

**Emerging Patterns in Share of Small Farms in Production and Credit:
Implications for Policy Formulation
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Abstract

Indian agriculture is structurally small farm and small holder based. The share of small farms in total farm output has increased over time. Paradoxically, their share in total credit has steadily declined. This paper examines these counter intuitive patterns in the context of small and marginal farmers in the post liberalization phase. The paper also focuses on regional inequalities in agriculture credit flow, regional growth patterns and implications of the changing share of various agencies (RRBs, Cooperatives and Commercial Banks) in agriculture credit. The need for institutional innovations in the agriculture credit delivery mechanism is also discussed.

Keywords: Agriculture credit; Farm Size

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Introduction

An appropriate well developed rural financial architecture in tune with the ground level realities is a *sine qua non* for effective agriculture credit delivery. The ushering in of the New Economic Policies lead to a paradigm shift in the economic policy environment an important dimension being the opening up of the financial sector and introduction of the Basle norms for the banking sector. Studies have indicated that the implementation of various accounting and statutory norms without taking into account the ground level realities led creation of irreparable damage to the rural financial architecture in the post liberalization era (Satish, 2007). An important fallout is that banks viewed agricultural finance as a risky proposition. This has led to a piquant situation where the share of small and marginal farmers in total credit flow has declined. This is surprising since the share of small and marginal farmers in the operational holdings and operated area has increased in the last decade and a half. Despite the fact that small farms increased their contribution in agricultural production (both foodgrain and non-foodgrain) thereby contributing immensely to food security and attaining food self sufficiency, their share in total credit declined. This paper looks at these two phenomenons: increased share of small farms in total agricultural production and their declining share in total credit.

This paper is structured as follows. Section I traces the changes in the operational land holding structure and correlates it with the contribution of the small holders to agricultural production and their share in agriculture credit. Section II highlights and analyses the broad trends in institutional agriculture credit flow in the post liberalization phase with focus on the 'Doubling of Agriculture Credit Programme'. The regional inequalities in agriculture credit flow, regional growth patterns and implications of the changing share of various agencies on small farms form part of this section. Section III attempts to analyse the changing pattern in the crop and term loan component of agriculture credit flow and link it to capital formation in Indian Agriculture. Section IV concludes the paper.

Section I

Operational Land Holding Structure in India

Indian agriculture is structurally small farm and small farmer based. The number of operational holdings doubled from 51 million to 101 million between 1961-62 and 2003 and the area operated reduced from 133 million hectares in 1960-61 to 107 million hectares (2003). The overall average size of operational holding in India declined from 2.63 hectares in 1960-61 to 1.33 hectares in 2002-03. Interestingly, in the marginal category there has been hardly any change in the average size of land holdings between the period 1981-82 to 2002-03. Similarly, average area operated per holding declined from 2.63 hectares in 1960-61 to 1.34 hectares in 1991-92 and further declined to 1.06 hectares in 2003 reflecting the pressure of the rising population on the limited land base (NSSO, 2006). The operational holding pattern in India has become skewed over the years. The share of marginal holdings in total operational holdings increased. The proportion of small holdings has declined in terms of operational holdings but their share in operated area has increased. The share of medium and large farmers has declined both in terms of operational holdings and area operated over the last three decades. However, the semi-medium category has increased their share in the operational holdings though their share in the operated area has remained constant over three decades (Table 1 & 2).

