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SUBJECT I
TRENDS IN RURAL FINANCE

Performance of Rural Credit and Factors Affecting the Choice of Credit Sources

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I

INTRODUCTION

Credit is not only one of the critical inputs in agriculture but is also an effective means of rural development. A large number of agencies, including co-operatives, regional rural banks (RRBs), commercial banks, non-banking financial institutions, self-help groups (SHGs) and a well-spread informal credit outlets together constitute the Indian rural credit delivery system. One of the objectives of the credit policy is to minimise the role of non-institutional sources, mainly the money-lenders in the flow of agricultural credit. Several initiatives have been taken in this regard since Independence. Some major milestones in rural credit are the acceptance of Rural Credit Survey Committee Report (1954), nationalisation of major commercial banks (1969 and 1980), establishment of RRBs (1975), establishment of National Bank for Agriculture and Rural Development (NABARD) (1982) and the ongoing reforms in the financial sector since 1991 (Vyas *et al.,* 2004). Simultaneously, several measures like establishment of Lead Bank Scheme, direct lending for the priority sectors, banking sector's linkage with the Government sponsored programmes targeted at the poor, Differential Rate of Interest Scheme, the Service Area Approach, the SHG-Bank linkage programme were undertaken. In recent years, initiatives like Kisan Credit Card Scheme (KCCs), Special Agricultural Credit Plans, and RIDF schemes have been introduced to enhance the flow of credit to the rural sector. Several committees have been constituted to suggest ways to increase the availability of institutional credit to the rural areas. These include the Expert Committee on Rural Credit (Chairperson V.S. Vyas), Committee on Agricultural Credit through Commercial Banks (Chairperson R.V. Gupta), Committee on Co-operatives (Chairperson Vikhe Patil), Advisory Committee on Flow of Credit to Agriculture (Chairperson V.S. Vyas), and Task Force on Revival of Co-operative Credit Institutions (Chairperson A. Vaidyanathan). The government has accepted and implemented several of their suggestions. However, inspite of these efforts and

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initiatives, the flow of credit to the agricultural sector remains a matter of concern, and the moneylenders continue to play a dominating role in the delivery of credit to rural households, as the reach of institutional agencies has remained poor, particularly to the small and marginal farmers. Also, empirical studies on the characteristics of borrowers from institutional and non-institutional sources are few and the factors which determine the choice of credit outlook have not been well discussed among the academia and policymakers.

For a scientific and empirical analysis of rural credit delivery, one needs to examine at the micro level the distinguishing characteristics of the rural households. Such an analysis would be useful in understanding the reasons for approaching one type of credit institution as opposed to others by groups of borrowers. This will also help in reorienting the credit policies and programmes for a better impact.

Against this backdrop, the present study was undertaken to (i) assess the performance of rural credit flow in terms of different indicators, and (ii) identify the factors that influence the choice of credit outlet and the possession of kisan credit cards by the rural households. The paper has been divided into five sections. The following section provides a brief description of data and the methods of analysis. Section III gives an overview of the performance of rural credit. The factors influencing the choice of credit outlet and possession of kisan credit cards are discussed in Section IV, while conclusions and policy implications are included in the last section.

II

DATA AND METHODOLOGY

The study is based on the unit level data of *Debt and Investment Survey* carried out by National Sample Survey Organisation (NSSO) during 1992 (48th Round) and 2003 (59th Round). The Debt and Investment Survey is generally carried out once in 10 years by NSSO and it provides useful information on different dimensions of rural finance. In the present analysis we have considered the credit made available during one agricultural year, from July 1991 to June 1992 for the 48th Round, and from July 2002 to June 2003 for the 59th Round. The performance of credit system has been assessed in terms of access of rural households to different credit outlets, share of formal credit institutions, availability of credit, etc.

Multinomial Logit Model

A number of socio-economic and agroclimatic variables may influence the choice of credit outlets. A multinomial logit model, developed by McFadden (1974) was applied to identify the factors which determine the choice of rural credit outlets. Multinomial logit models are used in the case of a dependent variable with more than two categories (Jobson, 1992; Lesschen *et al.,* 2005). This type of regression is

similar to logistic regression, but is more general because the dependent variable is not restricted to two categories. Each category is compared to a reference category, e.g. households not borrowing are compared with households borrowing from institutional source. The household level data from the 59th Round, Debt and Investment Survey, conducted by the National Sample Survey Organisation (NSSO), Ministry of Statistics and Programme Implementation, Government of India were used in the estimation of multinomial logit model. The factors which were supposed to influence the choice of borrowing outlets include age, sex, education of the household head, household size, operational land holding, household type, social group, agroclimatic zones, etc. The multinomial logistic regression functions can be expressed as per Equation (1):

$$P(Y_i = j) = e^{\beta'_j X_i} / \sum_{k=0}^{2} e^{\beta'_k x_i} \qquad j = 0,1,2 \qquad \ldots.(1)$$

where j denotes the choice of credit outlets, Y_i is the indicator variable of choices, x denotes the vector of explanatory variables and β' is the corresponding coefficient vector. The base category was the households not borrowing from any source.

Logit Model

The factors that affect holding of kisan credit card were also analysed by using household level data from the source mentioned above. The explanatory variables as explained above were hypothesised to determine the holdings of kisan credit card at the household level.

The following logit model was estimated to identify the factors, which influence holding of the kisan credit card at the household level. The dependent variable was binary taking a value of 1 for the kisan credit card holder household, and 0 otherwise.

$$P_i = E(Y = 1/X_i) = 1/1 + e^{-(\beta_1 + \beta_i X_i)}$$

where P_i is the probability that Y will have the value 1, that is, the household possess a kisan credit card, X_is are the factors that influence household's decision to hold this card, and βi's are the coefficients of the explanatory variables, X_is.

