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# **Farmers' Suicides and Response of Public Policy: Evidence, Diagnosis and Alternatives from Punjab**

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# Farmers' Suicides and Response of Public Policy

## Evidence, Diagnosis and Alternatives from Punjab

*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. Farmers' organisations, political movements and even some state-led response to this crisis have not met with success.*

ANITA GILL, LAKHWINDER SINGH

**A**gricultural development in economic theory has been regarded as a prerequisite for rapid economic transformation of the capitalist economy. Surpluses both of labour and capital resources have historically been contributed by the agriculture to the modern and dynamic sectors of the economy such as the industrial sector. During the process of economic transformation, the agriculture sector diminishes in importance and the industrial sector plays a dominant role. Transformation of resources from agriculture sector to rest of the economy has been seen as a positive and universal phenomenon by the modern thinkers of growth theory [Lewis 1954; Syrquin 1988].

It is a widely acknowledged and accepted fact in economic literature that a successful structural transformation is painful for agriculture in all societies, hence nearly all rich countries protect their farmers at the expense of domestic consumers and taxpayers and of foreign producers [Timmer 1988]. However, a turnaround in this kind of thinking occurred in mid-1970s to strengthen the rural economy through linking rural production with industry. Suggested strategy and policy changes have a capacity not only to reduce the pain of structural transformation, but also to substantially increase rural income and can also contain the population from moving to the cities with an already overflowing population [Mellor 1976]. On the contrary, stagnation of technology and yields and low levels of living standards of rural population along with the "squeeze agriculture" paradigm is a sure way of economic stagnation rather than growth. The agriculture sector of Punjab has not only been moving towards stagnation of yields, but also a squeeze on income as well.

The state-led green revolution in Punjab increased incomes of farmers irrespective of farm size and catapulted it to the status of being called the "grain bowl of India". The euphoria, however, was short lived, with the tide turning against the sector that once contributed nearly 70 per cent of wheat to the national foodgrain pool. Marginalisation of agriculture and the slow down in industrial growth during the economic reform period have further increased the pain of rural population which has drawn the attention of policy-makers, political leadership and academics alike. However, suggested policy solutions suffer from the same malaise which has already squeezed rural incomes.

This paper attempts to examine the agrarian crisis, some of its consequences and alternative viable policy options with what we hope will be a fresh perspective. The paper is organised into four sections. Section I examines the emergence of the crisis of the agrarian economy of Punjab. The manifestation of the crisis in terms of nature, extent and causes of suicides by the agriculturists has been presented in Section II. Public policy as a remedy for this crisis, shortcomings of the public policy and possible alternative solutions have been analysed in Section III. Concluding remarks are presented in the last section of the paper.

### I Growth and Structural Change in Punjab Economy

The Punjab economy has grown at a rapid rate since the ushering in of the green revolution. The growth rate was nearly 5 per cent per annum of the net state domestic product (NSDP) during the period 1966-67 to 1998-99. Punjab's per capita income in the year 2000-01 was Rs 24,111 and was ranked number one just ahead of Maharashtra with a difference of Rs 385 at current prices. Punjab's per capita income at constant prices was Rs 14,916 in the year 2000-01 and was ranked number two, superseded by Maharashtra with a margin of Rs 256.

Economic prosperity and the lead of Punjab in terms of per capita income are, however, now history and other fast growing states are quite close to surpassing this long sustained lead. This has been due to the fact that the development process in Punjab has slowed down in the post-liberalisation regime. Growth rate of NSDP declined to 4.7 per cent in the 1990s compared to that of the 1980s, which was 5.4 per cent. Major sectors of the Punjab economy showed a deceleration of the growth process in the 1990s compared with the 1980s and the worst performance was of the agricultural sector. The rate of growth of the agricultural sector dwindled from 5.15 per cent per annum during the 1980s to 2.16 per cent in the 1990s. Growth of income generated by the agriculture sector from crops slid from a rate of 4.9 per cent per annum in the 1980s to nearly 0.4 per cent in the 1990s [Singh and Singh 2002]. Previously, the agriculture sector was the engine of growth and a major contributing sector to the per capita income

of the state from the mid-1960s to the early 1990s. Such a rapid deceleration of the rate of growth of the agricultural sector of Punjab has far-reaching consequences for the rest of the economy due to interdependence of the sectors, and has pushed those who are dependent for their livelihood on agriculture into an unprecedented crisis. Wide variations noticed in the growth performance of different sectors of the Punjab economy have dramatic consequences for the economic transformation.

