and very small farmers were revoked to pursue commercial viability and aggressive loan recovery. Tenant cultivators with insufficient titles are altogether denied access to formal credit' (Posani 2009: 31-32; see also Christian Aid 2005). Another noteworthy consequence of the financial liberalization has been an increased hold of

non-institutional usurious moneylenders on rural debt portfolios in different degrees across India. To quote Posani again, 'With this drying up of formal credit, the farmers are left with no choice than to depend on 'informal' sources for credit. An NSSO survey in 2004 revealed that 68.6% of the total loans taken by farmers in Andhra Pradesh are from the informal credit market. This credit typically comes at usurious interest rates (anything between 36% and 100% compound), and worse, from the same entrepreneur who is selling the farmer the seeds and fertilizers. This stranglehold of the trader-moneylender has become the root of much exploitation and misery. Credit from these agents is almost never in cash form. It is inputs (his own brand of seeds, fertilizers) issued against the future output whose price, invariably low and exploitative, is fixed by the agent himself' (Posani 2009: 32; see also Christian Aid 2005; Suri 2006). Though there has been a revival of agricultural credit in India in 2000s, its nature and objective is in consistent with the agenda of financial liberalization; it is mainly targeted towards financing large-scale commercial, export-oriented and capital-intensive contract farming (Ramakumar and Chavan 2007).

Output Side of Agriculture: Uncertainty and Risk

Risk associated with the output side of agriculture has acquired new dimensions in post-1990 which are detrimental to the farmers. Referring the official data Posani argues that 'To the conventional yield shocks associated with deluge or dearth of water, have been added shocks resulting from spurious seeds and adulterated pesticides from unregulated private dealers. The resulting crop failures have been one of the major factors pushing farmers into spiralling indebtedness' (Posani 2009: 30). Apart from yield shocks, shocks related to crop price have also been a major concern. Price shock is closely related to India's accession to WTO. Following India's accession to WTO, state trading agencies were practically removed from participating in trade in agricultural commodities, and all agricultural products were removed from Quantitative Restrictions and brought under the tariff system or Open General Licensing by 2000. This development caused an unexpected increase in cheap agricultural imports that substantially depressed prices of domestic agricultural commodities. Posani writes that 'Import duty on cotton, for instance, was reduced to almost zero, leading to a sharp dip in the price of cotton which has been the crop of choice for many farmers in Andhra Pradesh …. A survey of cotton prices in Warangal district of AP found the price of a quintal of cotton swinging wildly between Rs. 2200

to Rs. 1450 in a 45 day period, dipping at times to Rs. 1200 (Posani 2009: 30; see also Venu Menon 2006). Traditionally or before economic reforms, low yields was correlated with relatively higher crop prices, but from early 1990s, as Rao and Suri opine, the yield prices depend more and more on the global rather than local supply and demand. Therefore, the impact of low yield becomes worse because of low prices (Rao and Suri 2006). Thus, yield and price shocks together brought about uncertainty and misery to farmers.

This problem is further compounded by a sharp decline in government procurement of agricultural produce over the years. Posani observes that 'There is no public procurement for commodities like chillies, pulses and oil seeds, and a very small percentage of the cotton produced is publicly procured. In addition, the minimum support price for many commodities is less than the market price. Since market prices revolve around the minimum support price, they end up reaching very low levels at the time of the harvest (Posani 2009: 30-31).

Agrarian Crisis and Farmers' Suicides

The above listed developments in the realm of agriculture in India in the post-reform period have brought about a severe crisis in rural India that manifests itself, among other things, in the ongoing incidence of suicide among farmers. This incidence is happening at a higher rate in states with input-intensive cash crop cultivation like Andhra Pradesh, Maharashtra, Karnataka and Kerala. A number of significant studies substantiate this observation (see Assadi 1988; Shiva and Jafri 1998; Parthasarathy and Shameem 1998; Revathi 1998; Kamath 1998; Prasad 1999; Vasavi 1999; Bose 2000; Iyer and Manick 2000; Mohanty 2001; Deshpande 2002; Grover et al. 2003; Nirmala 2003; Sarma 2004; Mohanty and Shroff 2004; Rao and Gopalappa 2004; Dandekar et al. 2005; Mohanty 2005; Mishra 2006; Sainath, 2007). The following section presents a short review of some of these studies.