Table 1: Trends in the average size of operational holding- All India (hectares)

Category	60-61	71-72	81-82	91-92	2002-03
Marginal	0.46	0.44	0.34	0.33	0.34
Small	1.43	1.46	1.44	1.41	1.36
Semi-medium	2.75	2.81	2.77	2.69	2.63
Medium	5.86	6.06	5.84	5.79	5.52
Large	16.98	16.33	15.98	15.72	15.68
Overall	2.63	2.20	1.67	1.34	1.06

Marginal = < 1 hectare (ha). Small = 1-2 ha. Semi medium = 2-4 ha. Medium = 4-10 ha. Large = Above 10 ha

Source: NSSO. *Some Aspects of Operational Land Holdings in India, 2002-03*, Report No 492, Government of India, (2006)

Category	Percentage of Operational Holdings			Percentage of Operated Area		
	1970-71	1991-92	2003	1970-71	1991-92	2003
Marginal	45.8	62.8	71	9.2	15.6	22.6
Small	22.4	17.8	16.6	14.8	18.7	20.9
Semi-Medium	17.7	12	9.2	22.6	24.1	22.5
Medium	11.1	6.1	4.3	30.5	26.4	22.2
Large	3.1	1.3	0.8	23	15.2	11.8
All Sizes	100	100	100	100	100	100

Marginal = < 1 hectare (ha). Small = 1-2 ha. Semi medium = 2-4 ha. Medium = 4-10 ha. Large = Above 10 ha
Source: Same as cited in Table 1.

Contribution of Small Holders to Agricultural Production

Crop	Farm Size	1981	1991	2001
Rice	Marginal	22	26	32
	Small	21	23	20
	Sub-total < 2ha	43	49	52
	Medium	25	25	24
	Large	32	26	25
Wheat	Marginal	16	20	24
	Small	15	19	19
	Sub-total < 2ha	31	39	43
	Medium	23	23	23
	Large	46	38	34
Pulses	Marginal	11	13	14
	Small	13	16	20
	Sub-total < 2ha	24	29	34
	Medium	20	23	25
	Large	56	49	41
Sugarcane	Marginal	16	23	23
	Small	19	23	26
	Sub-total < 2ha	35	46	49
	Medium	27	26	27
	Large	38	28	25
Oilseeds	Marginal	10	11	13
	Small	13	16	20
	Sub-total < 2ha	23	27	33
	Medium	22	24	26
	Large	55	49	41

Note: Figures for 1991 & 2001 computed from data in Agricultural Census & Agricultural Statistics at a Glance. Figures for 1981 from Small Holder in India: Food Security and Agricultural Policy, 2002, FAO Publication. Figures are comparable
Marginal = < 1 hectare (ha). Small = 1-2 ha. Medium = 2-4 ha. Large = >4 ha

The small holders have over the decades increased their share in the production of various crops. In 2001, more than 50% of the rice production in the country came from farm size of less than 2 ha. Small holders contribute almost 43% of the wheat production of the nation. In the case of pulses still the dominant share (66% in 2001) is of medium and large farms however the small holders have increased their share in the total production of pulses by almost 10% during the period 1981 – 2001. From the angle food security its needs to be acknowledged the crucial contribution that small holders are making in the production of foodgrains. Even in the production of non-foodgrain crops viz. Sugarcane and Oilseeds the small holders have consistently increased their share in the production of these crops over the two decades. (Table 3).

Studies have attributed the increases in proportionate and absolute contribution from the small holders to the adoption of new technologies and intensive use of modern inputs in their farms. While working out the contribution of various farm sizes in Table it was assumed, lacking other evidence, that yields were equal among all farm size categories. The estimates of proportionate contributions from farms of small holders would further increase if we incorporate the fact that the smaller farms have higher productivity than larger ones as has been suggested in the literature.

But as we shall in the paragraphs below the trends in flow of agricultural institutional credit, especially in the post liberalization phase, seem to have missed the increasingly rising contribution of small holders in agriculture production. Thus, presently the trends in agricultural credit flow(financial flow) does not adequately mirrors the changes and contribution of small holders (real sector).