The character of the Punjab economy at the advent of green revolution was fundamentally agrarian. Agriculture constituted 52.85 per cent of the gross state domestic product (GSDP) in 1966-67 and increased to 54.27 per cent in 1970-71. Thereafter, the share of agriculture sector's income in GSDP started declining continuously and dwindled to 39.22 in 2000-01. The structural transformation process has been regarded, at least in theory, as a healthy sign of economic development [Timmer 1988]. However, the growth process must be underlined by technological progress and investment of capital. This implies that the structural transformation occurring under conditions of a faster rate of growth of the economy led by substantial investment and technological progress through interdependence increases the importance of dynamic sectors such as industry. It is important to mention here that the industrial sector of Punjab was not an important sector of its economy, but gained importance during the faster growth of the agriculture sector and increased its share in GSDP from 7.86 per cent in 1966-67 to 20.12 per cent in 1995-96. Thereafter, the industrial sector's share in GSDP declined and was 16.10 per cent in the year 2000-01. However, the tertiary sector has been emerging as an engine of growth during the structural transformation and generated 45 per cent of the GSDP in 2000-01 (Table 1). The decreasing importance of agriculture (which includes livestock) and the industrial sector, and the increasing importance of the tertiary sector is not a healthy sign of structural transformation. The rate of decline in the growth rate of the overall economy due to a sharp fall in the growth rates of the productive sectors was not neutralised by the slow acceleration of the growth of the tertiary sector of the Punjab economy.

The other indicator of a structural transformation of the economy are the changes occurring in the structure of workforce engaged across sectors and over time. In Punjab, the workforce engaged in agriculture (cultivators and labourers) was 62.67 per cent of the total in 1971, which declined to 58.02 per cent in 1981 (census data) – a reduction of 4.65 percentage points over a decade (Table 2). The decline from 1981 to 1991 was only 1.95 percentage points, that is, 56.07 per cent workforce was still engaged in agriculture. From 1991 to 2001, there is some controversy regarding the figures, because according to the census data, the proportion of the workforce engaged in agriculture declined to 39.36 per cent, that is, a dramatic decline of 16.71 percentage points in a single decade. Now, this is unexplained, because if we take a look at the percentage of workforce engaged in the industrial sector, these are 11.3 per cent in 1971, 13.5 per cent in 1981, 12.28 per cent in 1991, and 8.41 per cent in 2001 (census data). Going by census data, this means that both agriculture and industry have shed workers but this workforce has not found employment elsewhere also, because unemployment of both the rural and urban population increased during this period [Gill 2002]. Further, the NSSO data confirms also that employment has shrunk in the organised as well as unorganised tertiary sector. And if the NSSO data is to be followed, the workforce engaged in agriculture in Punjab was still 53 per cent in 2000-01 [Planning

Commission 2003]. Apart from the data controversy, the point that emerges is that even now a substantial percentage of the workforce (53 per cent according to the NSSO statistics or nearly 40 per cent according to the census data) is engaged in agriculture and the change (read decline) is rather slow, while the squeeze in income from agriculture has been rapid (from 40.91 per cent in 1966-67 to 26.76 per cent of SDP in 2000-01, Table 1). This is an obvious sign of a grave crisis.

Deceleration of economic growth of the Punjab economy in general and the agriculture sector in particular has tremendously increased the crisis of the capitalist path of economic development, especially in the liberalisation and globalisation era. A substantial proportion of the workforce still dependent on agriculture for livelihood faces a serious problem to be gainfully employed elsewhere in the backdrop of squeezing share of agricultural income. Obviously, this is expected because of the fact that agricultural development on capitalist lines of production and a heavy dependence on market occasionally leads to this kind of situation [Timmer 1988]. Therefore, a need arises to examine the process of agrarian capitalist development of the Punjab agriculture in a historical perspective to provide an appropriate explanation of the emergence and rise of the agrarian crisis.

The ushering in of the green revolution in Punjab began with the arrival of high-yielding varieties of seeds for wheat and rice crop along with the use of chemical fertilisers. The new technology was adopted by the Punjab farmers at a rapid rate which had a productivity enhancing effect mainly on two crops, that is wheat and rice. Not only, land and labour productivity increased many times but it also had income enhancing effect across the board. Punjab peasantry was able to reap income gains proportional to their ownership of cultivable land [Bhalla and Chadha 1983]. The peculiar characteristic of the early green revolution was that it had increased labour intensity in agricultural processes