Farmers' Suicide and its Causes: A Review of Studies

An important work on the conditions and the contexts that forced farmers to commit suicide was prepared by the Tata Institute of Social Sciences, Mumbai, (henceforth this work will be cited as TISS Report) on the request of Mumbai High Court which treated the letter submitted by The All India Biodynamic and Organic Farming Association expressing concern over the suicides of farmers in Jalna, a district in Maharashtra, as a petition. The TISS Report has identified most of

the above listed developments in agriculture, such as repeated crop failures mainly due to inability of farmers to pay for high cost of pesticide, chemical fertilizer, HYV seeds and the genetically modified seeds such as the Bt. Cotton, declining productivity of land, absence of extension machinery of the government, a sharp rise in input costs, absence of support price, a sharp increase in cash crop cultivation, and the absence of adequate irrigation facilities, as conditions that lead to farmers' suicides. To quote it, 'Repeated crop failures, inability to meet the rising cost of cultivation, and indebtedness seem to create a situation that forces farmers to commit suicide. However, not all farmers facing these conditions commit suicide — it is only those who seem to have felt that they have exhausted all avenues of securing support have taken their lives. It is not only the landed who have a crisis of indebtedness to deal with. There were a number of landless families who had leased land on a short-/long-term basis by securing loans …. Many such families were caught up in cycles of debt and destitution, which ultimately led to the suicide of the head of the family' (TISS Report 2005: iii-iv). The Report further says that 'Life histories and case studies conducted for this study reveal that there has been sharp increase in the dependence on loans to enable cultivation. The tendency to take loans increased in the nineties. The farmers took their first loan from banks …. The later loans were from private parties … over 75% of the farmers had loan commitments to non- formal sources. Those farmers who faced repeated crop failures accumulated loans beyond their capacity to repay. Thus, most of victims had turned defaulters over the last four years (TISS Report 2005: v).

Another important study on farmers' suicide was conducted by the Indira Gandhi Institute of Development Research, Mumbai (henceforth this study will be cited as IGIDR Report). This study was commissioned by the Maharashtra government. Based on data from the 286 households, IGIDR Report listed various risk factors of farmers' suicide and categorized them into single, double, triple and four risk factors. The Report found that 'Overall, indebtedness had the highest incidence finding mention in 66 per cent of cases reporting a single risk factor and in all the cases of double, triple and four risk factors. Thus, indicating the economic crisis among the deceased households' (IGIDR Report 2006: 11-12). The Report argues that the economic crisis among the deceased households was mainly caused by the agrarian crisis which 'is somewhat reflected in crop failure finding mention in 79 per cent of the cases and also in some miscellaneous cases like not receiving the right price for crop' (IGIDR Report 2006: 12), a sharp rise in the cost of cultivation, a heavy reliance on informal sources of

credit, a very high rate of credit interest, lack of irrigation facilities, lack of adequate market and government support, absence of or ineffective farm credit and insurance schemes, unregulated price for seeds, fertilizers and pesticides, and crop price volatility due to a sharp reduction in import duty on agricultural commodities. It further says that 'An economic crisis that gets manifested in indebtedness and an agrarian crisis of crop failure or other related problems are interconnected. To be specific, crop failure can accentuate indebtedness through non-payment of existing loans or bring about the need for more loans' (IGIDR Report 2006: 12). By citing a number of cases the Report also observes that agrarian crisis have a social bearing and manifests itself into various non-economic factors that seemingly create conditions of farmers' suicide in the villages such as family disputes, domestic altercations, inability to meet the demands of household members, illness, alcoholism and impending marriage in the household among others. To quote it, 'even when non-economic reasons are cited as the immediate cause or as a trigger factor leading to suicide of a farmer, the economic decline brought about through an agrarian crisis would be the underlying factor. The economic crisis is depicted through indebtedness (IGIDR Report 2006: 13). It is also being observed that the liberalized policies of the government have shaped significantly the crisis ridden agrarian situation in Maharashtra.

