CHAPTER VIII

# Agrarian Distress and Rural Credit: Peeling the Onion

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## *Abstract*

*Agriculture has remained traditionally the most important economic activity in our country. That a majority of the rural households are directly or indirectly dependent on agriculture is an established fact. It is also fairly well known that the agricultural sector has gone through some crisis in the past few years. While the crisis may be isolated to a few crops and regions, the sector can no longer do with policy apathy. The increased number of farmer suicides highlights the fact that there is something fundamentally wrong with the way agriculture was dealt with, particularly after the economic reform process was rolled out. If we examine the immediate reason for distress that leads farmers to commit suicide, it is clearly that of indebtedness. Naturally most of the significant policy measures that were taken by the state in the recent past are aimed at the issue of supply of credit, the cost of credit, and the resultant use of credit in agriculture. In a way, this is an immediate relief measure that was required from the State. This chapter argues that some long term measures need to be taken to ensure that agriculture as a livelihood opportunity becomes attractive to farmers and not a desperate occupation that needs constant doses of State support even for survival.*

## 1. Can agriculture continue to be a worthwhile activity for sustainable livelihoods?

The Johl Committee[2] that looked into the issue of agricultural distress made the following observation in its findings:

*The manifestation of distress is stressful behaviour arising out of social, economic and psychological reasons. However, one common factor that can be seen across all regions is that manifestation of economic distress is primarily through indebtedness. The distress may be 'systemic' (faced by a large number of households) or 'idiosyncratic' (specific to the particular household).*

*Johl Committee led to defining distress as low levels of liquidity and cash crunch. In any situation of bankruptcy, whether corporate or individual, the manifestation happens through a liquidity crunch.*

Basically this observation led to defining distress as low levels of liquidity and cash crunch. In any situation of bankruptcy, whether corporate or individual, the manifestation happens through a liquidity crunch. However, it is also well known that liquidity issues are only secondary, and the primary issues pertain to the inherent economic viability of the underlying activity that is being carried out. In fact the committee identifies the reason for distress as the effect of inadequate farm-income coupled with limited non-farm activities that does not support diversification of livelihood activities.

Therefore whether agriculture continues to be a worthwhile activity for livelihoods needs to be examined. Obviously this is not a simple question because there are wide variations across the regions of the

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[2] Reserve Bank of India (2006): Report of the Working Group to Suggest Measures to Assist Distressed Farmers. Mumbai.

country that make the economics of agriculture behave in diverse ways as the resource availability is quite different. However, at the start, it may help to look at some macro level data for clues.

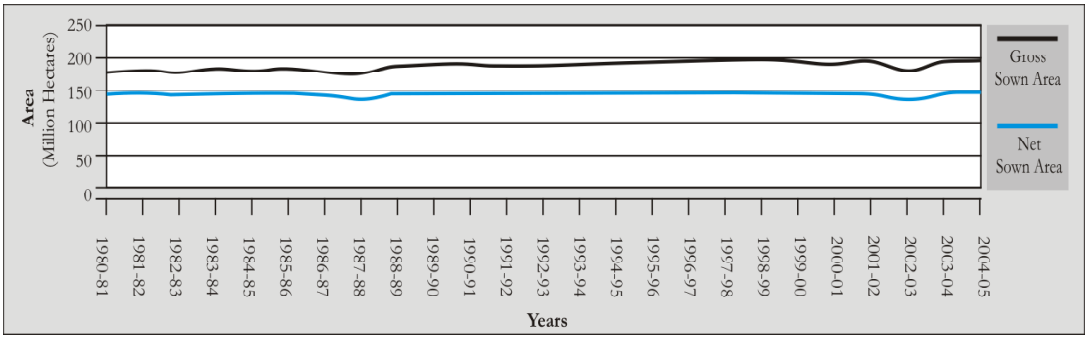
The share of agriculture in GDP was around 36.4 per cent in 1982-83, which declined to 18.5 per cent by 2006-'07. At the same time there was no drastic change in the number of households dependent solely or predominantly on agriculture. This essentially means that even if we assume that agriculture is a viable livelihood proposition, this segment of the population was not a part of the economic growth story.

In general the rate of growth of agriculture was higher than the rate of growth of population for a large part of post-Independence India, however this decelerated during the period 1990-2007. While the last year saw a record production of food grains, the deceleration asks us to do some serious soul searching.

*Any available land, at least at the margins, is under pressure of urbanisation, to contribute to the growing industrial, service and housing sectors.*

**Land Use:** Increase in the net area sown has flattened out, which essentially means that no additional land is available for cultivation. (See Fig 8.1). Therefore land as a basic resource has reached its peak and the only way we can deal with the issue of food security of the country has more to do with improving agricultural productivity. Any available land, at least at the margins, is under pressure of urbanisation, to contribute to the growing industrial, service and housing sectors.

Fig 8.1: Selected Categories of Land Use




*Source: Economic Survey 2007-08*

**Investments:** Looking at investments made in the agricultural sector, we clearly see that the pattern is skewed towards the other sectors. The gross capital formation in agriculture as a percentage of total gross capital formation declined from 8.6 per cent in 1999-2000 to 5.8 percent in 2006-07. It is particularly important to note that the pace of creation of additional irrigation potential has come down drastically. The irrigation potential created thus far is estimated to be around 73 per cent of the ultimate potential. Of this only about 85 per cent of the existing irrigation potential created, is actually utilised. Even in the schemes sanctioned, the implementation remains slow. The last Economic Survey indicates that under the accelerated irrigation benefit programme, 229 major/medium and 6,205 surface minor irrigation projects were sanctioned, of which only 91 and 4,605 respectively were actually completed.

*Looking at the data available for the years 1998 through 2001 it appears that have moved from public investments (canals) to private investments (wells/tube-wells) and the area under canals/tanks has shrunk, possibly indicating maintenance problems.*

If we look at the pattern of investments, the trend is getting skewed towards private investments in creating these additional resources rather than from public resources. This clearly puts pressure on agricultural households because any private investments would essentially mean locking up of capital, borrowing for the purpose of investments, and eventually servicing this borrowing. This obviously leads to enhanced levels of indebtedness.

Looking at the data available for the years 1998 through 2001, it appears that the area of land under irrigation has actually gone down. Investments have moved from public investments (canals) to private investments (wells/tube-wells) and the area under canals/tanks has shrunk, possibly indicating main-

tenance problems. This trend raises serious concerns. Considering the electoral and policy rhetoric in recent times, it seems that most of this is oriented not towards creation of new facilities such as minor and major irrigation projects or enhanced capital and public investments for creating and harnessing water bodies, but towards enhancing the utilisation and possibly the over-exploitation of the existing facilities. The provision of free/subsidised electricity for agriculture by the state governments is one clear instance. This obviously is a short-term view as against a longer term one of investments in public irrigation systems, major/minor irrigation systems, and rejuvenation and maintenance of tanks.

