An Appraisal of Performance of Primary Agricultural Co-operative Societies (PACS) in Nadia District of West Bengal

Pijush Kanti Ghosh[1], Arabinda Mitra[2] and Sudipta Sarkar[3]

[1]Department of Rural Development Studies, University of Kalyani, Kalyani, West Bengal-741235, India
[2]Department of Agricultural Economics, Bidhan Chandra Krishi Viswavidyalaya, Kalyani, West Bengal-741235, India
[3]Department of Rural Development Studies, University of Kalyani, Kalyani, West Bengal-741235, India

*Corresponding author: pkgrdsku17@klyuniv.ac.in

ABSTRACT

Primary Agricultural Cooperative Societies (PACS) – the age-long rural institutions were set up mainly focussing credit aspects of farming community. However, with the passage of time PACS have undergone many changes in terms of their *modus operandi* as well as objectives. Of late they have been mobilizing financial resources from rural households in the form of savings etc. Additionally, they are now promoting Self-Help-Groups (SHGs), particularly women-groups who were untouched earlier. In this paper, attempt is being made to examine performance of PACS in terms of its coverage, inclusion, economic efficiency, social responsibility and prudence in financial management. The study is based on secondary data relating to the period 2007-08 to 2016-17 referring to randomly selected seven PACS of Nadia district, West Bengal. Finally the authors point out to the weaknesses and pitfalls of societies and conclude with some suggestions for strengthening PACS. It has been observed that PACS have broadened their base in terms membership growth and quantum of loan-disbursement. However, they have showed poor performance in recovery and decelerating NPA growth. The reasons for growths in Overdue and NPA need critical observations at ground level. An exhaustive evaluation is needed whether overdue or NPA are owing to growth of wilful or non-wilful defaulters.

Keywords: Primary Agricultural Cooperative Societies (PACS), performance evolution

Primary Agricultural Co-operative Societies (PACS) have been playing major roles in rural sector, specifically in agricultural finance frontier for more than a century back. Functioning of PACS has been assessed, modified and monitored at different phases of both pre and post independence periods in India. PACS in Nadia district of West Bengal also witnessed such changes over the years. The authors endeavoured in this paper to make an in depth study of PACS of the district in terms of several indicators based on secondary data covering the period 2007-08 to 2016-17. This study refers to randomly selected seven PACS of Nadia district, West Bengal. In this paper, attempt is being made to examine performance of PACS in terms of its coverage, inclusion, economic efficiency, social responsibility and prudence in financial management.

Methodology

In this exercise we have chosen thirty eight indicators closely related to the domain of PACS-performance. Data on eighteen (18) indicators for the period under study were directly collected from respective PACS and the rest twenty (20) were computed and derived. List of the indicators could be viewed from Table 1.

In our analytical framework we have computed exponential growth rates of the respective indicators using the following formula:

$$A = P_e^{\ rt}$$

Where, A is the dependent variable (end value of the indicators, for example no of loannes, total loan, total deposit etc.)

r is the growth

P is constant

t is the time period

In this paper we have used K-means clustering technique for grouping the selected PACS into homogeneous strata according to growths of indicators. K-means clustering is a statistical tool for grouping the observations into K-clusters in which each observations belongs to the cluster with the nearest mean serving as a prototype of the cluster. The objective of K-means clustering is to minimize total intra cluster variance.

Further, we have classified the PACS into several-clusters according to sub-set of growth indicators as discussed subsequently.

RESULTS AND DISCUSSION

Table 1 shows growth rates of key-indicators during the period 2007-08 to 2016-17 for respective PACS. However, it is hard to comprehend, compare, contrast and examine the PACS simultaneously with large number of variables. We took the opportunity to oversee performance of these chosen PACS in terms of sub-sets of indicators using K-means clustering.

Coverage and Network

The following Table 2 shows coverage and network of PACS with respect to seven indicators. PACS have been clustered into three homogeneous groups using K-means clustering process.