**Table 1: Sectoral Distribution of State Domestic Product**

Sectors	1970-71	1980-81	1990-91	2000-01
Agriculture and livestock	54.27	48.46	47.63	39.22
(a) Agriculture	38.51	32.22	30.69	26.76
(b) Livestock	15.76	16.24	18.94	12.46
Forestry and logging	0.76	0.99	0.59	0.14
Fishing	0.03	0.03	0.09	0.38
Mining and quarrying	0.05	0.02	0.02	0.00
Manufacturing	8.04	11.00	16.27	16.10
Electricity, gas and water supply	0.84	1.31	2.45	2.42
Construction	9.21	6.15	3.74	4.97
Trade, hotel and restaurants	10.96	14.58	11.33	12.73
Transport, storage and communication	1.73	2.05	2.32	5.67
Banking and insurance	1.80	2.55	4.67	5.48
Real estate and business services	4.79	4.26	3.20	4.22
Public administration	1.79	2.81	3.28	4.60
Other services	5.72	5.76	4.32	4.07

Source: *Statistical Abstracts*, relevant issues, Government of Punjab.

**Table 2: Structure of Workforce in Punjab**

Year	Cultivators	Agricultural Labourers	Industrial Workes	Other Workers	Total
2001	2099330 (22.96)	1498976 (16.40)	769047 (8.41)	4774407 (52.23)	9141760 (100.00)
1991	1917210 (31.44)	1502123 (24.63)	749136 (12.28)	1929905 (31.65)	6098374 (100.00)
1981	1767286 (35.86)	1092225 (22.16)	665442 (13.50)	1402806 (28.47)	4927759 (100.00)
1971	1665153 (42.56)	786705 (20.11)	442070 (11.3)	1018664 (26.03)	3912592 (100.00)

Source: *Statistical Abstract*, relevant issues, Government of Punjab.

such as sowing, weeding and more so in harvesting and threshing. Farming chores were mainly done by family labour coming from the households of small, marginal and medium-sized farms and were supplemented by hired labour during the peak seasons. However, large farmers were mainly dependent on hired labour for agricultural operations. A rise in the income of rural households increased the capacity of the farm households to employ innovations to further exploit the potential of yield increases and enhance income from agriculture. Thus, the new innovations of threshing, cultivation of land through tractors, use of pesticides and insecticides, diesel pump sets and electric tube wells increased the use of mechanical power for tilling and harvesting operations. Also biological innovations for making crops free from weeds and pest attacks started reducing the role of family labour in farm operations.<sup>1</sup>

The consequence of the increase in mechanisation, assured irrigation, chemical fertilisers, pesticides and insecticides and high-yielding seeds was a manifold rise in land productivity and decline in the intensity of labour. Crop yield increased at a rate of 2.43 per cent per annum during the period 1967 to 1981, which constituted 40.91 per cent of total land productivity. The contribution of crop yield further increased at a rate of 2.71 per cent per annum during the post-green revolution period (1981-91) which was 52.52 per cent of the total land productivity. In the stagnation period (1991-2001), yield growth declined to 0.26 per cent and the contribution to land productivity also declined to 31.33 per cent [Singh and Sidhu 2004].

The labour use pattern also underwent substantial changes due to the intensive use of biological and mechanical technologies. The mandays of labour use declined after the mid-1980s in the wheat crop from 52.35 to 38.9 per hectare during 1985-88-1998-2000, that is a 25 per cent decline. It is amazing to note that labour use in paddy crop has sharply declined from 103.60 mandays per hectare in 1981-84 to 56.32 mandays per hectare in 1998-99. Mechanical harvesting was fundamentally responsible for the sharp decline in intensity of labour use in predominant crops of Punjab agriculture [Sidhu and Singh 2004].

Mechanisation of harvesting of major crops and intensive use of biological technologies have not only reduced the household use of labour power but also substantially contributed to the rise in the cost of production. Over capitalisation of mechanical power such as tractors and tube wells has made available the use of the tractor on a hire purchase basis to the small farmers which has reduced the use of family labour as well as completely eliminated tilling of land by bullocks even by the small and marginal farmers. The farmers have turned managers of the production processes of agriculture because the manual operations have been almost eliminated and the remaining tasks are being done by the migratory workforce available at low level of wages.

Rising costs along with stagnant technology and a near freeze in the minimum support price of wheat and paddy, which turned the already adverse terms of trade from bad to worse, surely reduced returns on foodgrain production. The reduction of differentials between returns and cost of production, the increasing uncertainty of weather as well as a dependence on borrowed credit at a higher rate of interest from informal lenders were the reasons responsible for increasing indebtedness among the farmers of Punjab [Shergill 1998; Ghuman 2001; Gill 2004a]. This has compounded problems to the extent that farmers of Punjab resorted to committing suicides [AFDR 2000]. The whole crisis is the consequence of the fact that market forces operated at much

larger scale during the phase of liberalisation and globalisation and thus reduced surpluses and increased costs leading to the distress sale of the paddy crop over a nearly five-year period during Akali Dal rule in Punjab. The incidence of suicides in Punjab increased tremendously during this period.