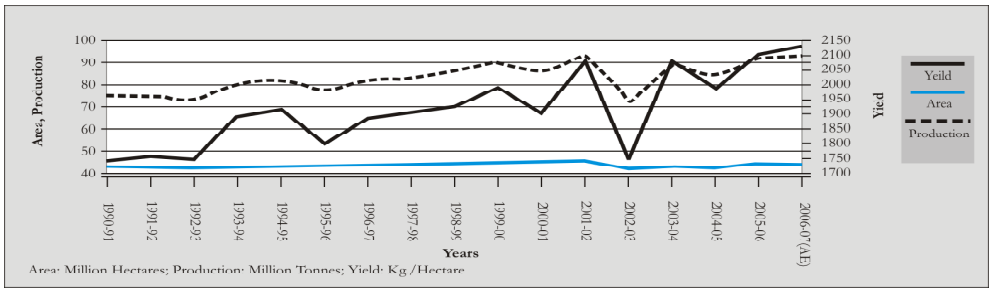
The reason to dwell on irrigation is obvious. Most of the variability in agricultural production is a function of availability of water. One may say that India as a whole has had good luck over the past few decades because on an average, we have had good monsoons. However regional variations in monsoons have made some sections of the farming households extremely vulnerable.

## 2. Distress is not as much a function of poverty as it is of predictability and variability

While it is true that most of the farmer suicides were reported in areas like Vidarbha, Maharashtra, which is marked by low availability of resources and backwardness, the same does not apply in similar scale to areas like Chattisgarh, Madhya Pradesh or even Rajasthan. Similarly we also find that regions like Punjab and Kerala have faced a spate of suicides, necessarily not related to agricultural performance but for other reasons. Hence there are two significant problems to address i.e. that of variability – to ensure that there is some level of assured band in which the households can engage in livelihood activity; and that of skewed growth where one smaller sector of the economy is growing much faster leaving a large segment of a deskilled farming community behind.

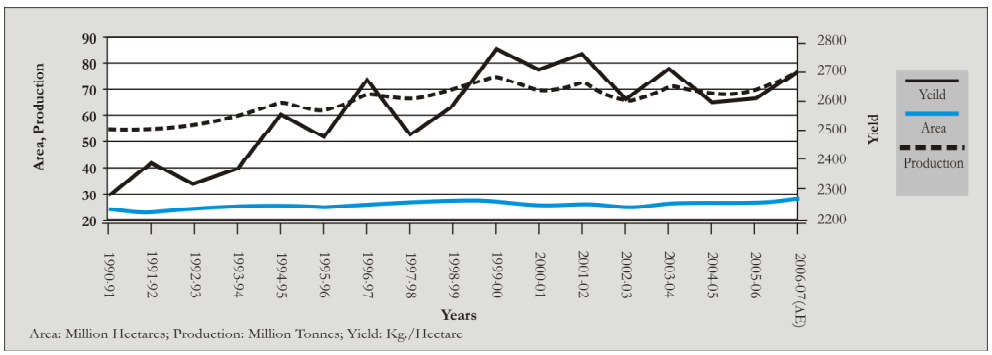
The three graphs presented here (Fig 8.2-8.4) show the variability of yield of the three main segments of agriculture i.e. rice, wheat and pulses. It is clearly evident that these crops show wide variations in yield, which needs to be addressed on an urgent basis.

Fig 8.2: All-India area, production and yield of rice



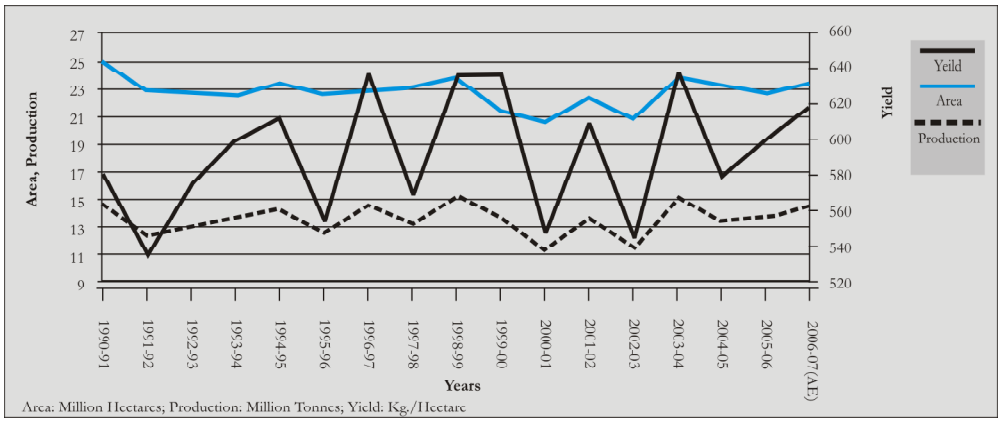
Area: Million Hectares; Production: Million Tonnes; Yield: Kg/Hectare

Fig 8.3: All-India area, production and yield of wheat



Area: Million Hectares; Production: Million Tonnes; Yield: Kg/Hectare

Fig 8.4: All-India area, production and yield of pulses




*Source: Economic Survey, 2007-'08*

*Looking at the NSSO statistics, it is apparent that the returns from agriculture for small and marginal farmers are not sufficient enough for them to earn an income that will take them above the poverty line, if agriculture is the only source of income.*

In addition to the aspect of yields, looking at how lucrative farming as an activity is, the figures available are revealing. In 2002-'03, the average return per hectare was Rs 6,756 in Kharif and Rs 9,290 in Rabi. Similarly, looking at the holding pattern, one finds that 86 per cent of the farming households cultivated an average land size of 1.2 hectare and 62 per cent cultivated an average land size of 0.9 hectare during Kharif and Rabi seasons, respectively. The paid-out expenses, as a percentage of value of output was 44 per cent in Kharif and 42 per cent in Rabi. This does not include the imputed cost of family labour or the output used for domestic consumption. This of course is the data for the nation as a whole and there are wide regional variations in the income that agricultural activity gives. For instance, a study in Dungarpur district of Rajasthan[3] indicated that agriculture is a net user of cash, because a large part of the production was kept back for household consumption. The arrivals in the market yard were estimated to not be more than 2 per cent of production. In such cases, the households have to diversify their livelihood sources to survive. It is not surprising then that areas where agriculture is a very basic subsistence activity are also areas where a fair amount of migration in search of alternative livelihoods is observed. Looking at the NSSO statistics, it is apparent that the returns from agriculture for small and marginal farmers are not sufficient enough for them to earn an income that will take them above the poverty line, if agriculture is the only source of income.