Based on a study of 66 reported cases of farmer suicide during 1998 in the districts of Amravati and Yavatmal in Maharashtra, a western state of India, B. B. Mohanty observes that 'The majority of those committing suicide were small farmers who had been adversely affected by the introduction of neoliberal economic policies during the early 1990s' (Mohanty 2005: 267). They traditionally occupied lower positions in the exploitative caste hierarchy; therefore, they desired to improve their socio-economic position as a result of enhanced aspirations generated by the ethos of globalization, and accordingly subscribed to the view that cultivation of cash crops using HYVs, chemical fertilizers and pesticides would lead to higher productivity and hence greater profitability. As a result, most of the farmers who committed suicides were involved in cultivation of cash crops, particularly cotton, and, as Mohanty writes, 'What all the farmer suicides had in common agriculturally, however, was an extensive area under HYVs, and correspondingly higher production costs incurred as a result of expenditure on technical inputs' (Mohanty 2005: 254). But sooner these farmers found themselves trapped between enhanced aspirations generated by the ethos of globalization and the concrete reality of economic reforms such as crop failure, declining income, the rising cost of cultivation and bottlenecks in

agricultural marketing that resulted into spiralling indebtedness, particularly to informal agencies such as moneylenders, traders, better-off proprietors, among them. Mohanty observes that the level of debt among small peasants 'represented no less than 69 per cent of their total assets. It is difficult to avoid the conclusion that loss of collateral because of non-repayment of loans was an important factor in the suicide of such cultivators' (Mohanty 2005: 257). This apart, he writes that 'That almost all suicides by small farmers (93 per cent) coincided with the harvest period underlines the economic importance of crop failure for those in this category' (Mohanty 2005: 257). Following Emile Durkheim, Mohanty argues that the economic situation created by the neoliberal policies for agriculture stimulated the trends toward individualization, which Durkheim linked to the breakdown in traditional values and norms and the consequent disintegration of family and/or community. The growing individualization in society led to suicide among farmers, particularly small farmers, because it 'served to underline their perception of themselves as being personally to blame for the loss, and its impact on the well-being of the family' (Mohanty 2005: 263). Individualisation leading to hopelessness and helplessness was also found to be common among the farmers who committed suicides in Maharastra by Meeta and Rajivlochan (2006: 30).

Sudha Venu Menon has investigated the reasons of farmers' suicide based on a study of 50 households of suicide victims from Warangal district in Telangana region of Andhra Pradesh, a southern state of India. She argues that the ruling elites in India believed that with the adoption of liberalization and signing of WTO agreement agriculture in India will witness high inclusive growth. However, the agricultural reality in the post-reform period is just opposite. She writes that 'The negative impact of these policies is now visible in the agrarian community in India, particularly among small and marginal farmers …. The suicide of farmers in a number of states is indicator of this trend' (Venu Menon 2006: 7). In terms of caste, most of the suicide victims belonged to the lower caste groups. To quote her, 'The present study reveals that 46% of the victims belong to backward community. 42% of the victims belong to scheduled castes' (Venu Menon 2006: 10). Venu Menon argues that the farmers' suicide has largely been caused by certain developments and policies in field of agriculture in the period of economic reforms, which are a clear shift from food crops to cash crops, new seed policy including liberalizing import and export of seed, pesticides, lack of irrigation, increase in operational cost, adverse price, low yield of cotton, lack of institutional credit support, and money lender-trader nexus.

The paper by Anita Gill and Lakhwinder Singh (2006), which is based on field surveys in the villages in Punjab, also cites the developments brought about by the neoliberal policies in agriculture as the main cause of farmers' suicide. To quote them, 'Lower yields, rising cost of cultivation, a mounting debt burden and dipping incomes of cultivators have plunged agriculture into a crisis of unprecedented scale, the consequences of which are not just economic. The economic trauma is translating into mental trauma, and the ever hardworking Punjabis, who have emerged stronger with each difficult period, are now being forced to admit defeat to the extent of ending their own lives' (Gill and Singh 2006: 2762) . They further write that 'This manifestation of the agrarian crisis in the form of suicides has reached dangerous levels in Punjab … most of the suicide victims were cultivators and belong to the category of small and marginal farmers' (Gill and Singh 2006: 2767).

K. Nagraj in his paper, while mainly focusing on the magnitude and trends, including regional patterns, in farmers' suicides in India, argues that there is a widespread tendency particularly among the official agencies to 'shift the burden of explanation from the social context to individual suicide victim, and hence, in effect end up blaming the victim' (Nagraj 2008: 24-25). Deriving lessons from Durkheim, he says that underlying the epidemic of farmers' suicide there is a complex set of socio-economic factors which has been largely created by the acute multi dimensional agrarian crisis precipitated by the implementation of neoliberal state policies since the beginning of the 1990s. He writes that 'This crisis has been there from around the mid-to-late 1990s, and this is the period … when farm suicides have been high and are increasing' (Nagraj 2008: 25). This agrarian crisis 'resulted in loss of livelihood for a large section of farmers. What added to the crisis was the almost total absence of alternate livelihood opportunities that they could have fallen back on in a time of crisis like this' (Nagraj 2008: 26).