III

PERFORMANCE OF RURAL CREDIT

Contribution of Different Sources of Borrowing

One of the indicators of improvement in the rural credit delivery is the reduction in the dependence of rural households on non-institutional sources of credit. The

share of non-institutional sources in the rural credit had declined from 91 per cent in 1951 to 44 per cent in 1991-92 and a dramatic achievement was noticed in increase of the share of formal credit institutions in rural credit from less than 9 per cent in 1951 to 56 per cent in 1991-92. But, later on this trend seemed to stagnate and the role of exploitative sources of credit persisted. The share of institutional sources in the total rural credit increased only slightly thereafter to 57 per cent in 2002-03 at the national level (Table 1). Shah *et al.,* (2007) have observed a significant rise in all the states of India in reliance for credit on institutional sources after nationalisation, but this trend was reversed after 1991. The focus of the financial reforms initiated in 1991 seemed to have bypassed the rural credit needs and left the rural people vulnerable to exploitative credit. However, the performance and trends were not uniform across different states. In some states like Bihar, Chhattisgarh, Tamil Nadu and most of the North eastern states, the share of institutional credit in the total rural credit fell dramatically. For instance, in Bihar it fell from 51 per cent in 1991-92 to 24 per cent in 2002-03. If immediate corrective measures are not taken, the situation may even

TABLE 1: SHARE OF INSTITUTIONAL AND NON-INSTITUTIONAL BORROWINGS IN DIFFERENT STATES: 1991-92 AND 2002-03

(per cent)

	Institutional			Non-Institutional		
States	1991-92	2002-03	Per cent change	1991-92	2002-03	Per cent change
(1)	(2)	(3)	(4)	(5)	(6)	(7)
Andhra Pradesh	25.56	37.50	11.94	74.44	62.50	-11.94
Arunachal Pradesh	56.47	78.40	21.93	43.53	21.60	-21.93
Assam	45.04	46.43	1.39	54.96	53.57	-1.39
Bihar	51.23	23.51	-27.72	48.77	76.49	27.72
Chhattisgarh	74.39	57.32	-17.08	25.61	42.68	17.08
Gujarat	74.70	75.74	1.04	25.30	24.26	-1.04
Haryana	52.67	61.78	9.10	47.33	38.22	-9.10
Himachal Pradesh	60.30	57.16	-3.14	39.70	42.84	3.14
Jammu & Kashmir	42.80	82.74	39.94	57.20	17.26	-39.94
Jharkhand	94.40	90.93	-3.46	5.60	9.07	3.46
Karnataka	62.78	62.51	-0.27	37.22	37.49	0.27
Kerala	81.79	81.63	-0.15	18.21	18.37	0.15
Maharashtra	77.06	78.12	1.06	22.94	21.88	-1.06
Manipur	53.19	7.76	-45.42	46.81	92.24	45.42
Meghalaya	91.88	38.11	-53.77	8.12	61.89	53.77
Mizoram	68.22	84.54	16.31	31.78	15.46	-16.31
Madhya Pradesh	57.76	62.26	4.50	42.24	37.74	-4.50
Nagaland	72.76	71.29	-1.47	27.24	28.71	1.47
Orissa	70.15	69.27	-0.89	29.85	30.73	0.89
Punjab	59.26	53.82	-5.45	40.74	46.18	5.45
Rajasthan	30.29	38.69	8.41	69.71	61.31	-8.41
Sikkim	98.58	75.81	-22.77	1.42	24.19	22.77
Tamil Nadu	61.92	46.63	-15.29	38.08	53.37	15.29
Tripura	84.02	74.04	-9.98	15.98	25.96	9.98
Uttar Pradesh	54.84	53.61	-1.23	45.16	46.39	1.23
Uttaranchal	28.97	53.94	24.97	71.03	46.06	-24.97
West Bengal	55.52	48.63	-6.89	44.48	51.37	6.89
All-India	55.65	57.09	1.44	44.35	42.91	-1.44

Source: Unit Level Data of NSSO, *Debt and Investment Survey*, 48th and 59th Rounds.

worsen in future. Further, the poorer households are more dependent on the non-institutional sources of finance, which are exploitative in nature. Therefore, it may be inferred that during the period of banking reforms, the excessive emphasis on profitability eroded the primary mandate of some of the formal financial institutions like co-operatives and RRBs and facilitated the comeback of exploitative non-institutional credit sector in rural lending.

Growth in Rural Credit Delivery

The increase in disbursement of credit at the aggregate level particularly in nominal terms does not reveal the actual increase or decrease over a period of time. Therefore, borrowing per ha and per capita in real terms in different states were worked out and have been presented in Tables 2 and 3. The borrowing by rural households either per ha of their gross cropped area or per capita has increased from both institutional and non-institutional sources. The availability of credit from

TABLE 2. STATEWISE AMOUNT OF INSTITUTIONAL AND NON-INSTITUTIONAL BORROWINGS AND COMPOUND ANNUAL GROWTH RATES (CAGR): 1991-92 AND 2002-03

(Rs./ha at 1993-94 prices)