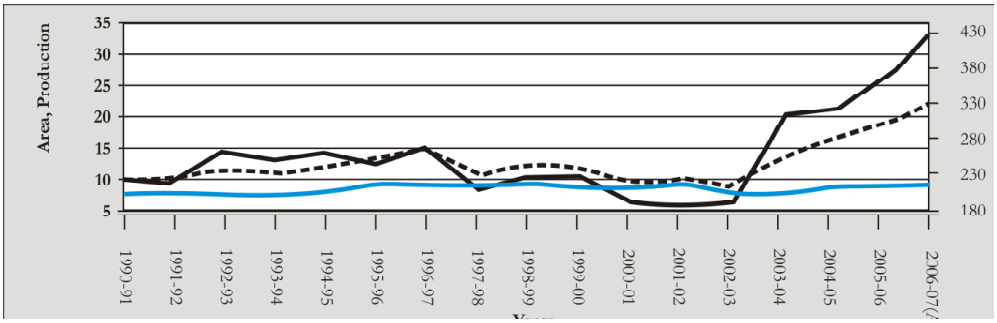
While there are several initiatives taken by the State as well as the markets to address the problem of variability in yield by not only offering insurance products including weather-based products, they do not address the fundamental issue. In an area that is low on resources and high risk, the insurance premiums are bound to be high. Therefore the endeavour has to be primarily towards addressing the factor that causes the risk and a compensation mechanism must kick in only later. However, it appears that in general the solutions are attempted at the compensation level rather than at the level of mitigating risk at source.

## 3. Cotton in Agriculture: Is there a story?

While in general one finds fluctuating and somewhat flat yields in agriculture, the graph provided in the Economic Survey with reference to cotton provides interesting indications. The yields in cotton seem to have increased dramatically while the area under cotton looks flat. See Fig 8.5 Cotton production in general has had an upward trend but for a slowdown during 2000-'01 and 2003-'04. This clearly indicates that with a significant technological input (in this case Bt) significant impact could be achieved in agricultural productivity.

[3]Sriram MS and Ghose Shaswati: Financial Flows of the Rural Poor: A Study in Dungarpur District. Ahmedabad: IIMA.

Fig 8.5: All-India area, production and yield of cotton




However, herein lies the tragedy in a story that the macro picture does not reveal. Most of the farmer suicides seem to be happening with farmer households involved in cotton cultivation. The question that arises is whether the risks associated with cotton cultivation have increased significantly. Studies (Davuluri, 1997) seem to indicate that it is indeed so. Farming households opt for crops like cotton because they are inherently very attractive in terms of yield. However, they are also very resource-intensive and require a fair amount of capital. The risk is particularly high in areas where cotton is grown as a rain-fed crop and a slight variation or failure of monsoons leads to disaster for individual farmers. However, the lure of a high yield is too hard to resist, because if the monsoon is good, the yield can be very high. From the perspective of both enhanced income levels and that of variability, cotton seems to make an interesting case for further examination. Statistics point out that in the years between 2002-'03 and 2005-'06 there was a dramatic increase in the yield of cotton while the area under cotton cultivation increased only marginally; and in fact the area under rain-fed cotton decreased during the period. Possibly the households involved in rain-fed cotton are now wary of the risk involved in engaging in this activity and are moving to safer crops.

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## 4. Indian agriculture has moved to a stage where almost all the inputs/ resources come from the markets

Considering the broad shifts in agriculture over the past few decades, there were significant and fundamental changes in the way agricultural practices emerged. The shifts in agricultural practices and the issues arising thereof are discussed in the following section. These fundamental changes are in some areas leading to agrarian distress and hence cannot be ignored.

**Technology Issues:** Indian agriculture has gone through a fundamental change since the Green Revolution. Farmers have shifted from their traditional crops to varieties that improve yields but are resource intensive. These varieties need high volume of water for irrigation though the availability of water has not kept commensurate pace. We have already discussed the investments in the irrigation sector in the recent past and the shift of investments from public sources to private capital formation as far as water is concerned. Indian agriculture has moved to a stage where almost all the inputs/resources come from the markets. This move is away from recycling of produce on which the farmer had control. The resource providers may have taken a short-term view of agriculture and agricultural markets.

The first fall-out of this inherent change in the agrarian scene is the de-skilling of the Indian farmer. With every new technology the farmer is forced to learn afresh and fast. Learning happens over time and at a much slower pace than that of de-skilling. This skill is not about the physical tasks involved in agriculture per se but largely in understanding the externalities involved. In the absence of such understanding, the farmer may resort to sowing the same crop over and over. With fragmentation of holdings and the land available per farmer getting smaller, the tendency is towards mono cropping. Thus diversity within the plot in a season and diversity of cropping on the same plot over a period of time takes a back seat.

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When commercial crops like cotton are grown on smallholdings, there is inadequate land available for subsistence food crops. Thus the food security net that was largely within the household moves to the markets. Obviously the farmer has to pay much more to buy out this food from outside due the multiple margins of the intermediaries in the value chain. This involves cash payout and the households get caught in debt if there is a mismatch between the timing of inflows from commercial crops and consumption necessities. Thus while on the one hand production needs credit due to external inputs, even consumption becomes dependent on credit. In case of subsistence agriculture, the production credit for agriculture is actually a consumption loan. Eventually both these aspects lead to higher levels of indebtedness.

## Issues with Inputs

**Seeds:** When farming households move from retained seeds to bought-out seeds, one element of control is lost. In moving away from traditional seeds to their hybrid varieties, the crop becomes resource intensive. Though the genetically modified seeds take technology to a higher platform, they require even greater skills. So the farmer loses both ways. If there is an early success, it gets repeated but may be followed by two or more negative fallouts. If the conditions are not as conducive as the first event, then the downside loss is greater than ex-ante. Meanwhile with the huge difference in prices between ordinary and research-intensive seeds, the risk of spurious seeds filling the middle price range increases. At the end of this cycle the farmer is unable to figure out why he lost. There are other issues concerning seeds such as:

- Are the prices of research-based seeds justified? Are the risks of germination and other aspects being adequately covered?
- Are the quality parameters clearly articulated?
- Does the State machinery have the wherewithal to deal with deviant behaviour on quality?
- Are the instructions on package of practices, including spacing recommended by the interested seed companies reasonable and fall within ethical parameters?
- How does the changed package of practices following new research get conveyed to the farmers?
- Is the produce grown as seed and rejected under quality parameters ejected out of the supply chain? Are there safeguards to ensure that they do not come back into the loop?
- Are their monopolistic tendencies in the market due to the Intellectual Properly Right regime that create opportunities for arbitrage and a market for spurious seeds?
- Is the role of seed certification agencies clearly defined and are they held accountable?

*With economic liberalisation, it seems that the extension machinery of the state has failed. The recruitment of agricultural officers in banks has fallen; the agricultural universities are strapped for research funds and the graduates of these universities are lapped up by private sector companies thus slowly transferring the intellectual capital from the public domain to the private space.*

**Extension Services:** Extension services have traditionally come from the State through agricultural extension officers. After nationalisation public sector banks hired agricultural officers and posted them in rural branches. Though they technically did not provide extension, they raised the right questions during the appraisals. The next big chunk of extension came from fertiliser companies. However, due to the quota regime on the sale of fertilisers, the companies promoted fertilisers generically rather than as a brand. The last bit of extension came from research driven by agricultural universities and institutions of excellence in agricultural sciences.