Magnitude and Trends in Farmers' Suicide in India: The Official Data

The main source of data on farmers' suicide is the annual reports on accidental and suicidal deaths published by National Crime Records Bureau (NCRB) of the Ministry of Home Affairs, Government of India. The reports consist of a range of tables; one of them is on the distribution of suicides by profession that includes a category for self-employed persons in farming/agriculture. An all India-wise consistent and complete data on farmers' suicide or suicide by persons employed in farming/agriculture is available for ten years from 1997 to 2006.

This period covers the largest part of the economic reform period in India. Regarding the data pertaining the suicide rate among farmers, which is defined as number of farmers' suicides per 100,000 farmers, Nagraj rightly claims that it 'can be calculated on a reliable basis only for the year 2001 because that is the only year for which we have reliable data on the number of farmers in country, and in different states, from the Census of India' (Nagraj 2008: 7). Given this, we have calculated and tabulated the farmers' suicide rates only for the year 2001.

NCRB data show that during these ten years as many as 166,305 farmers committed suicide in India (see Table 11). The Table also shows that on average around 16,500 farmers committed suicide every year from 1997 to 2006. It is also clear from the Table that every seventh suicide in the country was a farm suicide during this period. However, this distressful number is considered by many as an underestimation of the actual number of suicides by farmers in the country because, as Nagraj writes,

> These data published by the National Crime Records Bureau, as we have noted above, are put together from the police records from different states. Our experience during our field visits in Andhra Pradesh as a member of the Farmers' Commission set by the state government in 2004 was that the police often adopted a rather strict and stringent definition of a farmer in identifying a farm suicide. The title to land was taken as the criterion for identifying the farmer and this often left out a genuine farmer from the count. For example, a tenant farmer who leased in land and hence did not have a title to the land could be denied the status of a farmer; so also a farmer if the title was in his father's name (Nagraj 2008: 3-4).

Table 11 demonstrates that there has been 18 per cent increase in the number of farm suicides in the year 1998 compared to the year 1997, and the number remained more or less steady in between 16,000 to 16,500 suicides per year during 1998 to 2001. The next sharp increase happened in the year 2002 – around ten per cent increase compared to the year 2001 – and the number has moved up and down at around 17,000 to 18,000 per year during 2002 to 2006.

Table 11
Farmers' Suicides and all-Suicides in India, 1997-2006

Year	Farmers' Suicides		All Suicides	
	Number	Per cent of all Suicides	Number	Suicide Rate (per 100,000 Population)
1997	13622 (100)	14.2	95829 (100)	10.0
1998	16015 (118)	15.3	104713 (109)	10.8
1999	16082 (1118)	14.5	110587 (115)	11.2
2000	16603 (122)	15.3	108593 (113)	10.6
2001	16415 (121)	15.1	108506 (113)	10.6
2002	17971 (132)	16.3	110417 (115)	10.5
2003	17164 (126)	15.5	110851 (116)	10.4
2004	18241 (134)	16.0	113697 (119)	10.5
2005	17131 (126)	15.0	113914 (119)	10.3
2006	17060 (125)	14.4	118112 (123)	10.5
Total	166304	15.2	1095219	10.5
CAGR (%)	2.5	---	2.4	---

Note: Figures in brackets give indices with 1997 as the base. CAGR denotes Compound Annual Growth Rate

Source: National Crime Records Bureau (NCRB). Cited in Nagraj (2008).

According to NCRB data, there is a clear gender division in the farmers' suicide. The Table 12 shows that it is the male farmers who have largely committed suicide; around 85 per cent of all farmers' suicides are by male farmers. This figure is significantly larger compared to the number and percentage of male suicides in the general population during the period 1997-2006 (see Table 12). This apart the Table also shows that the number of male farmers' suicides has shown somewhat consistent increase per annum during this period compared to the number of female farmers' suicide. It means that there has been concentration of agriculture related suicides among males during 1997-2008. The much higher concentration of farm suicides among males reflects on the deep agrarian crisis (Nagraj 2008: 7). In India it is a truism that the household head is male and he is the bread winner and in charge of economic affairs; therefore, an agrarian crisis first of all brings the household head under stress and forces him to commit suicide.