	Institutional			Non-institutional			Overall		
States	1991-1992	2002-2003	CAGR (per cent)	1991-1992	2002-2003	CAGR (per cent)	1991-1992	2002-2003	CAGR (per cent)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Andhra Pradesh	504	2418	18.8	1467	4030	11.8	1970	6448	13.9
Arunachal Pradesh	81	71	-1.5	62	19	-12.0	143	90	-5.0
Assam	148	336	9.4	181	387	8.7	330	723	9.0
Bihar	275	387	3.8	261	1259	18.9	536	1646	13.1
Chhattisgarh	222	495	9.2	76	369	18.9	299	864	12.4
Gujarat	582	1976	14.4	197	633	13.7	780	2608	14.2
Haryana	578	4308	24.7	519	2666	19.7	1097	6974	22.6
Himachal Pradesh	1121	2624	9.8	738	1967	11.4	1859	4591	10.5
Jammu & Kashmir	296	1097	15.5	396	229	-5.8	692	1326	7.4
Jharkhand	203	1609	25.6	12	160	32.9	215	1769	26.1
Karnataka	465	1817	16.2	276	1090	16.3	740	2907	16.2
Kerala	4819	29270	21.9	1073	6587	22.1	5893	35857	22.0
Maharashtra	721	1833	10.8	215	513	10.1	936	2347	10.6
Manipur	119	111	-0.8	105	1316	32.1	224	1426	22.6
Meghalaya	45	70	5.1	4	114	44.8	49	185	15.8
Mizoram	98	282	12.3	46	52	1.3	144	334	9.7
Madhya Pradesh	326	1035	13.6	238	627	11.2	564	1662	12.6
Nagaland	164	911	20.8	61	367	21.8	225	1278	21.1
Orissa	209	1236	21.6	89	548	22.1	298	1784	21.7
Punjab	1398	5478	16.2	961	4701	19.1	2359	10179	17.4
Rajasthan	166	483	12.4	383	765	7.9	550	1247	9.4
Sikkim	390	1605	16.9	6	512	64.3	395	2117	20.3
Tamil Nadu	2388	6988	12.5	1469	7998	20.5	3857	14987	16.1
Tripura	895	2449	11.7	170	859	19.5	1066	3308	13.3
Uttar Pradesh	395	1164	12.6	325	1007	13.2	721	2171	12.9
Uttaranchal	557	709	2.7	1367	606	-8.6	1924	1315	-4.1
West Bengal	641	1494	9.7	514	1578	13.1	1155	3072	11.4
All-India	545	1916	14.8	435	1440	14.1	980	3356	14.5

Source: Same as in Table 1.

institutional sources had increased from Rs. 545/ha in 1991-92 to Rs. 1916/ha in 2002-03, while per capita had increased from Rs. 98 to Rs. 254 during this period. Similarly, the borrowing from non-institutional sources had increased from Rs.435/ha in 1991-92 to Rs. 1440/ha in 2002-03, while in per capita it had increased from Rs.91 to Rs. 191 during this period.

The per ha and per capita borrowing from institutional sources between 1991-92 and 2002-03 have depicted an annual growth rate of 15 per cent and 11 per cent respectively, indicating that the institutional sources were increasing the credit availability to the rural households significantly. But even this high growth rate of institutional credit was not able to fully contain the growth of non-institutional financing, which had grown at the rate of 14 per cent per ha and 10 per cent per capita basis annually during this period.

TABLE 3. STATEWISE AMOUNT OF INSTITUTIONAL AND NON-INSTITUTIONAL BORROWINGS AND COMPOUND ANNUAL GROWTH RATES (CAGR): 1991-92 AND 2002-03

(*Rs per capita at 1993-94 prices*)

	Institutional			Non-Institutional			Overall		
States	1991-1992	2002-2003	CAGR (per cent)	1991-1992	2002-2003	CAGR (per cent)	1991-1992	2002-2003	CAGR (per cent)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Andhra Pradesh	87	290	14.2	253	483	7.4	340	774	9.5
Arunachal Pradesh	14	17	2.4	10	5	-8.6	24	21	-1.3
Assam	16	33	8.4	20	38	7.7	36	72	8.0
Bihar	25	26	0.2	24	83	14.7	49	109	9.1
Chhattisgarh	64	102	5.2	22	76	14.5	86	178	8.3
Gujarat	145	384	11.3	49	123	10.6	194	507	11.1
Haryana	183	645	14.9	164	399	10.3	347	1044	12.9
Himachal	124	258	8.4	82	193	9.9	206	451	9.0
Jammu & Kashmir	44	130	12.8	58	27	-8.1	102	157	4.9
Jharkhand	30	147	18.9	2	15	25.9	32	162	19.4
Karnataka	112	341	13.0	66	205	13.2	178	545	13.1
Kerala	278	1201	17.5	62	270	17.6	339	1471	17.5
Maharashtra	192	387	8.0	57	108	7.3	249	496	7.9
Manipur	13	11	-2.4	12	126	30.0	25	137	20.6
Meghalaya	6	10	5.8	1	17	45.7	7	27	16.5
Mizoram	16	51	13.7	7	9	2.6	23	60	11.1
Madhya Pradesh	104	236	9.5	76	143	7.2	179	379	8.6
Nagaland	25	84	14.2	9	34	15.1	35	119	14.4
Orissa	30	137	18.1	13	61	18.7	43	198	18.3
Punjab	248	796	13.7	170	683	16.5	419	1478	14.9
Rajasthan	69	142	8.3	159	225	3.9	228	367	5.4
Sikkim	76	156	8.2	1	50	52.1	78	206	11.4
Tamil Nadu	226	526	9.7	139	602	17.5	365	1127	13.2
Tripura	39	91	9.8	7	32	17.4	46	123	11.3
Uttar Pradesh	56	121	8.8	46	104	9.4	103	225	9.0
Uttaranchal	49	57	1.5	121	48	-9.6	171	105	-5.2
West Bengal	54	83	5.0	43	88	8.2	96	171	6.5
All-India	98	254	11.0	79	191	10.3	177	445	10.7

Source: Same as in Table 1.