With economic liberalisation, it seems that the extension machinery of the state has failed. The recruitment of agricultural officers in banks has fallen; the farmers are now dependent on the input suppliers for technical advice, the agricultural universities are strapped for research funds and the graduates of these universities are lapped up by private sector companies thus slowly transferring the intellectual capital from the public domain to the private space.

The extension offered by self-interested parties raises certain problems and concerns. They are integrated in the financial markets driven by quarterly revenue considerations; and are generally myopic. There is a conflict of interest with brand-technology owners providing extension, with no alternatives provided from a public institution having no vested interests.

**Water:** Water is a concern expressed time and again. It is the result of the cropping pattern shifting to crops requiring intensive irrigation. Even under rain-fed conditions, farmers are betting on resource intensive high yielding crops. Water use is becoming inefficient because of the several factors.

In digging a bore-well, a private asset is created from something that is a public good. Agriculture is lucrative in areas where water is in plenty. People who have no access to water as a public good (canals, tanks) naturally look for private solutions. As the intensity of digging deeper (with falling water table) increases, there are negative ecological impacts. Coastal areas for instance can have problems of salinity ingress. The implications for the productivity of agriculture are:

- The need to dig deeper to get the same amount of water, therefore increased capital cost of sinking a bore-well, with an associated increase in the probability of failure. The other capital cost that goes up is associated with the increased cost of the motor and pipelines that have to be used to draw water from so much deeper.
- The recurring cost of drawing water from a deeper well is more due to increased use of diesel or electricity.

Farmers who shift to doing agriculture with assured water supply will not revert to rain-fed conditions. However, the returns fall as more people dig wells, and more water is drawn. This manifests in indebtedness leading to a debt trap. A study by Venkateshwarulu[4] indicated that most finance for private bore-wells had actually come from informal moneylenders thereby also increasing the costs of servicing the loan. Fragmentation of land holdings only accentuates the problem. Regulations pegging the sanction of a loan based on ecological considerations and minimum distance parameters between wells only push the farmers to informal sources as has happened in Warangal district in Andhra Pradesh.

There are no easy solutions to this. The general shift towards privatisation of public goods is a theme across all inputs.

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**Pesticides:** This issue is also related to agricultural technology and input-supplier driven extension services. In addition there are issues pertaining to spurious products operating in markets that are not mature, but are largely price sensitive. Going to the input supplier for a solution is like going to a doctor with an ailment. Once one is in the clutches, it is difficult to extricate oneself, as one is never sure of the downside of not listening to the advice. There is also a tendency to recommend preventive use of pesticides. The collateral effect of spraying on the health of the farmer is a related aspect that may act as an impediment. Society for Elimination of Rural Poverty (SERP) in Andhra Pradesh has put in practices of pesticides usage and claim that there is significant reduction in costs with no significant downside effects on yields. This involves very intensive extension efforts. Andhra Pradesh is leveraging on existing teams that are doing other work. The other states do not have this infrastructure and it calls for public investments in this area.

## 5. The biggest missing link in agriculture is the lack of risk mitigation products

Inherent risk mitigation practices do not work with externally managed input supply and extension services, and as a result affects the basic food security of families. Firstly, we need to address yield risks. While we have comprehensive crop insurance schemes, they do not address the problems of the individual farmer. The unit for loss assessment is too wide to compensate individual farmers. But the farmers have to pay the premium on an individual basis and there is a mismatch between the unit of payment and the

[4]Venkateshwarlu, Davuluri and K Srinivas (2000): Debt and Deep Well: Status of Small and Marginal Farmers in Warangal District. Hyderabad: CARE.

unit of risk settlement. The problem pertains to the costs involved in assessing the risks. The existing insurance products do not address the individual risks.

There are various elements that affect the yield starting with the quality of the seed used and the germination. The growth parameters can be hampered by temperature, rainfall, pest attack and the amount of fertilisers used. Except rainfall and pest attack all other parameters pertain to the individual enterprise of the farmer, while what is compensated is only the collective output. It is necessary to break up the risk elements into measurable and identifiable units. Even then, assessment at an individual farm level is difficult.

Temperature and rainfall risks were experimented with, but this requires investments in weather stations. In order to effectively cover the risk, given the nature of land holding and fragmentation, the solution lies in adopting a self-help group like approach to assess losses. However, this is very complex and hence difficult to implement. Nevertheless, assessing losses at least at the gram panchayat level might improve the confidence of the farmers.

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From the above discussion it is clear that the Indian farmer is at the receiving end. He is in an enterprise where the entrepreneur is not insulated from the enterprise. While in the formal industrial sector, due to the limited liability clause, the entrepreneur is generally insulated from failure, this is not so in agriculture. The inappropriate risk mitigation products also indicate that there are no effective external means of covering this element.

The other risk pertains to the price risk, which also hurts the farmer and makes him vulnerable. Price volatility could somewhat be addressed if commodity trading is opened up for small lots where the farmers could take cover. However, there is a need to build safety nets so that they do not end up using the commodity exchanges for speculative purposes.

Increased inputs do not necessarily translate into better prices. Even if the returns increase, they may not be in proportion to the increase in costs. While farmers do not get adequate price, the risks have gone beyond weather and natural calamities to input induced crop failure. In Indian agriculture the relationship between risk and return is stacked against the farmer. If the yield is good, there is no assurance that the price would be good. Therefore while there is a limit to the upside returns, the downside risks can be as high as 100 per cent of the investments, and thus cumulate in a misery as experienced by farmer households that have seen distress and suicide.

## 6. There is an overwhelming feeling in policy circles that agrarian distress can be addressed by unclogging the supply of formal credit

While agriculture is grappling with several complex issues, one area that is receiving due policy attention is agricultural credit. A study by the Planning Commission quoted in the Economic Survey (2007-'08) indicates that except for enhanced credit, other variables have not grown proportionately. There seems to be an overwhelming feeling in the policy circles that the fundamental issues in agriculture and problems that lead to distress could be addressed by unclogging the supply of formal credit. While this is indeed a welcome step, we have to realise that indebtedness is only a manifestation of other underlying problems. If we do not address the basic problem, we will continue to do work on the periphery and this will not make any significant impact on the livelihoods of the poor. Before discussing the details of agricultural credit, let's put the issues a bit more in perspective. It is clear that distress is a manifestation of multiple causes. In fact, studies indicate that distress is not necessarily related to extreme poverty (Gill and Singh 2006[5], Satish, 2006[6] ). Studies by Krishna (2003)[7] indicate that the reasons (such as crop failure, health,

litigation, etc.) for distress or for slipping back into poverty could be different from the reasons (such as livelihood diversification) for escaping poverty. Therefore the solutions to the problem cannot be focused only on the supply of credit.