Table 12
Farmers' Suicides and all Suicides in India by Gender, 1997-2006

Year	Farmers' Suicides					All Suicides		
	Male		Female		Male Farmers' Suicide as % of all Farmers' Suicide	Male	Female	Male suicide as a % of all Suicides
	Number	As % of all Male Suicides	Number	As % of all Female Suicides				
1997	11229 (100)	20.0	2393 (100)	6.1	82.4	56281 (100)	39548 (100)	58.7
1998	12986 (116)	21.1	3029 (127)	7.0	81.1	61686 (110)	43027 (109)	58.9
1999	13278 (118)	20.3	2804 (117)	6.2	82.6	65488 (116)	45099 (114)	59.2
2000	13501 (120)	20.5	3102 (130)	7.3	81.3	66032 (117)	42561 (108)	60.8
2001	13829 (123)	20.9	2586 (108)	6.1	84.2	66314 (118)	42192 (107)	61.1
2002	15308 (136)	22.1	2663 (111)	6.5	85.2	69332 (123)	41085 (104)	62.8
2003	14701 (131)	20.9	2463 (103)	6.1	85.7	70221 (125)	40630 (103)	63.3
2004	15929 (142)	21.9	2312 (97)	5.6	87.3	72651 (129)	41046 (104)	63.9
2005	14973 (133)	20.5	2158 (90)	5.3	87.4	72916 (130)	40998 (104)	64.0
2006	14664 (131)	19.4	2396 (100)	5.6	86.0	75702 (135)	42410 (107)	64.1
Total	140398	20.7	25906	6.2	84.4	676623	418596	61.8
CAGR (%)	3.0	---	Nil	---	---	3.3	0.8	---

Note: Figures in brackets give indices with 1997 as the base. ACGR denotes Compound Annual Growth Rate

Source: National Crime Records Bureau (NCRB). Cited in Nagraj (2008).

There is a high degree of variation concerning the number of farmers' suicide across different states in India. There are certain states where the number of farmers' suicide is significantly much higher, and the problem is much more acute. They are followed by several states which account comparatively lower number of farmers' suicide. Moreover, in most of the north-eastern states and union territories the number of farmers' suicide can be considered inconsequential (see Table 13).

Table 13
Farmer Suicides in Selected States and all India, 1997–06

State	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Andhra Pradesh	1097	1813	1974	1525	1509	1896	1800	2666	2490	2607
Assam	223	160	82	126	167	271	187	331	299	322
Bihar including Jharkhand	94	127	127	32	88	101	69	44	163	149
Goa	07	05	05	15	18	11	18	08	11	05
Gujarat	565	653	500	661	594	570	581	523	615	487
Haryana	45	185	205	238	145	190	207	160	140	190
Himachal Pradesh	23	28	39	35	22	25	34	52	22	22
Jammu & Kashmir	03	02	03	38	15	16	08	01	02	34
Karnataka	1832	1883	2379	2630	2505	2340	2678	1963	1883	1720
Kerala	1204	1514	1431	1295	1035	1533	1583	903	1118	1124
Madhya Pradesh including Chhattisgarh	2390	2278	2654	2660	2824	2578	2511	3033	2660	2858
Maharashtra	1917	2409	2423	3022	3536	3695	3836	4147	3926	4453
Orissa	251	418	265	199	256	345	365	379	254	283
Pondicherry	40	128	133	230	91	88	23	145	147	175
Punjab	111	108	87	73	45	40	26	74	47	85
Rajasthan	659	705	724	736	505	587	636	749	461	395
Tamil Nadu	932	1089	804	882	985	1455	1052	1599	1255	426
Tripura	18	241	97	14	41	41	04	15	29	07
Uttar Pradesh including Uttarakhand	568	727	845	735	709	559	428	518	546	462
West Bengal	1539	1457	1240	1377	1246	1518	1036	822	965	1187
Other States and Union Territories	98	87	65	79	79	112	84	109	100	67
All India	13622	16015	16082	16603	16415	17971	17164	18241	17131	17060

Note: 1. Other States and Union Territories include most of the north-eastern states (Arunachal Pradesh, Manipur, Meghalaya, Mizoram, Nagaland, and Sikkim) and union territories (Andaman and Nicobar Islands, Chandigarh, Dadar and Nagar Haveli, Daman and Diu, Delhi, and Lakshadweep).