The borrowings have witnessed higher growth rates from both institutional and non-institutional sources in relatively more developed agricultural states. The regional disparity across the country in the disbursement of institutional rural credit was found glaring. The southern region of the country availed higher amount of rural credit, followed by the northern, western and central regions. The credit availability from the institutional sources was abysmally low in the economically backward states like Bihar and the North Eastern states. Accessibility to institutional credit was higher in the developed states and lower in the backward states, which has been accentuating over time. The annual increase in the availability of credit from institutional sources also varied across the states. It was only 4 per cent in Bihar, 16 per cent in Punjab and 22 per cent in Kerala. It is a kind of vicious circle operating in the less developed states, where less availability of credit adversely influences the adoption of modern technology and private capital formation (Sidhu and Gill, 2006).

Is Financing by Non-Institutional Sources Exploitative?

Due to several problems involved in getting loans from formal financial institutions, rural households especially the poor ones often turn to informal sources such as moneylenders, traders, landlords etc. to finance consumption or working capital. Several factors induce the borrowers to take loans from non-institutional sources. The transaction costs of informal borrowings are low as moneylenders are located conveniently, loan procedures are minimal and cash is disbursed promptly, even at odd hours. But, the interest rates are very high. The average rate of interest charged by moneylenders turned out to be 36 per cent per annum in 1991-92 which had further increased to about 42 per cent in 2002-03. It is more than three times the interest rate charged by the institutional agencies.

The interest rate charged by the money lenders varied across the states but remained high in all the states as compared to that charged by the institutional agencies. Further, it appeared that the poorer households were compelled to pay even a higher rate of interest. The effective monthly interest rates charged by moneylenders were from about 5 per cent to more than 100 per cent (Robinson, 2001). The high variance in the interest rates charged by the moneylenders may be attributed to the differences in the type of loan, risks in money lending and bargaining power of the borrowers. High transaction costs of lending, low lending volumes, high opportunity cost of capital and the absence of legal recourse for loan recovery were amongst the factors that induce the moneylender to keep the interest rates high. These high rates of interest have significant economic and social costs. They, in fact inhibit the growth of borrowers' entrepreneurial ability and in some cases force them to become defaulters. The findings clearly exhibited that the interest charged by informal moneylenders was exploitative and therefore a stable, reliable and reasonable credit delivery system is a necessity to prevent the exploitation of rural households by the informal moneylenders.

TABLE 4. STATEWISE INTEREST RATES ON INSTITUTIONAL AND NON-INSTITUTIONAL BORROWINGS: 1991-92 AND 2002-03

(*per cent/annum*)

States	Institutional			Non-Institutional		
	1991-92	2002-03	Change (per cent)	1991-92	2002-03	Change (per cent)
(1)	(2)	(3)	(4)	(5)	(6)	(7)
Andhra Pradesh	13.36	12.75	-0.61	25.41	30.87	5.46
Arunachal Pradesh	13.98	5.83	-8.15	0.04	4.15	4.11
Assam	7.28	9.73	2.45	1.37	10.45	9.08
Bihar	11.27	11.73	0.46	23.28	36.02	12.74
Chhattisgarh	12.24	13.91	1.67	24.29	27.40	3.11
Gujarat	12.38	12.73	0.35	6.54	8.87	2.33
Haryana	10.16	13.54	3.37	24.53	23.85	-0.67
Himachal Pradesh	9.32	11.42	2.10	5.02	3.53	-1.49
Jammu & Kashmir	8.67	11.13	2.46	5.66	0.12	-5.55
Jharkhand	7.22	8.29	1.07	8.31	18.89	10.58
Karnataka	13.05	14.33	1.28	18.29	25.19	6.90
Kerala	15.29	13.15	-2.14	21.25	29.48	8.23
Maharashtra	13.79	15.05	1.26	14.70	24.78	10.08
Manipur	3.74	25.36	21.62	32.57	51.17	18.60
Meghalaya	12.56	8.54	-4.02	0.00	4.10	4.10
Mizoram	5.83	9.46	3.63	0.00	0.21	0.21
Madhya Pradesh	12.13	12.89	0.75	27.07	29.59	2.52
Nagaland	9.23	11.92	2.69	0.95	7.94	6.99
Orissa	11.59	13.00	1.41	31.77	41.72	9.94
Punjab	11.56	12.72	1.16	11.52	18.24	6.71
Rajasthan	12.47	13.38	0.91	27.87	22.69	-5.18
Sikkim	9.42	9.89	0.48	0.00	13.29	13.29
Tamil Nadu	11.54	15.48	3.95	34.29	35.09	0.80
Tripura	6.88	8.63	1.74	3.88	2.90	-0.99
Uttar Pradesh	12.86	11.95	-0.91	25.05	26.30	1.25
Uttaranchal	8.12	11.92	3.80	2.32	27.52	25.20
West Bengal	10.16	11.76	1.60	19.27	23.85	4.57
All-India	12.48	13.38	0.91	24.24	28.58	4.35

Source: Same as in Table 1.

Participation of Landless Households and Smallholders in Rural Credit

There is a predominance of landless, marginal and smallholders in rural households, which has accentuated over time. In 2002-03, they together were estimated to account for about 92 per cent of the total rural households. One of the indicators of the performance of the rural credit would be to assess their participation in the rural credit flow. The access of these households to institutional credit and the share of institutional credit in their borrowings have increased modestly during 1991-92 to 2002-03 (Table 5).