Credit Absorption capacity of small farms

It is often argued that the credit absorption capacity of marginal and small holders is limited and hence the decline in their share in agriculture credit is sometimes justified on this account. However, contrary to this viewpoint, increasingly evidence exists that among the various categories of farms the marginal and small holders capacity for absorption is increasing compared to other categories. For example, between the period 1991 and 2001(latest data for which is available) it the marginal and small holders whose

area under all crops (irrigated plus unirrigated) has positively grown whereas for all other categories the growth has been negative. But more importantly from the credit absorption angle it the growth in the irrigated area which assumes importance as access to irrigation increases substantially the requirement of credit. Taking all crops together the area under irrigation annually increased at the rate of 2.65% and 1.57% in the case of marginal and small holding category, respectively whereas for the other categories the growth has been negligible (Table 4). Across various individual crops we find the same trend (Table 4).

Table 4: Growth in Area under Various Crops between 1991 and 2001- Land Size wise												
Crops	CAGR(Irrigated Area)						CAGR(irrigated +unirrigated)					
	Marginal	Small	Semi-Medium	Medium	Large	Total	Marginal	Small	Semi-Medium	Medium	Large	Total
Paddy	3.34	1.99	0.58	0.54	0.87	1.72	1.27	-1.66	-1.02	-1.27	-1.31	-0.56
Wheat	2.02	0.53	0.38	0.52	0.26	0.80	1.36	-0.54	-0.56	-1.70	-1.93	-0.58
Total Cereals	2.54	1.23	0.40	0.41	0.43	1.12	1.04	0.03	-1.23	-2.16	-3.03	-0.89
Pulses	0.20	1.37	0.96	0.94	-1.00	0.62	-1.05	0.37	-1.12	-2.84	-5.24	-2.01
Sugarcane	2.31	3.49	2.55	0.87	0.11	2.24	1.56	3.13	2.21	0.51	-1.16	1.75
Oilseeds	1.69	1.12	-0.18	-1.26	-1.06	-0.12	0.97	2.15	0.74	-1.19	-3.59	-0.20
Fibres	5.33	4.47	2.28	0.72	-0.24	1.78	0.98	3.40	1.68	-0.75	-2.51	0.61
Allcrops	2.65	1.57	0.61	0.34	0.18	1.17	0.95	0.58	-0.63	-1.76	-3.07	-0.70

Source: Agricultural Census, GOI.(data downloaded from www. agricoop.nic.in)

With irrigated area annually increasing at substantial pace in the case of marginal and small farmers alongwith increasing commercialization of agriculture coupled with the fact that the dependence of the small farmers on purchased inputs has increased the need and credit absorption capacity has increased rather than declined in recent times.

Small Farmer and Agriculture Credit Flow

In aggregate, the share of small and marginal farmers in the total operational holdings increased from 80.6% to 85.93% during 1991-92 to 2003 and correspondingly their share in the operated area increased from 34.3% to 43.5%. However, their share in the credit disbursed declined from 53.66% in 1991-92 to 47.61% in 2006-07 whereas the

share in the number of accounts drastically reduced from 78.85% to 53.66% during the same period (Table 5).