2. The states of Chhattisgarh, Jharkhand and Uttarakhand were formed in 2001 by bifurcating the erstwhile states of Madhya Pradesh, Bihar and Uttar Pradesh respectively. Hence the data applicable to the states of Chhattisgarh, Jharkhand and Uttarakhand, which have been available only from 2001, have been added to Madhya Pradesh, Bihar and Uttar Pradesh respectively.

Source: NCRB various years.

In order to understand the pattern or trend of farmers' suicide systematically, Nagraj (2008) has classified the states and union territories into four groups on the basis of number, rate, intensity and trend of farmers' suicides. While making classification, the states and union

territories where the number of farmers' suicides is inconsequential has not been taken into account. Group 1 consists of Maharashtra, Karnataka, Andhra Pradesh, Chhattisgarh, and Madhya Pradesh. Kerala, Tamil Nadu, Goa, Pondicherry, West Bengal, and Tripura constitute Group 2. Only four states, Assam, Gujarat, Haryana, and Orissa, belong to Group 3. And Group 4 comprises Bihar, Jharkhand, Uttar Pradesh, Uttarakhand, Himachal Pradesh, Punjab, Jammu & Kashmir, and Rajasthan.

Of the four groups, Table 14 shows that it is in the Group 1 states the problem of farmers' suicide is most severe. During the ten years period of 1997 to 2006, 101,000 out of 166,304 cases of farmers committed suicides occurred in this group of states, giving an average of nearly 10,000 per year, which constitutes 21.2 per cent of all suicides in this group of states. The other distressing fact that Table 14 reveals is that Group 1 states has seen an almost constant increase in the number of farmers' suicides over the period 1997-1006. In this context, Nagraj writes that 'Considering the period 1997-2006 as a whole, farm suicides in this region increased at an annual compound growth rate of 5.4 percent. This rate, if held, would mean doubling of the number of suicides every 13-14 years' (Nagraj 2008: 16). Based on the data extrapolated from the 2001 Census, Table 15 tells that the farmer suicide rate in this group of states is around 25 per 100,000 farmers, which is almost twice as high as the all-India average, and the general suicide rate in this group is around 16 per 100,000 persons, which is also significantly higher than the all-India average. Thus, these figures demonstrate a considerably higher intensity of farmers' suicides in this group by showing a significant gap between the farm suicide rate and general suicide rate: the former is nearly 60 per cent higher than the latter.

Table 14 shows that 37,424 farmers' suicides took place in the group 2 states, which is 10.3 per cent of all suicides, during 1997-2006. Though this number is quite substantial, around 4000 per year, the overall trend has been a declining one, except two sharp increases, one in 1998 and the other in 2002. But Table 15 demonstrates that the farmers' suicide rate for group 2 states in 2001 is around 29 per 100,000 farmers, which is in fact the highest among all the groups. This is because of very high farmers' suicide rate in some of these states. So far as general suicide rate is concerned, this group of states has witnessed a very high rate, 20.1 per 100,000 persons, which is nearly twice as high as the corresponding all-India rate. Consequently, the intensity of farmers' suicides, i.e., farmers' suicides as a percentage of all suicides, in this group is quite low.