TABLE 5. CREDIT DELIVERY AND SMALL-HOLDER HOUSEHOLDS: 1991-92 AND 2002-03

Indicators (1)	Year (2)	Landless (3)	Marginal (4)	Small (5)	Medium (6)	Large (7)	Total (8)
Percent distribution of households	1991-92	33.8	39.5	13.0	8.7	5.0	100.0
	2002-03	39.6	41.4	10.6	5.5	2.9	100.0
Households having access to credit (per cent)							
Institutional	1991-92	3.9	7.3	9.1	14.1	18.3	7.5
	2002-03	4.1	5.7	10.6	15.3	22.1	6.6
Non-institutional	1991-92	10.6	10.8	10.3	9.3	7.9	10.4
	2002-03	13.5	13.8	9.4	9.4	7.7	12.8
Both	1991-92	0.7	1.2	1.1	2.4	2.2	1.2
	2002-03	0.7	1.1	2.9	2.4	3.3	1.3
Share of institutional borrowing (per cent)	1991-92	49.2	52.1	51.2	56.6	70.1	55.6
	2002-03	51.6	51.3	59.7	66.1	69.3	57.1
Distribution of borrowing (per cent)							
Institutional	1991-92	18.7	28.2	11.6	16.7	24.7	100.0
	2002-03	25.6	27.4	14.5	14.5	17.9	100.0
Non-institutional	1991-92	24.3	32.6	13.8	16.1	13.2	100.0
	2002-03	31.9	34.6	13.0	9.9	10.6	100.0
Per hectare borrowing (Rs./year)							
Institutional	1991-92	-	880	332	372	346	545
	2002-03	-	2114	1236	1244	1132	1916
Non-institutional	1991-92	-	809	316	285	148	435
	2002-03	-	2004	833	639	501	1440
Per-capita borrowing (Rs./year)							
Institutional	1991-92	65	72	77	154	332	98
	2002-03	193	162	296	540	1098	254
Non-institutional	1991-92	67	66	73	118	142	79
	2002-03	181	154	200	277	486	191
Interest rates on borrowings (per cent per annum)							
Institutional	1991-92	11.5	12.9	12.2	12.1	13.4	12.5
	2002-03	13.7	13.5	12.9	13.2	13.2	13.4
Non-institutional	1991-92	24.3	25.4	22.9	22.4	20.3	24.2
	2002-03	30.2	28.1	26.3	25.6	25.2	28.6

Source: Same as in Table 1.

But their shares in institutional borrowings did not commensurate with their shares in the total number of households, though the borrowing per capita and per hectare basis is higher among these groups. This indicates that though the flow of institutional credit had shown an improvement, the speed of improvement has to be accelerated. But one of the disturbing features is the higher and increasing interest rate paid by these groups on borrowings from non-institutional sources. For instance, the landless households were paying 25 per cent rate of interest on non-institutional borrowings in 1991-92, and it rose to 30 per cent in 2002-03. The interest rate paid on credit from non-institutional sources clearly showed a scale bias which has been persisting and accentuating over time. This trend does not augur well for equitable rural development.

Kisan Credit Cards (KCCs) Scheme

The Kisan Credit Cards (KCCs) scheme was introduced in 1998-99 to facilitate farmers' access to short term credit from the formal financial institutions. The credit under this scheme is sanctioned in proportion to the size of owned land but there is some flexibility for the farmers cultivating leased-in land, in addition to their owned holding. The KCCs scheme has made a rapid progress since then and till 31st October 2006, 64.5 million KCCs were issued by co-operative banks, commercial banks and RRBs. The pattern of distribution of KCCs across different states exhibited considerable variations. Some regional disparities in the distribution of KCCs as well as amounts sanctioned/availed are clearly visible. The distribution of cards and amount availed across different classes of households were not uniform in all states. But at the aggregate level, though the number of credit cards issued and the credit availed did not commensurate with the proportion of smallholders, the tilt particularly in the number of cards issued was not very sharp. The difference in the amount of credit availed under KCCs scheme could be partly attributed to the higher limit for large landholders and their higher credit requirement for agricultural operations. It was interesting to note that an overwhelming majority of the farmers was using KCCs to avail credit from the formal financial institutions. At the aggregate level about 61 per cent of the card holders were found using the same at least once in a year.

The use pattern varied across states as well as different classes of farmers. The use of credit card showed a positive relationship with the size of land holding. The percentage of card holders using KCCs was 35 among landless households and 81 among large farm households. The high popularity of KCCs in a short span of time revealed that that rural households do not shy away from availing credit because of interest rate only but because of cumbersome procedure of lending by formal credit institutions under other schemes. The KCC scheme has been observed to be quite efficient in Punjab by Singh and Sekhon (2005). But Sharma (2005) has highlighted several hindrances in the expansion of KCCs scheme and has stressed on streamlining of the legal and institutional hurdles with maintaining its sustainability and long-term viability.