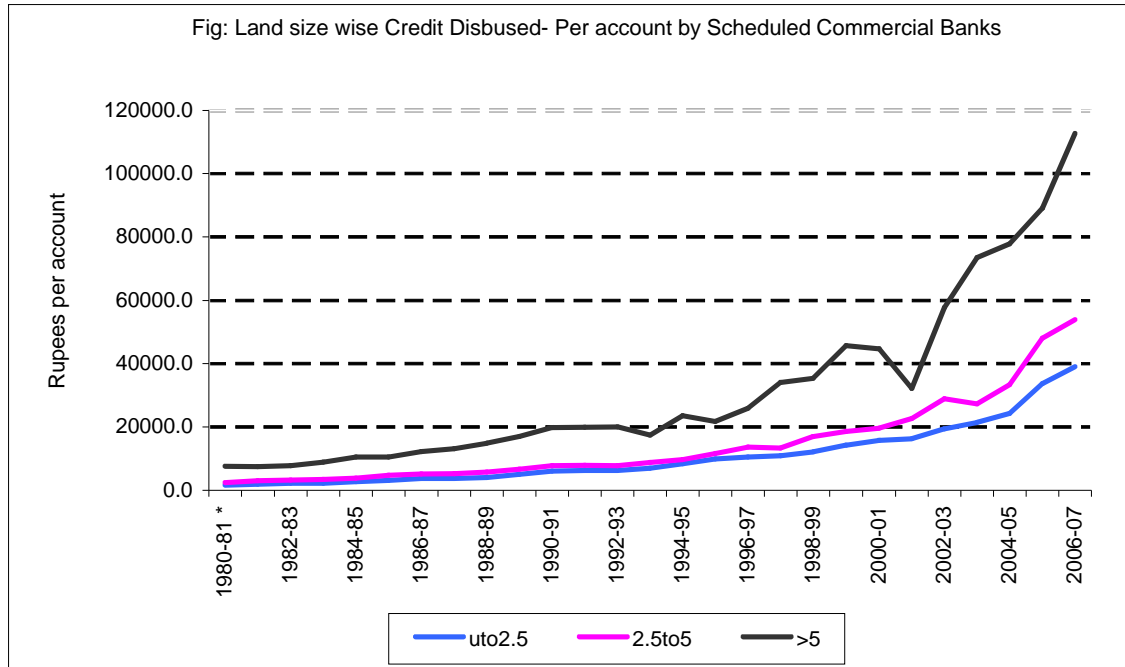
Between the period 1991-92 and 2003 the share of the marginal farmers in the operated area increased from 15.6% to 22.6% but their share in agriculture credit flow declined from 28.79% to 22.12% and the share in the number of accounts also declined from 45.42% in 1991-92 to 38.79% in 2002-03. The marginal holdings accounted for 62.8%(1991-92) of the total operational holdings which increased to 71%(2003) in the country. A decline in the number of accounts of the marginal holdings with an increase in the number of marginal holdings hints towards the 'non-inclusive' nature of the scheduled commercial banks towards disbursing credit towards the marginal farmers. In the case of small farmers their share in the area operated increased during the period 1991-92 and 2002-03 but their share in agriculture credit remained almost stagnant at 25%. With regard to land holding size of 5 acres and more(large farmers) the share in area operated has declined but the share in both the agriculture credit flow and the number of account have increased during the nineties. (Table 5).

With increasing commercialization and diversification of Indian agriculture it is unlikely that the credit requirements of marginal and small farmers may have reduced thereby justifying the decline in their share in the total credit disbursed. The above trends are just a reflection of the growing apathy that the commercial banks are showing towards lending to the marginal and small farmers.

Category	Share in operational holdings		Share in operated area		Share in number of Agri.Accounts			Share in Agri. Credit Disbursed		
	1991-92	2003	1991-92	2003	1991-92	2002-03	2006-07	1991-92	2002-03	2006-07
Marginal	62.8	69.65	15.6	22.6	45.42	38.9	41.56	28.79	22.12	24.69
Small	17.8	16.28	18.7	20.9	31.43	30.17	27.93	24.87	25.52	22.92
Large	19.4	14.07	65.7	56.5	23.15	30.93	30.51	46.34	52.36	52.39

Source: Computed from Handbook of Statistics on the Indian Economy, 2008-09, RBI

The per account credit disbursed across land holding size is increasingly getting skewed and the gap is widening between the small, marginal and large farmers.(Figure below).



The doubling of agriculture credit period saw almost a vertical rise in the curve relating to large farmers indicating the widening gap- in the year 2006-07 (the last year for which data is available), the large farmer per account credit disbursement stood at Rs.1,12,652 and the same for small and marginal farmers was Rs.53,862 and Rs.38,983 respectively (Figure). There is hardly any evidence in terms of any real sector needs justifying this sudden increase in the per account disbursement. Perhaps, the only plausible explanation lies in the commercial banks urge to achieve the credit targets by sanctioning and extending more credit per account in the large farmer account heads.