It is difficult to establish a causal relationship to show that the increased supply and administered pricing of credit will help in increasing agricultural productivity and the well-being of farmer households. Why such a relationship is difficult to establish is detailed below:

*It is difficult to establish a causal relationship to show that the increased supply and administered pricing of credit will help in increasing agricultural productivity and the well-being of farmer households.*

1. Credit is a sub-component of the total investments made in agriculture. The investments come from a basket of sources ranging from non-monetised investments such as the farmer's labour, saved seeds, use of local resources for pest control and fertilisers; and monetised investments that include both the savings of the agriculturist and borrowings. Borrowings could in fact be from multiple sources in the formal and informal space. We shall consider only a part of this sub-component -- borrowing from formal sources, in order to establish the causality. With data available largely from the formal sources of credit and indications that formal credit as a proportion of total indebtedness is going down, it becomes that much more difficult to establish causality.
2. The diversity in cropping patterns, holding sizes, productivity, regional variations also make it difficult to establish such causality for agriculture or rural sector as a whole, even if the data was available.

While looking at the productivity of agricultural and rural credit, it might be pertinent to review three important papers that touch on this theme.

An important paper that examines the possible relationship is by Burgess and Pandey [2003].[8] The authors, using panel data on rural poverty and spread of bank branches, argue that increase in access to credit has helped reduce rural poverty. They conclude that the fact that banks open branches makes formal credit accessible and that in the long run has a positive impact on poverty. To illustrate their argument, they contrast the poverty rates with the pre- and post-liberalisation periods (when the condition to open more branches in unbanked areas was dispensed with). While establishing their argument they also cite others [Eastwood and Kohli, 1999] who argue that the expansion of branches actually enhanced the lending to the rural small-scale sector where the growth was faster. Thus it is possible to take these independent conclusions together to indicate that the positive impact on poverty might have come from the non-farm sector. In fact the authors argue that market forces possibly may not take care of the poor and backward areas by providing a counter example from microfinance, which has grown largely without large geographic target setting from the State. They cite evidence that microfinance is not successful in reaching backward areas. So the thrust of Burgess and Pandey is that in order to address poverty, it is necessary to have formal banking outlets. However the impacts on poverty seem to come from non-primary sectors like enterprise and the resultant wage employment that these enterprises generate. They also argue that since banks provide a complete suite of financial products, including savings, they are more effective than pure credit institutions. However the paper does not provide evidence of a link between credit and agriculture.

Vaidyanathan (2006)[9] examines both capital formation in agriculture and also the type of investments currently being made in agriculture in the context of farmer suicides. His paper also does not indicate any direct relationship between investments and productivity. In fact he argues that some of the recent trends in investment in agriculture are ill conceived and thus may lead to a negative spiral. He cites the case of increased indebtedness of farmers towards both formal and informal sources in cash crops

[5]Gill, Anita and Singh, Lakhwinder (2006): Farmers' Suicides and Response of Public Policy: Evidence, Diagnosis and Alternatives from Punjab. Economic and Political Weekly, June 30, 2006.
[6]Satish P (2006): Institutional Credit, Indebtedness and Suicides in Punjab. Economic and Political Weekly. June 30, 2006.
[7]Krishna, A. (2003): Falling into Poverty: Other Side of Poverty Reduction. Economic and Political Weekly, Vol. 6, pp. 533-542.
[8]Burgess, Robin and Rohini Pandey [2003]: Do Banks Matter: Evidence from Indian Social Banking Experiment. BREAD Working Paper.No37.
[9]Vaidyanathan A (2006): Farmer Suicides and Agrarian Crisis Economic and Political Weekly. Vol 41 No.38, September 23rd. pp.4009-4013

*Public capital formation that addresses maintenance of larger irrigation structures, that has a long-term vision of management of resources like water is important for addressing productivity.*

like cotton, not necessarily resulting in increased productivity and in many cases leading to failure. He argues that even private capital formation in agriculture may not be yielding better productivity because farmers are digging deeper to tap groundwater, thereby incurring more costs to maintain the same levels of productivity and in cases where the wells fail, getting into serious indebtedness. Both these observations indicate that while it is important to have increasing investments in agriculture, and much of these private investments should desirably be funded through formal sources of credit, no causality can be established between investments and productivity, unless they are directed in a well thought out manner. Thus mere increase in supply of credit is not going to address the problem of productivity, unless it is accompanied by investments in other support services. Therefore public capital formation that address maintenance of larger irrigation structures, that has a long-term vision of management of resources like water is important for addressing productivity.

Rakesh Mohan[10] looked at the overall growth of agriculture and the role of credit. Agreeing that the overall supply of credit to agriculture as a percentage of the total credit disbursed is going down, he argues that this should not be a cause for worry as the share of formal credit as a part of the agricultural GDP is growing. However, even here one is unable to establish the relationship between increased supply of credit and productivity.

One finds that the relationship between the value of input and the value of agricultural output over the last decade has remained in the same band, with the output hovering around five times the value of input (See annex). The figures are stated at current prices, and adjusting for inflation, one finds that there was no dramatic increase in the value of output over the past decade. This loosely establishes that while credit is increasing, it has not really made an impact on value of output figures. This is not a robust way of establishing causality, but points out the limitations of credit. It is important to see that even at the highest level of production, credit forms around 5 per cent of the total output value. Thus expecting something that has so little a share in the output value to have significant impact on the output/productivity values may not be in order.

*Data indicates that agriculture in itself is not very profitable and varies widely across states and regions. Interestingly in some states like Jharkhand, Kerala, Rajasthan, Tamil Nadu and West Bengal, the earnings from wage labour is higher than the earnings from cultivation.*

Further the data indicates that agriculture in itself is not very profitable and varies widely across states and regions. For instance the data from the 59th round of NSS, 2003 indicates that in 2002-'03, the net receipt from cultivation for each household across the country was around Rs 969 per month. This figure varies widely and forms less than 50 per cent of the overall pie of the income sources of the households. Interestingly in some states like Jharkhand, Kerala, Rajasthan, Tamil Nadu and West Bengal, the earnings from wage labour is higher than the earnings from cultivation. Looking at the overall cost of cultivation one finds that interest expense on loans for cultivation averages around 1 per cent of the total cost of cultivation, never exceeding 3 per cent of the cost of cultivation. The most significant costs of cultivation are labour and fertiliser (Statement 8, Page 19).

Significant inputs in percentage terms are labour (22 per cent), lease rental (5 per cent) and other expenses (15 per cent), and a greater investment in these inputs would not increase the inherent productivity of the land. The inputs that establish causality are seeds (16 per cent of input costs), irrigation (12 per cent) and fertilisers (23 per cent). Thus to ascribe causality to credit, one has to look at the incremental outputs due to investments in these inputs which account for about 50 per cent of the costs and see if externally spurred investments would make a difference.

The NSSO data does not show the significance of credit in the overall productivity of agriculture. It also highlights the fact that rural incomes are becoming increasingly dependent on alternative and diverse sources.