## II Farmers' Suicides: Extent and Diagnosis

Suicides by farmers were first highlighted by the media in Kerala, Karnataka and Andhra Pradesh. But then came reports of suicides by farmers in Punjab, which were perturbing and quite unexpected in such a prosperous region. So long as suicide remains an occasional and stray incident, it does not generate much public concern. But when the incidence shows an upward trend and affects a particular section of society, it becomes a public issue, to be viewed, studied and analysed in all its seriousness. In Punjab, suicides by the farmers became a public issue since the mid-1980s. The state government itself has admitted that 2,116 suicides had taken place since 1986, but this could just be the "tip of an iceberg" as many more cases might have gone unreported, if not unnoticed [Tribune 2005].

The gravity of the problem in Punjab has been highlighted by three main studies: by the Institute for Development and Communication (1998), followed by Iyer and Manick (1999), and by an NGO, the Association for Democratic Rights (2000). Table 3 gives the main profile of suicide victims in the survey areas of the three studies.

The studies reveal that Sangrur and Mansa are the two districts which have reported the most incidents of suicides. These are the relatively backward and poorer districts of Punjab. But, as noted earlier, this by no way is an indication that suicides in other districts have not taken place – the number could be much smaller and might have gone unnoticed and unreported. Table 3 also reveals that the percentage of cultivators who committed suicide is much more than agricultural labourers. And among the

**Table 3: Profile of Suicide Victims**

Study by Characteristics	IDC (1998)	Iyer and Manick (1999)	AFDR (2000)
Districts surveyed	Gurdaspur Sangrur Mansa Ludhiana	Sangrur	Patiala Mansa Sangrur Bathinda
Villages covered	14	11	29
Households covered with confirmed cases of suicides	53	75	79
Percentage of cultivators who committed suicide	55	66.66	84.80
Percentage of agriculture labour households	45	33.33	15.20
Percentage of small and marginal farmers	25	84	65.70
Percentage of illiterates	58.50	66.25	75
Percentage of married victims	81.10	–	76
Causes of suicides: (percentage)			
(i) Multiple of which indebtedness is one	38	78.75	62
(ii) Crop failure	1.05	10	5.10
Debt exclusively from commission agents (per cent)	36.72	67.50	27.40
Debt from commission agents and other sources	–	81.25	73.60
Unproductive use of loan (per cent)	68.20	51.61	20.00*

*Note:* \* Comprises percentage of victims who could not repay back loan due to the reasons like expenditure on social ceremonies, excess consumption and illness, which are conventionally regarded as unproductive expenditures.

cultivators, it is the category of small and marginal farmers which reported the maximum number of suicides. Most of the suicide victims were illiterate. The causes of suicides, of which indebtedness figured prominently, were multiple. The other factors included economic distress, crop failure, alcoholism, marital and domestic discord, drug addiction, etc. All these causes, in one way or the other, pointed towards the poor economic status of the victims which manifested itself in various ways. Indebtedness was more towards non-institutional sources of finance, in which commission agents figured prominently. This fact has been established earlier also in the studies of Shergill (1998); Gill (2000); Gill and Kaur (2004); and NSSO (2005). Also, most of the loans (from institutional as well as non-institutional sources) of these victims were used for purposes that are traditionally classified as unproductive – social ceremonies, illness, house construction, etc.

The twin aspects of indebtedness (mostly to informal lenders) and the “unproductive” use of loans need to be studied simultaneously in greater detail to analyse the true reasons behind suicides. One side of the picture is that with the ushering in of the green revolution, the incomes of all classes of farmers increased initially, which set off the aspirations of cultivators to lead a better life in terms of living conditions and consumption. Always one to be on the ostentatious side of life, the Punjabi farmer, especially in the Malwa region (Bathinda, Faridkot, Sagrur, Mansa, Patiala and Ludhiana) now freely started spending lavishly on social ceremonies. Dowry in marriages invariably began to include a car, among other things. If there was a paucity of funds, there was always the informal lender, willing to give loans in substantial amounts. Or even a tractor loan from institutional sources could be used to give dowry. The beginning and deepening of economic crisis in agriculture shrunk the incomes of peasantry, but not their aspirations and the firmly entrenched social norms. Failure to pay back loans indebted them further, entrapping them in a debt trap. Harassment by lenders, the threat of arrest and then the public shame accompanying the impending compulsion to forsake their most prized asset – land – proved to be the last nail in their coffins.