Section II

Doubling Of Agriculture Credit in 3 years - Background

By the beginning of this millennium concerns were getting raised about the inclusiveness of the growth process as many parts of the country were seeing farmers suicides. The

NSSO findings on indebtedness of cultivator households was the last straw as it indicated that the share of institutional agencies in agriculture credit has fallen compared to the previous decade(1991) the first time since independence. The Government of India announced on 18 June 2004 that agriculture credit shall be doubled with respect to the base period of 2003-04 within a period of three years. This programme came to be known as the “ Doubling of Agriculture Credit”. Targets of lending for various institutions and within those of various sub-categories were laid down. Monitoring the implementation of the programme was bestowed to NABARD and RBI. The expectation was that the programme would increase the institutional credit flow to the agriculture sector, inequities in terms of flow between regions would reduce, inter-agency shares would become less skewed, improvement in the distribution of credit among various categories of farmers, inclusion of new farmers into the institutional credit flow etc. In the paragraphs below an attempt has been made to discuss the impact of the programme on some of these parameters.

Institutional Credit Flow to Agriculture Sector- Current Trends

Year	Cooperatives	RRBs	Commercial Banks	Total
1991-92	5797(52)	596(5)	4806(43)	11199(100)
2001-02	23604(38)	4854(8)	33587(54)	62045(100)
2003-04	26959(31)	7581(9)	52441(60)	86981(100)
2004-05	31231(25)	12404(10)	81481(65)	125477(100)
2005-06	39404(22)	15223(8)	125859(70)	180486(100)
2006-07	42480(19)	20435(9)	166485(72)	229400(100)
2007-08	48258(19)	25312(10)	181088(71)	254658(100)
2008-09(P)	36762(13)	26724(9)	223806(78)	287292(100)
CAGR (1991-92 to 2003-04)	13.66	23.61	22.06	18.63
CAGR (2004-05 to 2006-07)	16.63	28.35	42.94	35.21

*-includes Other agencies, P-Provisional
CAGR- Compound Annual Growth Rate
Figures in the parentheses is percentage to the total
Source: RBI & NABARD

During the post liberalization phase credit flow to agriculture has increased by almost twenty five times between 1991-92 and 2008-09. This increase has been accompanied with a structural shift in the way credit is purveyed. In 1991-92 more than 50 per cent of

the total institutional credit flow to agriculture was supplied by cooperatives and by 2007-08 their share has declined to 13%. During this period commercial banks have increased their share substantially and in 2008-09 their share stood at 78%. In the case of the RRBs their share has steadily increased and is hovering around the 10% mark in recent years (Table 6). The substantial increase in the share of the commercial banks can be attributed to the high annual growth achieved during the period 2004-05 to 2006-07 (which is the doubling of agriculture credit period).

During the period 1991-92 to 2003-04, institutional credit to agriculture annually grew at 18.63 per cent whereas during the doubling period(2004-05 to 2006-07) growth recorded was annually 35.21%. Cooperative could not increase their annual growth rate during the two periods which also gets reflected in their declining share. Commercial banks credit grew by almost 43% per annum during the period 2004-05 to 2006-07 which was almost double the rate which was achieved during 1991-92 to 2003-04 (Table 6).

Changing Share Of Agencies- Implication for Small Farms

The trend of declining share of the cooperatives in the total institutional credit got accentuated during the doubling period. It is important to recognize that as institutions, cooperatives compared to commercial banks is better suited to satisfy the needs and requirements of the marginal and small farmers. Recognizing this aspect, the Government of India based on the recommendations of the Task Force (Chairman: Prof. Vaidhyanathan) announced a revival package in 2006 with an estimated outlay of Rs. 13,596 crore for the short-term cooperative structure (STCCS). The package aimed at *inter-alia* bringing about legal and institutional reforms, improve quality of management etc in an integrated manner so as to make the structure vibrant. As on March 2008-09, a total of 25 States have executed MoU with Government of India and NABARD and implementing the package covering 96% of the STCCS(NABARD, Annual Report, 2008-09). However, the implementation process is yet to be completed hence it would be some time before the impact can be gauged. On its completion the share of cooperatives is expected to go up.