[10]Mohan, Rakesh (2006): Agricultural Credit in India – Status, Issues and Future Agenda, Economic and Political Weekly Vol.41. No 12 pp. 1013-1021.

With these inputs, one can examine if there is headroom for formal sources of credit to replace the current financing patterns. The growth in agricultural finance may be partially filling this headroom. Even if this headroom is filled up, it would only reduce the borrowing costs of the farmer to a limited extent without having a significant impact on productivity. Credit linked productivity enhancement may come through technological innovations that make agriculture more capital intensive with a dramatic incremental input-output multiplier.

Apart from the above very small evidence, one is unable to establish causality between increased availability of credit and agricultural productivity. One may be able to examine this in some detail if the data pertaining to input costs, credit component (both formal and informal), crop production and yield data is available at the district level over a period of time. This comprehensive data is however extremely difficult to obtain.

Hence while credit is important, the excessive focus laid on credit, as a solution to agrarian distress may be ill conceived. Before concluding, let's look at the politics of loan waivers in the next section.

## 7. A predominant myth is that policies for rural areas should be fully embedded in agriculture

While formulating policies, we succumb to certain myths. As per the 2001 census 40 per cent of the rural population was engaged in agriculture as cultivators. Around 33 per cent of the rural population were agri-wage labourers. Hence while talking about programmes rooted in agriculture, we are talking about the direct benefit to only 40 per cent of the rural population. Similarly when talking about poverty, we again seem to equate it with rural areas. Thus several policies get formulated on a simple formula of "poverty equals rural areas equals agriculture". Examining the policies formulated by different governments in the past decades, one finds how myopic they were.

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The first big event that started the tragedy of rural finance can possibly be traced to 1989. However, different governments had given ominous signs that such a tragedy would occur. But the policies between the decades of the Fifties through the Seventies were more forward looking. The All India Rural Credit Survey (Gorwala Committee) and the decennial All India Debt and Investment Surveys had indicated that a significant share of the credit in the rural areas was being met by the informal sources, particularly the moneylenders. The share of institutional credit was small in the overall pie of rural indebtedness. It was in that context that the Gorwala Committee had recommended State partnership in the field of rural cooperatives. A significant part of the rural credit policy was rooted in the recommendations of the Gorwala Committee in the Fifties and the Sixties.

In the decade of the Seventies we saw the increase in institutional credit in the rural financial sector. This started with the nationalisation of commercial banks. There were two elements that were going hand-in-hand with the policy of the State:

1. For every licence to open a branch in an urban location, the banks had to open four branches in unbanked locations.
2. Not less than 18 per cent of the net bank credit had to be compulsorily given to the agricultural sector, and 13.5 per cent of it had to go to agriculture "direct".

While point 1 above was given up in the early Nineties (as part of the overall economic liberalisation drive), the second policy intervention continues even now. The current branch-licensing requirement has reintroduced such a conditional branch expansion policy, though with a much liberal ratio. This policy is good but from a position of the policy that there should be enough physical outlets and adequate financial resources allocated to agriculture and rural areas. Then when the policy goes ahead to dictate how this would be achieved, our problem starts. That is where the decline of the lofty intent of the State starts becoming evident. The significant milestones of the policy decline are:

8. Integrated Rural Development Project (IRDP) loans that were designed centrally (and were not relevant in many areas where they were disbursed) and thrust down the throats of the banks and cooperative societies.
9. Loan Mela programmes organised by ministers in several places.

A fall-out of the above trend was that cooperatives no longer remained cooperatives, but became arms of the State. Banks distributed money to the pressures of loan melas. There was a mountain of potential bad debt sitting pretty on the Indian economic system. In 1989, the first large-scale loan waiver was announced.

In the decade of the Fifties the share of institutional credit in the overall indebtedness was only 7.3 per cent. It was at this juncture that the Gorwala Committee had suggested the State's partnership with cooperatives. By the decade of the Sixties, the institutional share had increased to 18.7 per cent. By 1971 it had increased to 32 per cent. With the nationalisation of some commercial banks and setting up of regional rural banks (RRBs), the fastest growth came in the decade of Seventies. By 1981 the share of institutional credit had almost doubled to 63 per cent. This continued on a growth path till about 1991, when the share had grown to 66 per cent of the total indebtedness. However, after the 1989 waiver, the share of institutional credit fell to 61 per cent by the 2002 figures. Interestingly the share of cooperatives started showing a decline in the early Eighties.

Ominous signs of the current loan waiver were there for all of us to see in the policies of the State over the past few years. Firstly the state seemed to have sought refuge in pumping credit, whenever there was a crisis in agriculture. Doubling of agricultural credit in three years made an interesting catch line. It was measurable and the State could pat its own back when the numbers came in. It is possible to arm-twist the banks to produce the numbers.

*Clearly output does not seem to just increase by opening the credit tap. Without taking these four pillars of agriculture, there would be little purpose in propping up the scaffolding of credit as the single answer to all agricultural woes.*

If the bottleneck in agriculture was credit, then with the doubling of agricultural credit and with subvention provided for agricultural loans, there should have been some significant effect on the agricultural output. However, the overall output seems to have stagnated over the past few years, except the current year. (See annex) Clearly output does not seem to just increase by opening the credit tap. As discussed earlier this would need better seed, fertiliser, water and markets. Without taking these four pillars of agriculture, there would be little purpose in propping up the scaffolding of credit as the single answer to all agricultural woes. From the statistics, it is evident that while agricultural loans have doubled, the actual number of borrowing cultivators has gone down, thereby increasing the average amounts lent per account. In a situation where the average holding size is going down across the country, we would not need any sophisticated statistical exercise to declare that these loans are moving towards larger farmers. If the average loan size goes up, without concurrent increase in the output we can at best draw one of two conclusions: The repayment capacity of the borrower must have significantly gone down, or the loans were diverted for some other purpose. Either way, it was very evident that there was a time bomb ticking in the doubled agricultural credit.

The country had to pay a price in the decade of Nineties for the policies followed in the decade of the Seventies. It started with the restructuring of commercial banks by recapitalising them. The banks were then able to stand on their own feet and fulfil their responsibilities. So after 1991, the banks largely assumed responsibility for their performance, talked about their profitability and were actively watched in the stock market. Commercial entities are expected to behave in this manner and be active participants in the commercial world. After the commercial banks, it was the turn of the RRBs to get an overhaul. Once the State started implementing the recapitalisation package, the widespread expectation was that it would no longer interfere in the day-to-day functioning of the commercial entities.

Therefore when in 2002-'03 the Vaidyanathan Committee was appointed to look at the cooperative sector, one was expecting that the State would also do its bit to repair the damage for this sector as well, before

withdrawing. In fact, one of the justifications given by the Vaidyanathan Committee was that since the State was responsible through its interference in the cooperative sector to correct the situation through an investment of nearly Rs 15,000 crore, this was seen as a one-time investment. The precondition for this package was autonomy for the cooperative sector. In fact the Committee had specifically made mention of loan waivers and its devastating impact on the financial systems. The State however never takes the reports of such committees in their entirety for implementation.