Table 14
Farmers' Suicides and all Suicides in Different Groups of States

Year	Group I States			Group II States			Group III States			Group IV States		
	Farmers' Suicides	All Suicides	Farmers' Suicides as a % of all Suicides	Farmers' Suicides	All Suicides	Farmers' Suicides as a % of all Suicides	Farmers' Suicides	All Suicides	Farmers' Suicides as a % of all Suicides	Farmers' Suicides	All Suicides	Farmers' Suicides as a % of all Suicides
1997	7236 (100)	38910 (100)	18.6	3746 (100)	33672 (100)	11.1	1084 (100)	11789 (100)	9.2	1458 (100)	9909 (100)	14.7
1998	8383 (116)	43453 (112)	19.3	4434 (118)	36003 (107)	12.3	1416 (131)	12443 (106)	11.4	1695 (116)	11217 (113)	15.1
1999	9430 (130)	46170 (119)	20.4	3710 (99)	36943 (110)	10.0	1052 (97)	13470 (114)	7.8	1825 (125)	12424 (125)	14.7
2000	9837 (136)	47157 (121)	20.9	3813 (102)	35905 (107)	10.6	1224 (113)	14034 (119)	8.7	1649 (113)	9843 (99)	16.8
2001	10374 (143)	47906 (123)	21.7	3416 (91)	36191 (107)	10.6	1162 (107)	13497 (114)	8.6	1384 (95)	8983 (91)	15.4
2002	10509 (145)	49341 (127)	21.3	4646 (124)	35418 (105)	13.1	1376 (127)	13742 (117)	10.0	1328 (91)	9876 (100)	13.4
2003	10825 (150)	49211 (126)	22.0	3716 (99)	36316 (108)	10.2	1340 (124)	13809 (117)	9.7	1199 (82)	9741 (98)	12.3
2004	11809 (163)	51482 (133)	22.9	3492 (93)	36939 (110)	9.5	1393 (128)	13912 (118)	10.0	1438 (99)	9495 (96)	15.1
2005	10959 (151)	49754 (128)	22.0	3525 (94)	37870 (112)	9.3	1308 (121)	13865 (118)	9.4	1239 (85)	10492 (106)	11.8
2006	11638 (161)	52043 (134)	22.4	2926 (78)	38698 (115)	7.6	1282 (118)	14447 (123)	8.9	1147 (79)	10653 (108)	10.8
Total	101000	475427	21.2	37424	363955	10.3	12637	135008	9.4	14362	102633	14.0
ACGR (%)	5.4	3.3	---	- 2.7	1.6	---	1.9	2.3	---	- 2.6	0.8	---

Note: Figures in brackets give indices with 1997 as the base. ACGR denotes Annual Compound Growth Rate.
Source: National Crime Records Bureau (NCRB). Cited in Nagraj (2008).

Table 15
Number and Rate of Suicides for the General Population and Farmers in Different Groups of States, 2001

Group of States	Number of Suicides		Farmers' Suicides as a Per cent of all Suicides	Suicide Rate (per 100,000 members)		
	Among Farmers	Among all Population		Among all Population	Among Farmers	
					All Cultivators	Main Cultivators
Group 1 States	10374 (63.2)	47906 (44.2)	21.7	15.6	24.8	28.7
Group 2 States	3416 (20.8)	36191 (33.4)	9.4	20.1	28.8	33.6
Group 3 States	1162 (7.1)	13497 (12.4)	8.6	10.0	6.9	8.9
Group 4 States	1384 (8.4)	8983 (8.3)	15.4	2.4	2.6	3.3

All-India	16415 (100.0)	108506 (100.0)	15.2	10.6	12.9	15.8

Source: The Census of India, 2001. Cited in Nagraj (2008).

In group 3 states, shows that the total number of farmers' suicides is 12,637, which is 9.4 per cent of all suicides, during 1997-2006 (see Table 14). The number of farmers' suicide per year during this ten years period is around 1300, which is in comparative sense not high. The trend, apart from two sharp increases in the numbers in 1998 and 2002, has remained on the whole stable after 2002. Table 15 demonstrates that the farmers' suicide rate for group 3 states is also quite low, 7 per 100,000 farmers, which is lower than the all-India average. The level of general suicide rate in this group of states is also quite low, 10 per 100,000 persons, which is nearly as high as the corresponding all-India rate. Thus, the farm suicide rate here is lower than the general suicide rate. These figures show that the intensity of farmer's suicides in this group of states is also not very high.

Group 4 is the largest consisting of eight states. Table 14 shows that the total number of farm suicides group 4 states is 14362, giving an average of nearly 1400 per year, which is 14 per cent of all suicides, during 1997-2006. The trend, apart from two sharp increases in the numbers in 1998 and 1999, has been declining on the whole from 2000 coming down to 1147 cases of farmers' suicides in 2006. Given the large number of states, some of them are quite big, in this group, these figures can be considered very low in comparative terms. Moreover, Table 15 reveals that the farmers' suicide rate for group 4 states in 2001is only 2.6 per 100,000 farmers, which is the lowest among all the groups. This is also the region where the general suicide rate is lowest, 2.4 per 100,000 persons. Thus, the intensity of farmers' suicide in this group of states is lowest. It can be said that in this group of states the phenomenon of farmers' suicides is not a major problem, at least in comparison with other groups of states in India.