Agriculture Credit - Regional Growth and Distribution

The growth in credit flow was higher in the Western(54.13%) and the Southern region(47.58%) in comparison to the other regions during the doubling period. The Central region grew at an annual rate of 35% though it accounts for the largest GCA among all the regions.(Table 7).

Region	2003-04	2004-05	2005-06	2006-07	CAGR (2004-05 to 2006-07)
Northern	2181869	3212464	5044838	6345800	40.55
North Eastern	29994	40733	93571	82529	42.34
Eastern	504740	723769	1221627	1539356	45.84
Central	1248734	1714180	2313365	3129312	35.11
Western	1012247	1411102	2617793	3352062	54.13
Southern	2613740	3683078	6351206	8021263	47.58

Source: NABARD

At the all India level, the credit institutions more than doubled the flow of agriculture credit. As against the base year(2003-04) disbursement of Rs 86,980 crores the total agriculture credit flow from institutional sources increased to Rs. 203296 crore in 2006-07; exceeding the target(Rs. 175000 crore in 2006-07) by 16%. However, in relative terms there has been hardly any change in terms of the inter- regional distribution of agriculture credit during the doubling of agriculture credit period(Table 8).

Region	Share in Agriculture Credit in 2003-04	Share in Agriculture Credit in 2006-07	Share in Gross Cropped Area(GCA)	Share in Gross Irrigated Area (GIA)	Share of SF/MF in operated area in their respective region
1	2	3	4	5	6
Northern	28.74	28.24	20.11(148)	26.32	15.87
North eastern	0.40	0.37	2.83(128)	0.68	36.28
Eastern	6.65	6.85	14.66(151)	15.25	64.79
Central	16.45	13.93	27.26(139)	31.66	43.29
Western	13.33	14.92	16.47(114)	9.74	34.40
Southern	34.43	35.70	18.68(124)	16.36	45.28

Note: Col(6) is based on Agriculture Census, 2001. GCA & GIA pertains to 2005-06
The figures in the parentheses in Col(4) is the Cropping Intensity
Source: NABARD, RBI and Centre For Monitoring Indian Economy(CMIE)

The Southern and Western region together accounted just over 50% of the credit flow in 2006-07 but they account for around 35% of the Gross Cropped area and 26% of Gross irrigated area. The Central region which accounts for more than a quarter of gross cropped area lost out in terms of its share in agriculture credit during the programme period. The Eastern region is almost comparable with the Western region in terms of share in the gross cropped area and infact has a higher share in the irrigated area compared to the latter but the agriculture credit flow is less than half than what flows into western region. Moreover, there has been hardly any improvement in this regard in the doubling period (Table 8).

The inequities become even more starkling if we correlate the share of marginal and small holdings in the respective regions with the share of agriculture credit flow in the region. For example, of the total operated area in the eastern region, the marginal and small holdings account for over 65% of the operated area (92% of the operational holdings in the region are marginal and small holdings) but the agriculture credit flow in the region does incorporate this reality in its disbursement pattern. The figures for the North Eastern region suggest an alarming situation is arising. It appears that the credit flow pattern is devoid of the share of marginal and small holdings in the operated area, share in the gross cropped and irrigated area in a region (Table 8). It is evident from Table 8 that the doubling programme was not able moderate these inequities in the credit flow across regions.