A second but important aspect of the problem of the so-called unproductive use of loans (mostly informal loans) raises the question as to how to define the term “unproductive”? Recalling the crisis in agriculture once again, the spending of loans for survival – essential consumption, for medical expenses, and for building a roof over one’s head – is not justifiably unproductive. Spending for maintaining/enhancing one’s productive capacity has now been recognised as very productive expenditures [Strauss and Thomas 1995]. If an in-depth disaggregative analysis of the loan use is made, instead of just the two broad conventional categories, then a substantial proportion of the loan use classified as unproductive could possibly be deducted. The expenditure on marriages and other social ceremonies are safely classified as unproductive. But then, why is only one section of society singled out and chastised for spending on marriages when the entire set up of the Punjab state is under the influence of this social evil. Farmers cannot be studied and analysed in isolation from what is happening in society at large, because they are not autonomous from the social structure, and their actions will be influenced largely by the society in general. The problem is that farmers, unlike most other sections of society, do not have regular, assured incomes; and whatever they earn is shrinking by the day. Suicides due to drug abuse, alcohol and domestic or marital discord are just reflections of this malaise of economic crisis with grave social consequences.

Also, a less noted and thought of, albeit equally true side of the picture which is much less reported, is that not all loans, even informal loans are misused. Yet a majority of the peasantry (and landless workers) are in a grave economic situation. It has been established by micro-empirical studies that a majority of borrowings of cultivators are used for productive – short-term and long-term purposes. Gill (2000); Gill and Kaur (2004) have established that nearly 63 per cent and 57 per cent, respectively of informal credit was utilised for productive purposes (Table 4). It was only in the case of landless workers that a greater percentage of loans were utilised for consumption or repayment of old debts. Apart from these studies, the NSSO data too confirm that in Punjab, of every Rs 1,000 of outstanding loans taken by farmers, Rs 264 was for capital expenditure in farm business, Rs 360 for current expenditure in farm business, Rs 44 for non-farm business, Rs 85 for consumption, Rs 102 for marriages and ceremonies and Rs 126 for medical and other expenditure. For the country as a whole, the NSSO concluded that more than 50 per cent of indebted farmer households had taken loans for the purposes of capital or current expenditure [NSSO 2005].

The productive purposes for which informal loans are utilised is for repair, fuel, maintenance and hiring of machinery, tube wells and pump sets. The expenditure on these cannot be postponed during peak seasons, and it is only the informal loans which are immediately available. The institutional loans, on the other hand, usually have a credit limit (set on the basis of owned, not cultivated land), and are readily available only after the first loan is repaid. Hence, the cultivators have no option but to turn to the informal lenders, where red tapism and lengthy paper work seldom exist, unlike the institutional loans. Moreover, formal credit is not able to fulfil the entire credit demands of cultivators. Table 5 bears an ample proof of this. For most categories, the supply of formal credit is not even 50 per cent of demand for credit.

The whole situation, thus, has to be viewed in a broader macro framework of the needs of farmers and the set up to fulfil these needs rather than on limiting ourselves to studying just the profile of suicide victims, so that the menace can be checked before assuming gigantic proportions. In the agricultural set-up, borrowing is a necessity. It is neither objectionable nor a sign of weakness. It is the failure of the institutional set up in supplying credit commensurate with demand that is mainly responsible for the crisis and its manifestation in the form of suicides. Commission agents are thriving as informal lenders because they have chosen crop, rather than land, as collateral, and entice farmers into interlinked contracts – pledge of sale of crop in return for loan [Gill 2000; Bell and Srinivasan 1989]. Crop is not undervalued as land is, but the rates of interest are kept exorbitantly high

**Table 4: Utilisation of Informal Credit by Sample Households**  
(Per cent)

Size-group of Owned Holding (Acres)	Productive Purpose		Consumption Purposes	
	Patiala	Amritsar	Patiala	Amritsar
Landless	4.28	49.64	64.11	50.36
Up to 2.5	70.23	47.29	29.77	52.71
2.51-5.00	51.41	48.74	45.92	51.26
5.01-10.00	50.66	81.50	48.26	18.50
Above 10	68.95	71.18	29.29	28.82
Total	63.03	57.14	36.36	42.86

*Note:* The percentages for production and consumption in case of Patiala may not add up to 100, because it excludes the utilisation of credit for repayment of old debt of cooperative societies.

*Source:* Calculated from field survey.

[Gill 2000], while keeping paper work to a minimum. Land grab is only in extreme cases, and that too in case of big landlords turned commission agents. But harassment, threats, fear of arrest and the public shame is enough to drive the borrowers to suicide, even though the loan might not have been used “unproductively”. Hence, suicides as a manifestation of indebtedness in particular and agrarian crisis in general have to be viewed and analysed in a broad macroeconomic framework. It has to be realised that the root cause of the problem lies not just under the cursory heading of indebtedness; it has to be traced back to the entire credit set-up and then the crisis within the agricultural sector.