The Table 2 witnesses that Mahishbathan is a distinct entity separating from other counter-clusters in terms of coverage. It is seen that growth rates of loanee members including agricultural borrowers were maximum under this unique cluster. Another point of merit to this group has been marked in terms of high growth of agricultural- allied borrowers. Further, this PACS has excelled in fund mobilization or promoting thrift- savings. In contrast, Khishma and Bholadanga Saguna forming the second cluster showed dismal performance in terms of growth of term-depositors. The same table also depicts that number of agricultural allied borrowers have not grown at the same pace as agricultural borrowers grew. The third cluster comprising Haripur, Jitpur, Dharampur and Pipulbaria have shown moderate

and impressive growths in the selected indicators. However, this cluster exhibited high growth rate in the number of agricultural allied loanees.

Diversification Portfolio of PACS-loans

Table 3 and Table 4 examine the growth-pattern of loan disbursement in between agricultural and agricultural allied sector. Apart, this table also witnesses loans disbursed to the SHGs. The selected PACS have been classified into three groups. Referring to the Table 3, we find that Haripur has excelled in agricultural allied sector.

However, it showed negative figure in loan disbursement to the SHGs. The same table also shows high growth rates in all indices in case of the third cluster comprising Pipulbaria, Dharampur and Mahishbathan. Further cluster-2 showed positive growths in the selected variables. However growth in allied agricultural sector lagged far behind agricultural sector in this cluster.

Now coming to the Table 4, we observe poor performance of Bholadanga Saguna and Khishma PACS in terms of growth in per capita loan disbursement both in agriculture and agricultural-allied sector. Growth in SHG sector is positive but with little value in this group. The cluster-2 under this sub-category has figured high growth in per capita loan disbursement but displayed negative trend in agricultural allied sector. This cluster also showed impressive growth in per capita SHG-loans. This cluster has single membership of Pipulbaria. The third cluster formed by four PACS, viz; Haripur, Jitpur, Dharampur and Mahishbathan showed negative performance in agricultural allied loan per caput. Similar trend has been observed in SHG loan per member in this cluster.

Next, we have attempted to examine the financial prudence of PACS in terms of growth in share capital, total loan disbursed, total deposit along with growths in overdue and NPA (Non Performing Asset). Accordingly PACS have been clustered into three homogeneous groups as shown in Table 5.

Financial Prudence

Looking at the Table 5, it is observed that cluster-1 in which Haripur is the sole member has shown relatively better prudence in financial matter comparing to the rest PACS. In this cluster impressive

Table 1: Growth of Key-indicators (in %) for Selected PACS during the Period of 2007-08 to 20016-17