Section III

Crop & Term Loan- Implications for Capital Formation

Indian Agriculture in recent times has been plagued with shrinking capital formation. Lack of investment in the sector has emerged as a major constraint in increasing GDP from Agriculture. Since the mid eighties the share of Gross Capital Formation (GCF) in agriculture in total GCF started declining- in 1980-81 it was 16.1 % but by 1995-96 it had declined to 6.3% though it started rising thereafter for a brief period when it stood at 11.1% in 2001-02 and then again declined to 7.3% in 2005-06. Studies have indicated

that capital formation in agriculture was hit as private sector could not compensate adequately for the decline in public sector investment. The ratio of GCF in Agriculture to total GDP has been hovering at 2.2% since the 2000 thereby indicating the stagnancy in the agriculture sector though in recent years the ratio of GCF in Agriculture to Agriculture GDP has improved (Table 9).

Table 9: Gross Capital Formation in Agriculture (at 1999-2000 prices) (Rs. crore)					
Year	GCF in Agri	Ratio of GCF in Agriculture to (%)			
		GDCF	Agri. GDP	Total GDP	
1999-00	43,473	8.6	10.6		2.2
2000-01	39,027	8.0	9.6		1.9
2001-02	48,215	10.2	11.1		2.2
2002-03	46,823	8.4	11.8		2.1
2003-04	44,833	6.7	10.2		1.9
2004-05	49,198	6.2	11.1		2.1
2005-06	56,459	6.0	12.1		2.2
2006-07 ^P	62,663	5.9	12.9		2.2
2007-08 ^Q	67,864	5.5	12.3		2.2

P: Provisional. Q: Quick Estimate
Source: Central Statistical Organisation, Gol

The term loan component of bank credit has important bearing on capital formation in agriculture. Over the decades the share of term loan in the total credit flow has remained on an average at 40 per cent. In 1980-81, term loan constituted 40% of the total credit flow and by 1991-92 (beginning of the liberalisation period) it marginally declined to 39%. By 1996-97 the share declined to 36 per cent and the share marginally increased to 37% in 2003-04, the base year of the doubling of agriculture credit programme which further rose to 40% in 2006-07 (same as in 1980-81). It appears that the increase in the share of term loan during the doubling period did have a positive impact in improving the ratio of GCF in Agriculture to Agriculture GDP. However, the latest available figure indicates that the share of term loan has substantially declined to 29% in 2007-08 (Table 10).

Type of Loan	1980-81	1991-92	1996-97	2000-01	2003-04	2004-05	2005-06	2006-07	2007-08
Crop Loan	60	59	64	63	63	61	58	60	71
Term Loans	40	41	36	37	37	39	42	40	29

Source: NABARD, Annual Report, Various Issues

Period	Crop Loan	Term Loan	Total
1980-81 to 1990-91	11.31	11.72	11.48
1990-91 to 2003-04	18.61	16.89	17.93
2004-05 to 2006-07	34.92	35.89	35.30
Growth in Agricultural Production			
Period	Foodgrains	Non-foodgrains	All Crops
1980-81 to 1990-91	2.85	3.77	3.19
1990-91 to 2003-04	1.16	1.20	1.58
2004-05 to 2006-07	3.08	12.83	9.07

* Growth is Annual Compound Growth Rate (CAGR)
Source: CAGR for foodgrain, non-foodgrain and all crops from Report of the Expert Group on Agricultural Indebtedness(Table 1.9, pg 25 of the Report). CAGR for crop and term loan are authors calculation.

Credit is an important input that has an effect on the agricultural production. Though it would be erroneous to exclusively correlate the growth of credit to the rate at which agricultural production grows, nevertheless a comparison of the growth rates is likely to provide us with some directions on the productivity of credit. During the period 1980-81, crop, term and overall credit grew at an average annual rate of 11.31%, 11.72%, 11.48%, respectively. During the same period foodgrain, non-foodgrain and all crops registered grew at 2.85%, 3.77 and 3.19%, respectively. During the period 1990-91 to 2003-04 credit (crop and term loan) registered an annual growth of 17.93% with crop loan growing at 18.61% and term loan at 16.89%. But during the same period agricultural production measured by foodgrain and non-foodgrain production growth rate substantially declined compared to the previous period(1980-81 to 1990-91). Thus, increasingly higher doses of credit both crop and term loan is required to enhance and get incremental increases in agricultural production. Both crop and term loan grew at substantial rate during the period (2004-05 to 2006-07) of doubling of agriculture credit. Foodgrain production which stood at 213.40 million tonnes in 2003-04(base year of the doubling period) dipped to 198.4 million tonnes the next year and subsequently increased and attained a level of 217.3 million tonnes in 2006-07(last year of the doubling