### III Hope and Suggested Policy Measures

Despite the grave situation in which the Punjab peasantry is engulfed, there is still a ray of hope. Since in the previous section, an attempt was made to diagnose the problem, suitable alternatives can now be suggested as remedial measures, in the light of the efforts already made at the level of the state. Since the agrarian crisis has manifested itself in suicides, the problem needs to be tackled at various levels, beginning from the immediate relief measures to the families of suicide victims, to long-term policy decisions covering the entire agricultural sector.

As a part of the immediate relief package for the families of suicide victims, there is a need to provide monetary assistance as compensation so that the aggrieved family can meet its physical survival needs. This is all the more important in the cases where the victim was the only earning member of the family. Proper identification of such families by a non-partisan organisation must precede such financial compensation. Additional financial compensation can also be provided by voluntary organisations and NGOs. Since most of the suicides are directly or indirectly related to indebtedness and economic distress (not necessarily in this order), it is proposed that a moratorium on the debt of the victim be implemented. Also the rate of interest and the loan instalments need to be substantially lowered thereafter. In case the victim was the sole earning member, waiving off the entire loan – formal or informal – would be highly recommendable.<sup>2</sup>

Again, taking a cue from the relief measures provided to suicide victims in Andhra, a pension scheme to the next of kin (especially if he/she is aged and/or a non-earner) should be implemented. As part of longer-term relief measures, it is suggested that provision for cost-free skill-oriented education be made for minor children. Older children could be provided suitable employment to rehabilitate the family. This would also ensure that the victim’s family is made capable of paying off the debt and live a life of honour, having washed off the stigma of being a suicide victim’s kin.

The growing agricultural crisis and its manifestations have not gone entirely unnoticed, with the Punjab government appointing a committee as early as in 1985 under the chairmanship of S S Johl to diagnose the problem and suggest remedial measures. The committee put forward the idea of diversification of agriculture from the existing wheat-paddy cropping pattern [Government of Punjab 1986]. It was argued that this diversification from cereals to fruits, vegetables and pulses will not only increase the income of farmers, but also reduce environmental degradation for long-term sustainability of Punjab’s agriculture. It may be recalled that this agriculture diversification based rural industrialisation growth strategy met with success in the early 1980s in a number of south-east Asian countries. The Punjab government recently tried to promote diversification of agriculture by taking on the

path of contract farming, between farmers and the agribusiness firms [Singh 2004]. However, the very design and implementation of contract farming left the small-sized farmers at the mercy of the private firms which secured monopoly situation in the market. In the absence of enforcement agency, such profit considerations and market orientation acted against the farmers and they have been left with no choice but to continue the wheat-paddy cropping pattern [Gill 2004b].

Diversification of agriculture of Punjab is, no doubt, a desired goal for transformation of the economy into an industrialised one, but so long as the processing activities of agriculture production take place away from the farm gates, the agriculture sector will continue to face the threat of exploitation and a decline in rural incomes [Timmer 1988; Singh 2005]. The south-east Asian countries in general and Taiwan in particular, have been the success stories because agriculture produce was processed on the farm gates and surpluses were ploughed back to expand rural industrial activities and also raising the level of living of the rural population. The farmers’ association of Taiwan successfully bypassed the exploitative intermediary agency. The state too played its role by providing essential institutional infrastructure and investment.

The organisation of production, thus has to be changed from individual to cooperative – not the bureaucratic state-controlled cooperative but modern member-owned and controlled cooperatives. Amul in our own country is an example of one such cooperative. The farmers’ cooperative in Junnar taluka in Maharashtra for industrialisation of grape cultivation is another success story. The government of Punjab, too, needs to offer a strategy which is not purely private and market based, but which leads farmers to organise themselves to carry out production, processing and marketing. For this, suitable institutional and infrastructural arrangements and elimination of middle man here to be provided.