TABLE 6. STATEWISE PERCENTAGE DISTRIBUTION OF HOUSEHOLDS, KCC HOLDERS AND AMOUNT BORROWED THROUGH KCCs BY CLASS: 2002-03

	Landless			Marginal			Small			Medium			Large		
States	HHDs	KCCs	Credit	HHDs	KCCs	Credit	HHDs	KCCs	Credit	HHDs	KCCs	Credit	HHDs	KCCs	Credit
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
Andhra Pradesh	56.5	13.2	3.2	27.8	40.0	27.3	9.2	24.5	18.3	4.4	15.0	34.8	2.1	7.3	16.4
Arunachal Pradesh	21.4	0.0	0.0	40.8	5.3	0.0	24.9	63.7	45.8	8.9	31.0	54.2	4.0	0.0	0.0
Assam	37.1	17.5	0.0	44.3	50.5	10.9	14.6	21.1	45.0	3.7	8.0	27.6	0.2	2.9	16.6
Bihar	39.0	2.3	1.3	51.1	51.0	18.7	7.0	28.6	29.7	2.2	6.3	6.4	0.7	11.9	43.9
Chhattisgarh	24.2	0.6	0.0	39.4	32.3	15.7	20.3	47.2	58.5	11.1	14.8	21.9	5.1	5.0	3.8
Gujarat	41.5	1.3	0.7	33.4	10.3	7.7	9.9	12.1	7.4	8.1	29.7	19.8	7.1	46.6	64.4
Haryana	38.3	7.7	12.4	38.6	8.8	1.3	9.6	8.9	5.0	8.8	43.8	43.2	4.8	30.9	38.1
Himachal Pradesh	23.2	1.5	0.0	65.0	69.7	5.1	8.4	25.9	94.9	2.9	2.9	0.0	0.4	0.0	0.0
Jammu & Kashmir	10.8	1.9	7.5	69.9	60.3	11.3	12.4	15.3	12.2	4.7	12.6	31.3	2.1	9.8	37.8
Jharkhand	23.8	1.6	0.0	62.9	72.2	45.5	11.0	22.7	35.4	1.7	0.0	0.0	0.6	3.5	19.2
Karnataka	42.1	0.8	0.3	32.1	13.5	8.8	13.3	27.8	21.0	7.5	25.8	11.9	5.1	32.2	57.9
Kerala	50.3	11.6	5.7	45.5	58.5	62.8	3.5	15.9	17.3	0.5	6.2	14.1	0.3	7.8	0.0
Maharashtra	44.2	0.7	0.1	26.8	16.0	3.3	13.6	18.8	26.1	10.0	28.0	13.6	5.4	36.4	56.8
Manipur	19.5	0.0	0.0	64.8	77.1	41.4	14.4	22.9	58.6	1.1	0.0	0.0	0.2	0.0	0.0
Meghalaya	25.0	0.0	0.0	52.8	78.6	19.0	15.4	17.3	59.1	4.8	4.1	21.9	2.0	0.0	0.0
Mizoram	14.3	11.2	0.0	48.9	53.0	0.0	29.8	30.0	0.0	5.6	5.7	0.0	1.4	0.0	0.0
Madhya Pradesh	34.8	0.8	0.2	27.5	5.2	1.3	19.2	14.7	4.1	11.9	22.0	16.2	6.5	57.2	78.2
Nagaland	18.6	0.0	0.0	70.0	100.0	0.0	10.1	0.0	0.0	1.2	0.0	0.0	0.0	0.0	0.0
Orissa	35.4	5.9	4.1	48.5	53.2	27.9	11.8	27.9	49.3	3.7	9.5	12.2	0.7	3.4	6.4
Punjab	41.1	2.7	2.2	37.2	7.3	1.1	8.7	21.2	18.1	7.4	29.0	23.6	5.7	39.8	55.0
Rajasthan	24.7	4.2	1.1	37.6	23.3	6.7	15.4	15.4	12.0	11.1	24.7	25.0	11.2	32.3	55.2
Sikkim	36.0	0.0	0.0	53.0	100.0	0.0	7.9	0.0	0.0	2.8	0.0	0.0	0.2	0.0	0.0
Tamil Nadu	64.5	3.9	0.6	27.1	22.7	2.7	4.9	33.1	43.5	2.6	26.5	33.1	0.9	13.9	20.1
Tripura	62.8	39.1	10.7	35.0	60.9	89.3	2.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0
Uttar Pradesh	24.0	3.0	5.2	57.6	40.4	20.7	11.9	28.3	22.5	5.1	20.6	33.2	1.3	7.8	18.4
Uttaranchal	26.4	26.8	5.7	65.7	46.7	17.5	4.6	5.6	42.2	3.3	13.4	18.5	0.1	7.4	16.1
West Bengal	43.1	16.9	0.1	51.2	60.5	28.4	4.5	20.3	71.5	1.0	2.1	0.0	0.2	0.3	0.0
All-India	39.6	6.1	3.0	41.4	34.3	13.1	10.6	23.9	16.4	5.5	19.0	25.6	2.9	16.7	41.8

Source: Unit Level Data of NSSO, *Debt and Investment Survey*, 59th Round.
Note: HHDs = Households.

TABLE 7. STATEWISE USE OF KCCs BY HOUSEHOLDS DURING 365 DAYS: 2002-03

(per cent)

States	Landless	Marginal	Small	Medium	Large	All
(1)	(2)	(3)	(4)	(5)	(6)	(7)
Andhra Pradesh	13.73	25.25	25.42	35.58	55.93	27.56
Arunachal Pradesh	0.00	0.00	88.06	88.89	0.00	83.66
Assam	0.00	16.85	100.00	100.00	100.00	40.55
Bihar	90.27	78.36	55.20	100.00	100.00	75.96
Chhattisgarh	0.00	69.03	98.95	44.44	4.10	75.80
Gujarat	100.00	93.44	95.73	82.52	95.21	91.38
Haryana	100.00	58.07	100.00	97.30	60.27	82.85
Himachal Pradesh	0.00	3.08	25.23	0.00	0.00	8.69
Jammu & Kashmir	100.00	71.47	64.66	100.00	100.00	77.38
Jharkhand	0.00	47.92	82.91	0.00	100.00	56.89
Karnataka	100.00	100.00	89.47	75.99	55.52	76.57
Kerala	100.00	51.46	58.85	100.00	0.00	57.25
Maharashtra	27.79	26.95	96.08	63.24	82.84	70.51
Manipur	0.00	57.75	100.00	0.00	0.00	67.43
Meghalaya	0.00	7.59	100.00	100.00	0.00	27.33
Mizoram	0.00	0.00	0.00	0.00	0.00	0.00
Madhya Pradesh	100.00	89.16	74.00	71.13	89.20	83.06
Nagaland	0.00	0.00	0.00	0.00	0.00	0.00
Orissa	76.84	54.14	71.60	67.84	88.94	62.86
Punjab	100.00	89.62	100.00	93.43	75.86	87.73
Rajasthan	30.20	54.67	91.19	96.27	95.71	82.81
Sikkim	0.00	0.00	0.00	0.00	0.00	0.00
Tamil Nadu	17.23	23.68	64.83	62.32	35.38	48.91
Tripura	100.00	13.47	0.00	0.00	0.00	47.35
Uttar Pradesh	84.83	61.05	72.04	83.57	79.71	70.96
Uttaranchal	3.89	35.11	100.00	100.00	100.00	43.87
West Bengal	0.67	18.49	82.33	0.00	0.00	27.98
All-India	35.07	47.39	63.69	70.97	81.24	60.65

Source: Same as in Table 6.