programme) which further increased to 230.8 million tonnes thereby registering an annual growth of 1.97 % during the period 2003-04 to 2007-08. (Table 11).

A comparison of the growth in various sub-sectors of the term loan component has been attempted so as to take a long-term view of the sub-sectoral changes. We have termed the five year period 1999-2000 to 2003-04 as the ‘pre-doubling phase’ whereas the five year period 2003-04 to 2007-08 as the ‘doubling phase’. The growth rate in ‘pre-doubling’ and ‘post-doubling’ scenario have been estimated (Table 12). Expectedly, given the targeted nature of the programme, both crop loan and term loan components grew at a higher rate in the doubling phase in comparison to pre-doubling phase.

Table 12 : Growth* in Credit in Pre-doubling and Doubling Phase		
Sector	Compound Annual Growth Rate(CAGR)	
	Pre-Doubling Phase (1999-00 to 2003-04)	Doubling Phase (2003-04 to 2007-08)
Crop Loan	17.38	34.78
Term Loans	16.62	23.01
Minor Irrigation	3.86	0.99
Land Development	16.07	44.91
Farm Mechanisation	0.62	20.14
Plantation & Horticulture	16.60	42.43
Animal Husbandry	8.42	32.53
Fisheries	29.58	2.24
Growth is Annual Compound Growth Rate.		
Source: NABARD, Annual Report, 2008-09		

Crop loan annually grew at 17.38% in the pre-doubling phase whereas the rate almost doubled to 34.78% in the doubling phase. But in the case of term loans a similar jump in the growth rates did not occur though the growth rate increased. This indicates that banks have adopted the crop loan route to increase and achieve the disbursements targets in the doubling phase. Interestingly, term credit into the minor irrigation sector grew at a higher in the pre-doubling phase compared to the doubling phase. The growth of investment credit in this sector is crucial from the point of capital formation and Similar is the case with Fisheries which had recorded substantial growth in the pre-doubling phase and it grew at annual rate of 2.24% in the doubling phase. Investment credit into Land

development, Farm Mechanisation, Plantation and Horticulture and Animal Husbandry grew at a substantial rate during the doubling phase and the programme appears to have provided an impetus to these sectors as reflected in the credit growth figures.

Conclusions And The Way Forward

The above discussion shows critical contribution of small farms to agricultural production and India's food security in comparison to other size classes of farms. Despite this, the share of marginal and small farmers in agriculture credit has dwindled since the financial sector reforms began in the 1990s. This raises concerns as it has implications for food security and this cannot be wished under the carpet anymore. Even the recent effort in terms of doubling of agricultural credit has not been able to even out the regional inequalities in agriculture credit flow despite the fact that agriculture credit grew substantially.

No doubt there is a need to strengthen and expanding the institutional credit delivery mechanisms for agriculture. This involves revitalising and expanding the cooperative credit structure which is found to better assimilate the needs of small and marginal farmers. At the same time it needs to be recognised that agricultural credit policy should react quickly and adapt itself to the emerging needs and encourage and mainstream innovations. Some of them being the models of Joint Liability Groups, Village Development Councils, Farmers Clubs and Self-Help Group-Contract Farming Linkage Model. Some of these innovations have shown encouraging results and need to be upscaled and mainstreamed. Perhaps this is the way forward to meet the credit needs of small and marginal farmers in future in India (P. Satish & N. Mehrotra, 2009).

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