Given this background it is indeed intriguing that the State conceives such schemes that tend to destroy the monuments it has built and maintained over the years. The promise of reduction in interest rates is one more of the measures that the State very often resorts to. The problem that agriculture faces is more in the area of yields and prices, but it is difficult for the State to intervene and control this aspect. Perhaps the State needs to seriously introspect as to how it could put a finger on the basic problems leading to agrarian distress rather than get the solutions in place through supply-side directives and look for problems that require a quick solution.

## 8. Agrarian distress is not divorced from the general distress at the household level

As we have argued earlier, "agrarian distress is only a part of the problem. Pressures that push the people towards poverty are health and social expenses, apart from the failure of investments in business (including farming). The initiatives that need to be rolled out should take a medium- to long-term perspective, while simultaneously dealing with the short-term fire fighting that the State would have to do. The Expert Panel on Agrarian Distress[11] articulated the initiatives as follows:

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Medium term initiatives that need to be rolled out on a national scale include

1. Mechanisms to strengthen food security at the household level;
2. Regulatory mechanisms for inputs like seeds;
3. Risk mitigation at both the personal as well as the professional level;
4. Relief for failure of investments like failed wells;
5. Reducing vulnerability on account of ill health.

Basically agrarian distress is not divorced from the general distress in the family. There are pressure points not only on the professional space (in this case agriculture) but also on the personal space. One of the problems with agriculture is the concentration of risks that the households have on an activity such as agriculture. Indeed, backward regions like Dungarpur district in Rajasthan where agriculture is practiced on a subsistence level seems to be better off as far as absorbing any agrarian shocks such as drought, because over the years they have put in place coping mechanisms that include migration in search of non-farm employment.

While as far as agriculture is concerned it is essential to have public investments in agricultural research, counselling services, training and infrastructure. In addition subsidies, which address the pressure points of agrarian distress through safety nets and support systems, could be more encouraging and less costly than direct doles and write-offs. More importantly an important step is to go beyond agriculture to expand livelihood opportunities. Non-farm employment also reduces agrarian distress and slows down rural-urban migration.

An expert panel had looked into the aspects that could address agrarian distress and recommended solutions in both the short-term and medium-term under the following classifications. These recom-

[11]Nabard 2007: Expert Panel on Agrarian Distress. Mumbai:NABARD

*An expert panel 's recommendations provided a framework on which the issue of distress and livelihood security for agricultural households can be addressed. The four themes were:*
*• Finance management, indebtedness, and terms of credit*
*• Risk and risk mitigation*
*• Support systems and social networks*
*• Farm practices that lead to distress, and changes to these practices.*

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- Farm practices that lead to distress, and changes to these practices.

In addition to the issue of agriculture, it is important to look at the other sectors. The rural economy is not homogeneous to be amenable to schematic lending. Indeed data from three states indicates that it might be appropriate to look at credit as a part of a basket of financial services. However, across regions the following characterises rural transactions:

- The exchanges have a large non-monetised element. While exchanges are on the basis of rupee value, transactions do not get settled frequently. For instance one might agree on a daily wage rate, but ultimate settlement takes place through a few cash exchanges in a season, beyond a minimum daily subsistence that might be settled in kind. The cash exchanges are less. We find this practice prevalent with migrant workers and their Mukaddams.
- The sources of cash flows in the local economy are not diversified. In agrarian economies we have heightened economic activities around harvest time. Thus one finds even the other services getting settled around that time. For instance in Khammam district a local cable television operator had his monthly subscriptions paid up regularly and his income from new subscriptions would spurt during the harvest time. Traditionally we know that even service providers like the dhobi, and barber were paid in kind around harvest time, in addition to the minimal payments they received through the year.
- The income diversification of individual households is limited, with most households depending on one or two significant streams of income.
- The exposure to risk is higher. We find rural activities are outside the organised "formal" entities. Thus they cannot cover the downside risk. The entrepreneur and the enterprise are seamless, unlike in the urban settings, and any business failure (including that in agriculture) affects personal finances. The formal business on the other hand is insulated through the limited liability clause. The general usage of cash is on an inflow-outflow basis rather than an income-expense basis. Thus any formal insurance is seen as a continuous outflow with no perceivable inflows. In some of the rare cases where they see the merit of the risk cover, the claim settlement process does not give them confidence to continue an ongoing relationship.
- Because of the above, the rural households are vulnerable. If we were able to formulate policies that prevent people from slipping back into poverty, the net poverty reduction figures could show a remarkable progress.

*Most of the schemes like IRDP, SGSY and other schematic lending programmes have looked at lending to the poor for self-employment purposes. There is an inherent flaw in this design because it assumes all people not involved in cultivation want to be self-employed.*

Therefore, when looking at the rural markets from the demand side, it is possible to offer an array of need-based interventions that would make an impact on the cash flows, increase monetisation and the participation in the formal sector, thus making exchanges discover market mechanisms.

Even in the non-farm sector, major interventions were supply induced. Most of the schemes like IRDP, SGSY and other schematic lending programmes have looked at lending to the poor for self-employment purposes. There is an inherent flaw in this design because it assumes all people not involved in cultivation want to be self-employed. Looking at the pattern of engagement of the rural people for earning incomes, it is evident that a significant proportion of the rural population is wage-employed as evidenced in 'Distribution by Workers Category' Table (annex).

From the data one discovers that only a third of the population works as agriculture labour while a significant number work outside of agriculture. While it is sharper in the national statistics, even the number of people outside of cultivation is significant. Even people involved in agriculture seem to be employed part time on somebody else's plot as wage earners.

However, it would not be appropriate to say that all supply-induced programmes have not worked. Even microfinance programmes, by and large, are supply side offerings. Microfinance places several constraints on the borrower by its design. While there may not be a project-to-project evaluation, it directs investments in certain types of activities because of the design constraint. All microfinance programmes have non-negotiable clauses. These pertain to the discipline. The design of microfinance programmes expects a regular contact with the members and all loans are to be repaid with a certain frequency. This is a supply (design) induced constraint and forces the borrowers to either set up enterprises that provide such a frequent cash flow or service the new loan from an extant cash flow. For an economy that is largely constrained by seasonal income, the requirement of generating cash flows to service the loan and also to save significantly changes the rules of the game. This change is bigger in Grameen groups, because the frequency of contact is weekly with no scope for default. Thus people in these programmes are forced to look at activities that yield frequent cash flows.

This strategy may induce livelihood diversification, without actually stating so. In our primary data collected in Dharmapuri district in Tamil Nadu as against other areas we found that a large percentage of people were involved in enterprise possibly due to microfinance programmes that were operating for more than two decades. Myrada, the organisation that pioneered the SHG movement did its early work in Dharmapuri district. Not only are the figures of self-employment distinct in Dharmapuri district, we found that the groups financed wide-ranging activities in the district. In a study we found that SHGs in Dharmapuri had a significant role in meeting the financial needs (savings as well as loans) of the respondents. The supply-side constraints of microfinance initiatives pertain to design of the programme and not to the design and delivery of financial products.