Thus, the official data suggest that it is the group 1 states where the problem of farmers' suicide is largely concentrated both in terms of number and rate, and the trend has seen a sharp increase during 1997-2006. Though this group of states is populated by 30 per cent of the total population and 33 per cent of the total cultivators in India, every 6 out of 10 farm suicides during this ten years period happened in this group (see Table 14). Table 14 also shows that the extent of concentration of farmers' suicide in this group has increased during this ten years period; in

1997 this group of states accounted for nearly half of the total farm suicides in the country, but in 2006 this proportion increased to more than two-thirds. Farmers' suicide rate is much higher than the general suicide rate and farmers' suicides account for a very large proportion of total suicides in group 1 states. This particular fact implies that, unlike group 2 states, farmers' suicides do not reflect general suicides or both phenomena are not related with each other in group 1 states. Another significant fact about the group 1 states, which can be considered as the graveyard of farmers today, is that the problem of farmers' suicide is mainly located in certain regions of the states such as the Vidarbha region in Maharashtra, Deccan and Hyderabad Karnataka regions in Karnataka, and Telangana and Rayalaseema regions in Andhra Pradesh. Lastly, though the problem of farmers' suicide is quite acute in all the states constituting group 1, it is in the state of Maharashtra that the problem is much larger. During the ten years between 1997 and 2006 the number of farmers' suicides in Maharashtra more than doubled, from 1917 to 4453. Thus, every fifth farm suicide committed in the country during this period occurred in Maharashtra. So far as other states in this group is concerned, in Andhra Pradesh and Madhya Pradesh the number of farmers' suicide increased from 1097 and 2390 to 2607 and 2858 respectively, whereas in Karnataka the number in fact decreased from 1832 to 1720 (see Table 13).

Conclusion

I would like to conclude this paper by reiterating my arguments that the contemporary agrarian crisis in India, which was caused primarily by the relative marginalization of agrarian interests in the national policy agenda, is a direct outcome of the economic reforms in India since the 1991. The economic reforms led to a gradual withdrawal of state from agriculture that happened in various forms such as declining public expenditure and increasing marketization of agrarian sector. The withdrawal of state was an integral part of neo-liberal or free-market policy framework that India adopted to become a partner in the increasingly supra-national regime facilitated by globalization discourse. Ostensibly, this regime claims to strive for an inclusive, symmetrical, decentralized and democratically cultivated rules-based world. But the reality is just opposite and full of ironies and paradoxes. For example, we have WTO backed trade regimes that press for removal of protection and subsidies vis-à-vis agriculture in the third world countries, while the first world countries are allowed to continue with subsidies in the garb of some artificial technicalities. The supra-national regimes have severely curtailed the policy space

that was traditionally available to the third world countries to pursue their development objectives in the best interest of their own citizens.

The process of liberalization in fact proved more disastrous for agriculture and peasantry in India because it was adopted without resolving the fundamental agrarian problems or contradictions such as an absolute inegalitarian land structure, depeasantisation, and abysmal condition of agricultural labour, tenants and small peasants. Though India chiefly inherited most of these problems or contradictions from the British rule, it did too little to resolve them after independence. During the period of economic reforms, state did nothing to transform the depressed traditional institutional framework of agriculture because it believed that the barrier to lifting up agricultural surplus or growth and consequently to rural development could be surmounted with following the structural adjustment programme of neo-liberalism. But in reality the opposite happened, and the traditional agrarian contradictions in effect acquired bigger shape by getting associated with the new contradictions generated by the liberalization process (see Ramachandran and Swaminathan 2002; Byres 2002).

One thing that has not changed vis-à-vis agriculture during the period of economic reforms is the size of population involved in agriculture for their livelihoods. It has always been more than 50 per cent of India's population. Given the massive size of population involved in agriculture and their acute suffering that has been manifesting itself also in its final form, i.e., suicide, the fact that puzzles us is the near absence of farmer/peasant movements, which India has been traditionally famous for, against the state's neo-liberal agenda. The answer of this puzzle requires a proper research work, but here it can be assumed that the answer may be lying in the state's successful attempt to sharply divide the farmers or peasants in terms of distinct official caste/ethnic categories such as the categories of 'backward caste' and 'forward caste' and official class categories like marginal farmers, small farmers, large farmers, peasants above poverty line, peasants below poverty line, etc. With differential treatment to different groups of farmers in terms of policies and programmes such as the farm loan waiver scheme, state seems to have been able to prevent till now a large-scale collective farmer/peasant resistance to its neo-liberal agenda.

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