Specifically, addressing the problem of credit, there are no two views that it is the middleman – who is exploiting the farmers the maximum and leading them into a debt trap. The remedy lies in the provision of institutional credit at cheaper rates of interest and, more important, at levels commensurate with the demand for credit. Although the recommendations of the Narasimham Committee (1991) regarding lowering of priority sector (of which agriculture is a very important part) target of bank credit from 40 per cent to 10 per cent was not approved by the political masters in our country, the monitoring and fulfilment of targets have begun to be taken much less seriously. This is not desirable, keeping in view of the grave economic situation of agriculture. To aggravate the situation, the priority sector list is being regularly revised to the detriment of small and marginal farmers [Dasgupta 2002]. For instance, in the category of direct advances to agriculture, the acquisition of jeeps, pick-up vans, etc, have been included – vehicles that are minimally made use of by small and marginal farmers. Again, the target of 18 per cent of direct advance is now being fulfilled by including a certain percentage

**Table 5: Supply of Formal Credit as Percentage of Demand for Credit**

Size-Group of Owned Holding (Acres)	Patiala	Amritsar
Landless	10.77	14.58
Up to 2.5	27.12	61.93
2.51-5.00	49.51	41.43
5.01-10.00	24.96	40.07
Above 10	75.11	67.75
Total	47.85	43.67

Source: Calculated from field survey.

in the form of indirect credit [EPW Research Foundation, Special Statistics 2003; TNS 2003]. That the supply of institutional credit is much less than demand has already been mentioned earlier. The Punjab government's recent measure to revise the 1997 vintage land rates taken into account by cooperative banks for lending purposes has enhanced the loan availing capacity of farmers and is a step in the right direction, but the inclusion element of landownership as a basis for a loan and that too processed with considerable red tape and delays are still a problem. A lower rate of interest is of no use if the loan is not adequate, timely and without the additional costs of procuring it. These additional costs involve cost of frequent visits to the institution, payment of a fee, submission of documents (requiring payment to some 'munshi' who can do the paper work for the illiterate farmers), etc. These expenses, if added to the rate of interest, make formal borrowings quite expensive.

On the other side are the informal lenders – mainly commission agents – who charge exorbitant rates of interest but provide an easy finance, commensurate with demand, while linking sale of crop to loan amounts. These practices are highly exploitative, but the farmers are forced to borrow from them out of sheer necessity. To serve rural credit needs, the experiences of Indonesian rural financial institutions, where organisations provide credit services locally, with character-based lending [Chaves and Gonzalez 1996], or like the Grameen Bank of Bangladesh can be adapted to Indian needs. And most important is the delinking of politics from credit, which turns loans into grants with every election, making the task of credit institutions difficult. The solution to indebtedness will go a long way in solving the entire agrarian crisis. Among other measures, it is suggested that formal institutions would do well to shift to crop as collateral, instead of insisting on land ownership, especially for long-term loans. This would ensure that the credit is need-based. Farmers should also be provided crop insurance at par with what is available to industry, as agriculture is the sector most vulnerable to the vagaries of nature. Failure of crops almost always renders the farmers incapable of paying back the loan instalment, and if crops fail in two or more consecutive seasons, farmers invariably find themselves in a debt trap. This is exactly what is happening in some parts of Punjab, where the fury of the Ghaggar river (in the Malwa region where the maximum suicides have been reported) during monsoons wreaks havoc year after year.

Apart from this, since the farmers cannot escape certain expenditure on consumption, health and even social ceremonies, efforts can be made to set up a pool of separate funds, with matching contributions from the farmers and the government, which can then be used to give interest free loans specifically for such expenses as mentioned above. This pooling can be done at the village level, by the panchayats or some such organisations. Funds can be loaned out to member farmers on a rotational, need-based or lottery basis if the fund pool is small. The idea can be roughly similar to the chit funds or nidhis operating in urban areas. However, the success of such a scheme will depend purely on the farmers and the honesty with which they operate the scheme. If such schemes can be successfully implemented, then farmers would not need to "misuse" the borrowings from institutions or avail of informal loans for "unproductive" purposes.

Since it has already been argued that despite using a major portion of the borrowings for "productive" purposes, farmers are falling into a debt trap, steps have to be taken to address the entire credit needs of farmers and the very set-up of credit providing agencies – formal, as well as informal.

It is also necessary that the government starts thinking in terms of setting up some sort of cooperative organisation to hire out agricultural machinery – tractors, threshers and harvest combines – on subsidised rates. This will save a lot of expenditure for the farmers. Even for irrigation, it should not be necessary that every farmer spends on installation of tube wells and pump sets individually. Government-installed tube wells, collectively operated by farmers can serve the purpose. In view of the declining water table in Punjab, submersible pump sets (deep tube wells) need to be installed. The installation cost of submersible pump sets is beyond the financial capacity of the small and marginal farmers. If such pump sets are installed by the government, water use would be more equitably distributed, in addition to saving of costs.