IV

DETERMINANTS FOR CHOICE OF CREDIT OUTLETS

A multinomial logit model was applied to identify the factors which determine the choice of a credit outlet. The variables included in the best-fit models and related hypotheses are defined below.

It was hypothesised that the age of the decision-maker may influence the choice of credit outlets as it will act as a proxy of the experience. Female-headed households were hypothesised to have less access to formal credit than male-headed households. The education level was hypothesised to influence the choice of formal credit outlets positively, i.e., higher the level of education higher is the probability of accessing loans from the formal credit sources. Different household types were supposed to influence the decision differently. Irrigated environments were hypothesised to influence the choice of formal credit positively.

The variables used in the model with descriptive statistics are summarised in Annexure I. The final estimation results of multinomial logit model are presented in

Table 8. The effect of age on probability of borrowing was significant and positive from institutional sources and negative from non-institutional sources. It was expected because with age, people mature and hence avoid going for borrowing from non-institutional sources. The effect of gender though was positive for both cases, it was more so for getting loans from institutional sources. Only 11 per cent of the rural households were estimated to be headed by female. The male headed households depicted higher probabilities of getting loans from the institutional sources. The bigger household size and larger farm size increases the probability of taking credit from the institutional sources. The bigger size of household could spare a family member to pursue the loan disbursement procedures from the institutional sources, while larger farm size enhances the repayment capacity and thus facilitates credit

TABLE 8. ESTIMATES OF MULTINOMIAL LOGIT REGRESSION

	Institutional		Non-Institutional	
Explanatory variables	Coefficient	Standard error	Coefficient	Standard error
(1)	(2)	(3)	(4)	(5)
Age of the head of the household (years)	0.01177**	0.00160	-0.00762**	0.00121
Gender of the head of the household, Male =1, otherwise =0	0.31241**	0.08692	0.17455**	0.05420
Household size	0.04296**	0.00775	0.01672**	0.00609
Operated land size (hectares)	0.14161**	0.01204	0.06788**	0.01455
Social group				
ST=1, otherwise=0	-0.72042**	0.09430	-0.55630**	0.06651
SC=1, otherwise=0	-0.31526**	0.07299	0.21063**	0.04719
OBC=1, otherwise=0	-0.05296	0.05195	0.21402**	0.04059
Education level				
Primary =1, otherwise=0	0.32765**	0.05753	-0.01791	0.03795
Secondary=1, otherwise=0	0.47076**	0.05956	-0.26560**	0.04490
Higher secondary or certificate/diploma course=1, otherwise=0	0.76794**	0.11298	-0.25878**	0.09708
Graduate and above=1, otherwise=0	0.71077**	0.11767	-0.47697**	0.11791
Household type				
Agricultural labour=1, otherwise=0	-0.17302*	0.08412	0.07531	0.05120
Other labour=1, otherwise=0	0.16560	0.09252	0.14224*	0.06356
Self-employed in agriculture=1, otherwise=0	0.50192**	0.06978	-0.12668*	0.05019
Others=1, otherwise=0	0.08432	0.09835	-0.39089**	0.06991
Agro-ecological Zone				
Arid=1, otherwise=0	0.19867	0.18939	-0.60995**	0.14419
Coastal=1, otherwise=0	1.37183**	0.06560	0.85422**	0.04832
Hill and mountain=1, otherwise=0	-0.65499**	0.10677	-0.58896**	0.05823
Rainfed=1, otherwise=0	0.51580**	0.05298	-0.09620**	0.03690
Constant	-4.47912**	0.14040	-1.71239**	0.09759
Chi-squared	2586.55			
log-likelihood	-54565.09			
Number of observations	89529			
R^2	0.0516			

Source: Same as in Table 6.

Note: ** and * 5 indicate level of significance at 1 and 5 per cent level, respectively.

disbursement from the institutional source. The results further confirmed the vulnerability of weaker sections in getting credit from the institutional sources. It was observed that households belonging to scheduled castes, scheduled tribes and other backward castes had less probability of getting credit from the institutional source than the general caste households.

The effect of education on the choice of credit outlet was interesting. The higher the level of education, the higher was the probability of having loans from the institutional sources. The education makes the borrower wiser not to take credit from non-institutional sources at higher rates of interest. This indicates the need for simplification of the procedures of credit disbursement from the institutional sources so that even the illiterates could have increased their access to institutional credit in the rural areas. The effect of household type on the choice of credit outlet was mixed. The households with self-employment in agriculture depicted higher probability of availing credits from the institutional sources, while the labour households generally turn to non-institutional sources for borrowing. The agroclimatic conditions also influenced the choice of credit outlets. As compared to households located in the irrigated region, the households located in the coastal region had higher probability of borrowings from institutional sources. The households in other regions had less probability of choosing institutional sources as their credit outlets.

These results suggested that rural credit outlets had evolved in response to a number of interactive forces. Nevertheless, their effects on choice of credit outlets varied. On the whole, age, education, gender, social group, farm size, household size, agroclimates and occupation emerged to be the major determinants of the choice of rural credit outlets.