Looking at the need for rural credit beyond agriculture, the demand side indicates some market opportunities. The needs of the rural households are no different from their urban counterparts. However, the products offered need to be structured properly in order to make them meaningful for the rural areas. One compelling need is that of smoothening the seasonality of cash flows. The formal institutions do not really operate in this space. The SHGs do not seem to see consumption loans as a taboo. The rice credit line experiment in Andhra Pradesh demonstrates how food security can intervene in reducing vulnerability. The scheme had the dual purpose of cost savings (as rice is purchased in bulk for the collective) and providing food security for the households. It is argued that food stocks helped the poor to bargain for better wages, as they did not have an immediate need to work out of desperation.[12] If this is indeed the case, it increases the financial yield for the wage earners and demonstrates that credit has made a difference. The experiment recognises that there are large numbers of wage earners and the human body is the most productive asset owned by them. This scheme, operated through SHGs, can easily be linked with the formal institutions.

*Looking at the need for rural credit beyond agriculture, the demand side indicates some market opportunities. One compelling need is that of smoothening the seasonality of cash flows.*

The other demand induced needs can follow the employment pattern in the rural areas. Microfinance deals with income diversification in a limited way, but does not address livelihood issues contributing to diversification of income streams. Seasonal migration is a case in point. Seasonal migrants work through a set of contractors called Mukaddams. A study in Ahmedabad and Hyderabad cities focussing on seasonal migrants in the construction sector indicates intricate relationships between the Mukaddams and the workers similar to the relation the farmers have with their input suppliers – a web of interlinked transactions, where the workers are given advances, taken for work, supported for bare subsistence and later given a lump sum wage. It is however not clear how vulnerable the migrants are. (See Chapter 2)

[12]Vijayakumar T (2006): Personal communication. Vijayakumar is the CEO of Society for Elimination of Rural Poverty that implements the Velugu Programme.

However as final wage settlements happen at the end of the season, it is likely that they are dependent on the Mukaddam to realise the current income, and to seek future employment opportunities. There are opportunities for providing an initial loan to reduce the financial dependence on the Mukaddam, and scope of providing for cash conservation at the destination and remittance-related services. This is complex as the economic activities are happening at two stations – the base of the household and the changing destinations where they are working.

The other demand-induced loan that is widely documented is for emergency purposes, for which the dependence on informal systems is imperative. While some microfinance initiatives address this by retaining a cash balance, or refinance a bridge loan from the informal sources, it is not widely prevalent. Structuring this from a formal source is a challenge.

The current needs of the households come from a complex web of relationships. It may not be possible to address every need from the formal sources. This requires re-engineering of the current products to address the spectrum of needs. Formal sources may not want to address all the needs. From the view of productivity, we have illustrated how consumption loans on the lines of rice credit line actually may add to productivity, while the other loans are more in the nature of vulnerability reduction. Maheshwari (2004)[13] indicates that reducing vulnerability in itself can be a laudable goal. She compares the pattern of borrowings of members of two-year-old SHGs as against members of eight-year-old SHGs and concludes that there is no difference in the cost of borrowing between the two groups. At the initial stages, while the SHG members are heavily dependent on the moneylender, they also manage their finances by borrowing informally from their friends and relatives who lend at near-zero costs. As the SHG grows, their dependence on the moneylender gradually reduces, and concurrently the access to informal finance from networked relationships also reduces. This does not affect the cost of borrowing significantly, but makes the households less dependent on the moneylender. The argument is similar to the vulnerability argument extended in the rice credit line scheme.

In addition there are needs pertaining to asset creation. Some assets lead to augmentation of income sources and others lead to better quality of life. However, we cannot ignore the economic activities that relate to asset creation. Our data from the three districts show the absence of formal sources even in planned events like housing because the design of products is contextually inappropriate. Addressing these needs will reduce the dependence on one source and thus make the households less vulnerable. This in itself can have positive multiplier effects on income yields and productivity.

*. Instead of controlling at the supply level, it may be a better idea to make rural lending attractive, by removing formal and informal interest rate ceilings. The microfinance market has flourished because the commercial decisions such as interest rates were left to the local conditions.*

## 11. Our policy interventions look for 'quickfix' solutions and the interventions are finance-led

We have to start recognising that there are no easy or short-term solutions. We need to understand the changing face of Indian agriculture. The provision of financial services is one small part of the issue. The policy has to recognise the fact that rural lending is inherently risky because of the volatility of the underlying economy and there is far less potential for institutions to cover costs. The institutions have to maintain a balance between defaults and administrative/collection costs. Banks do not seem to have a clear idea on what it costs to lend in the rural areas, therefore it may be desirable to institute segmented costing systems where product-wise profitability could be arrived at. If the State still has to intervene, it can target interest subsidies, if they are absolutely necessary.

Our argument is against any interventions in the interest rate space. Instead of controlling at the supply level, it may be a better idea to make rural lending attractive, by removing formal and informal interest rate ceilings. The microfinance market has flourished because the commercial decisions such as interest rates were left to the local conditions. We also see diversity in interest rates applied in the microfinance

[13]Maheshwari, Neelam (2004): Access to Credit: Determinants for an SHG Member. New Delhi: PRADAN (mimeo).

sphere depending on the situation, but that it is making access friendlier and has had an impact is beyond doubt. Banking needs to be unshackled at this stage.

We have to recognise that any intervention in rural areas has to have a large non-agricultural element to it. This is the only way we can recognise the seasonality of agriculture. It is absolutely essential to ensure that there are diversified livelihood opportunities across the country. This could happen through dovetailing the livelihood opportunities with other schemes of the government like the rural employment guarantee scheme. (See chapter 3) It may be also useful to look at migration in a constructive sense and possibly facilitate benign migration in seasons from areas that are poorly endowed with natural resources. Unless the economy is lubricated with constant flow of cash from diverse activities, the vulnerability is only going to increase. In addition there are the usual sore points that are discussed in literature ad-nauseum like recognition of tenancy rights; bringing the land records up to date; providing forward/backward linkages; setting up of warehouses and cold chains and clearing the infrastructure bottlenecks.

*Agrarian distress in India is the manifestation of a complex interplay of changes in technology, fundamental changes in the way resources are used and the inadequate policy response that has focused largely on de-clogging credit supply.*

Agrarian distress in India is the manifestation of a complex interplay of changes in technology, fundamental changes in the way resources are used and the inadequate policy response that has focused largely on de-clogging credit supply. Agricultural livelihoods cannot be divorced from the larger issue of rural livelihoods and one of the most significant ways in which we could positively affect households involved in agriculture is to look at opportunities of livelihood diversification and opening up ample opportunities in the non-farm sector.