## IV Concluding Remarks

The structural transformation of an economy involves the reducing importance of the agrarian sector that is the reduction of the workforce dependent on agriculture while shifting surpluses to the more dynamic sector of the economy that is industry. The Punjab economy is undergoing a transformation leading to a grave crisis, instead of becoming a healthy sign of capitalist economic development. This is because while the surpluses are being rapidly extracted, the dependence of the workforce on agriculture is still very heavy. The situation is aggravated due to declining productivity and income in this sector. The onset of the green revolution had given a tremendous boost to the economy by bringing sharp increases in incomes, production and productivity for all classes of agriculturists. However, the boost was short-lived – with productivity declining over a period of time, income dipping due to increased costs of production but a near freeze in minimum support prices, and with large numbers rendered unemployed due to mechanisation of agricultural operations and lack of alternative employment opportunities. Near stagnation in the agricultural sector and non-descript development of the other sectors of the economy saw the beginning of a crisis which has reached unprecedented gravity, to the extent that cultivators were forced to take their own lives rather than live a life of extreme poverty, mounting debt burden and the agony of not being able to pay back the debts.

This manifestation of the agrarian crisis in the form of suicides has reached dangerous levels in Punjab. Intensive field surveys carried out to gauge the gravity of the problem as well as its causes pointed out that most of the suicide victims were cultivators and belong to the category of small and marginal farmers. Suicides were attributed to a number of reasons, ranging from poverty to crop failure, indebtedness, marital discord and alcoholism, but in our view it was mainly due to the economic crisis that the peasantry, in Punjab, in general, is facing and which has led them to borrow heavily. The heat has been felt more by the small and marginal farmers, since they are at a disadvantageous position so far as borrowing from institutional sources is concerned, and land ownership is a criteria for borrowing. Hence non-institutional sources, particularly the commission agents, have come to occupy a dominant position, as they lend on the basis of crop as collateral, and with minimum paper work. Although, contrary to popular belief, much of the borrowings (from both sources) are used for what are traditionally known as productive purposes. Yet, the peasantry is under debt pressure because incomes from agricultural crops are not enough to meet survival needs as well as repayment of loan instalments. If other

reasons are given, they are just essential links in the chain of economic difficulty leading to borrowing and indebtedness, and then the pressure – of family, of lenders, even mental pressure – of returning the loan or face public shame and humiliation, not to speak of threats of land grab.

Remedies thus have to be found not only in terms of short-term or immediate solutions to suicides, but also long-term solutions to end the agrarian crisis itself. While immediate measures could include relief, mainly financial, to the families of suicide victims, and attempts at their rehabilitation, the long-term measures to “nip the evil in the bud” should comprise attempts at rural industrialisation. This could be done on the lines of how and what has been undertaken in east Asian countries especially in Taiwan. The farmers’ cooperatives, sans middlemen, to produce, process and market output on the farm gates can be a way out. This would not only provide the agricultural sector with a much needed diversification from the wheat-paddy rotation, but also prove to be remunerative in terms of incomes and employment. The farmers’ organisations must engage themselves to start collectively processing and marketing enterprises rather than purely depending on agitations for more remunerative prices. Asking for rights along with engaging in industrial activities has a capacity to eliminate the middlemen who thrive on surpluses generated through processing and marketing activities. The state government apart from supporting and extending cooperation must become innovative to articulate policies in the fast globalising world to prod farmers’ organisations to initiate those activities which integrate the processing and marketing activities on the farm gates. This also underlines that the state and state-run financial institutions would have to alter their system of lending – loans would have to be made adequate, timely, cheap, and commensurate with demand. The red tape and additional costs involved, which make institutional loans so unattractive, would also have to be reduced drastically. [47]

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## Notes

- 1 It is important to note here that the electric tube wells installed in Punjab have been increasing continuously from 1.46 lakh in 1976 to 2.83 lakh in 1981 and were more than 8.29 lakh in 2002 which is nearly a sixfold increase. This increase in the rate of growth of number of electric tube wells could not satisfy the demand because a substantial number of applications remained continuously pending with the state electricity board [ESO 2002]. The number of tractors in Punjab has increased to 3.87 lakh which constitutes one-fourth of the total number of tractors in India and every third farm household has a tractor keeping in view 11.17 lakh total operational holdings in Punjab [Singh 2004].
- 2 It needs to be pointed out at this stage that the Punjab planning department had announced a compensation of Rs 2.5 lakh in its annual Plan of 2001-02, but this promise has yet to be fulfilled, unlike the case of Andhra Pradesh. In fact, highly moved by the state’s apathy, a petition has been filed by the Movement against State Repression (MASR) in the Punjab and Haryana High Court seeking instructions to the Punjab government and the government of India to compensate and rehabilitate families of farmers who committed suicides in the state (*The Hindustan Times*, January 21, 2005).

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