Factors Affecting the Holding of Kisan Credit Cards by Rural Households

A logit model was used to identify the factors which influenced the holding of kisan credit cards by the rural households. The explanatory variables as explained above were included and the results of logistic regression are presented in Table 9. The effect of age, gender, household size, farm size, and education level was positive and influenced the decision of the households to have KCCs. The possession of KCCs was found to be biased in favour of general castes; in comparison households of other castes had less probability of having kisan credit cards. Again, apart from the households with self-employment in agriculture are having lesser probability of having KCCs. It was expected because the purpose of a kisan credit card was to increase the flow of institutional credit particularly the short term credit for agricultural operations and therefore, the households involved in agriculture are more in need of these credits. As compared to the irrigated region, households in the coastal region exhibited higher probability of possessing KCCs. The farmers in other regions were placed disadvantageously as compared to farmers in the irrigated regions.

TABLE 9. FACTORS INFLUENCING HOUSEHOLDS DECISION TO HOLD KISAN CREDIT CARD

Explanatory variables (1)	Coefficient (2)	Standard error (3)
Age of the head of the household (years)	0.00580*	0.00240
Gender of the head of the household,		
Male =1, otherwise =0	0.70213**	0.15725
Household size	0.04222**	0.01140
Operated land size (hectares)	0.17254**	0.01548
Social group		
ST=1, otherwise=0	-0.79435**	0.17329
SC=1, otherwise=0	-0.40651**	0.11348
OBC=1, otherwise=0	-0.19294*	0.07879
Education level		
Primary =1, otherwise=0	0.18214*	0.09125
Secondary=1, otherwise=0	0.27765**	0.09514
Higher secondary or certificate/diploma course=1, otherwise=0	0.58799**	0.15528
Graduate and above=1, otherwise=0	0.51073**	0.17629
Household type		
Agricultural labour=1, otherwise=0	-0.00112	0.16805
Other labour=1, otherwise=0	-0.44277	0.23162
Self-employed in agriculture=1, otherwise=0	1.35050**	0.13538
Others=1, otherwise=0	0.14047	0.19083
Agro-Ecological Zone		
Arid=1, otherwise=0	-0.15307	0.29383
Coastal=1, otherwise=0	0.71743**	0.10414
Hill and mountain=1, otherwise=0	-1.44643**	0.21331
Rainfed=1, otherwise=0	-0.09308	0.07979
Constant	-5.70096**	0.23615
Chi-squared	863.25	
log-likelihood	9683.06	
Number of observations	89529	
R^2	0.1213	

Source: Same as in Table 6.
Note**:** ** and * indicate level of significance at 1 and 5 per cent level, respectively.

V

CONCLUSION AND POLICY IMPLICATIONS

The access and distribution of rural credit is skewed in favour of better endowed regions and within the same region tilted towards better-off households. The persistence of non-institutional sources is a matter of concern and concerted efforts need to be made to minimise their role in rural credit, particularly because their rates of interest are exploitative and have exhibited an increasing trend. The weaker sections of the society are more exposed to these sources, and seemed to be trapped into a vicious circle. The use of KCCs have been found encouraging and its distribution is less skewed.

The choice of a credit outlet is affected by a number of socio-demographic factors. The effect of education has indicated the need for capacity building of borrowers. Imparting training to borrowers regarding procedural formalities of financial institutions could be helpful in increasing their access to institutional credit.

Certain initiatives have been taken by some of the banks like Punjab National Bank and their outcome has been encouraging. Similar efforts need to be replicated by other financial institutions. Further, procedure for loan disbursement could be made simple so it may not be difficult for the less educated and illiterate households to access institutional financing agencies for the credit. The weaker sections like SCs, STs and OBCs and smallholders are more exposed to non-institutional sources for their borrowings and thus end up paying higher rates of interest, which have a negative bearing on their economic situation. This needs to be ameliorated by strengthening the on-going special schemes for these groups. The requirement of heavy margins and collaterals are still in vogue which further precludes landless and small holders from accessing the institutional credit. Reforms initiated in this regard should be effectively implemented at the grassroot level. The proportionately higher use of KCCs indicates that if procedures are made simple, the access to institutional credit can be enhanced.

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ANNEXURE 1

MEAN AND STANDARD DEVIATION OF EXPLANATORY VARIABLES USED IN LOGIT AND MULTINOMIAL LOGIT REGRESSIONS

Variables (1)	Mean (2)	Std. Dev. (3)
Age of the head of the household (years)	45.039	13.843
Gender of the head of the household,		
Male =1, otherwise =0	0.892	0.310
Household size	5.026	2.526
Operated land size (hectares)	0.673	1.461
Social group		
ST=1, otherwise=0	0.101	0.302
SC=1, otherwise=0	0.222	0.415
OBC=1, otherwise=0	0.412	0.492
Education level		
Primary =1, otherwise=0	0.267	0.442
Secondary=1, otherwise=0	0.201	0.401
Higher secondary or certificate/diploma course=1, otherwise=0	0.033	0.179
Graduate and above=1, otherwise=0	0.028	0.164
Household type		
Agricultural labour=1, otherwise=0	0.261	0.439
Other labour=1, otherwise=0	0.104	0.305
Self-employed in agriculture=1, otherwise=0	0.380	0.485
Others=1, otherwise=0	0.110	0.313
Agro-Ecological Zone		
Arid=1, otherwise=0	0.024	0.153
Coastal=1,otherwise=0	0.135	0.342
Hill and mountain=1, otherwise=0	0.043	0.204
Rainfed=1, otherwise=0	0.475	0.499