Sl. No.	Indicators	PACS						
		Haripur	Jitpur	Dharampur	Pipulbaria	Mahishbathan	Khishma	Bholadanga Saguna
1	No of General Members	6.54	5.55	7.82	7.44	6.90	11.10	11.04
2	No of Loanee Members	9.31	5.20	6.30	6.76	15.35	11.41	9.52
3	% of General Member to Loanee Members*	2.60	-0.34	-1.41	-0.64	7.91	0.27	-1.36
4	Total amount of loan	10.16	9.58	10.26	13.92	15.81	7.69	8.92
5	Total Loan per capita*	1.46	3.95	3.03	6.24	0.29	-3.91	-2.69
6	Overdue per PACS*	-18.03	5.27	11.66	12.12	5.66	0.67	1.39
7	Overdue Per borrowers*	-25.02	0.07	5.04	5.03	-8.41	-9.64	-7.43
8	NPA per PACS*	-28.03	-1.10	-1.10	0.54	-11.32	1.77	1.37
9	NPA Per Borrowers*	-34.16	4.35	-6.96	-5.83	-23.12	-8.65	-7.45
10	Share Capital per PACS*	10.91	9.35	9.52	13.42	15.69	7.05	6.58
11	Share Capital Per Borrowers*	1.46	3.95	3.03	6.24	0.29	-3.91	-2.69
12	No of SHG Groups formed	-1.38	10.80	18.70	19.00	21.88	13.94	16.71
13	No of SHG Members per PACS*	-1.38	10.99	19.27	18.08	20.81	13.94	15.00
14	SHG Loan Disbursed	-1.08	11.36	19.15	22.34	16.13	12.29	16.88
15	Per Capita SHG Loan*	0.30	0.33	-0.11	3.61	-3.88	-1.45	1.64
16	No of Depositor Members by SHG	9.35	4.68	5.13	7.32	14.27	8.51	8.32
17	Deposit amount by SHGs	9.56	9.07	10.21	12.86	16.99	12.12	6.40
18	Per Capita Deposit amount by SHG*	0.19	4.19	4.83	5.16	2.38	3.33	-1.77
19	No of Saving Depositors (SB)	9.26	4.63	5.15	7.69	14.30	8.75	8.17
20	Amount of SB Deposit	10.38	8.38	10.95	13.28	17.38	11.08	6.77
21	Per Capita SB Deposit*	1.02	3.59	5.52	5.19	2.70	2.15	-1.29
22	No of Recurring Depositors(RD)	9.70	5.89	5.54	9.09	16.94	10.99	8.66
23	Amount of RD Deposit	11.31	10.45	9.82	13.72	16.16	35.79	10.85
24	Per Capita RD Deposit*	1.47	4.30	4.06	4.24	-0.67	22.35	2.01
25	No of Term Depositors	8.63	-1.44	0.77	4.15	4.15	-4.66	1.99
26	Amount of Term Deposit	-1.27	-2.32	6.62	3.23	20.92	-9.85	-11.31
27	Per Capita Term Deposit*	-9.12	-0.89	5.80	10.30	16.10	-5.45	-13.03
28	Total Deposit	10.34	9.23	9.80	13.17	16.20	8.89	6.47
29	No of Agricultural Loanee	9.13	5.23	6.39	6.46	15.97	12.55	11.37
30	Agricultural Loan	10.69	9.83	10.44	14.02	16.39	8.96	8.41
31	Per Capita Agriculture Loan*	1.43	4.37	3.81	7.10	0.37	-3.19	-2.65
32	No of Agricultural Allied Loanee	11.54	4.98	4.99	11.32	12.86	4.02	-1.32
33	Agricultural Allied Loan	12.12	4.02	5.14	9.87	13.08	-0.08	-0.27
34	Per Capita Agricultural Allied Loan*	0.52	-0.92	0.15	-1.31	0.19	-3.94	1.06
35	Agricultural Loan to total loan*	0.48	0.23	0.17	0.09	0.50	1.18	-0.47
36	Agricultural Allied Loan to total loan*	1.77	-5.07	-4.64	-3.56	-2.36	-7.22	-8.44
37	SHG Loan to total loan*	-10.21	1.63	8.06	7.39	0.27	4.27	7.30
38	CD Ratio*	-0.16	0.32	0.41	0.66	-0.34	-1.10	2.31

*(*Computed)*

Table 2: Cluster Centres Showing Growth -rate of Selected Indicators

Indicators	Cluster		
	1	2	3
No of General Members	6.90	11.07	6.84
No of Loanee Members	15.35	10.46	6.89
No of Agriculture Loanee	15.97	11.96	6.80
No of Agriculture Allied Loanee	12.87	1.35	8.21
No of SB Depositors	14.30	8.46	6.68
No of RD Depositors	16.94	9.82	7.55
No of Term Depositors	4.15	-1.33	3.02

(Cluster-1: Mahishbathan; Cluster-2: Khishma and Bholadanga Saguna and Cluster-3:Haripur, Jitpur, Dharampur and Pipulbaria).

Table 3: Cluster Centres Showing Diversification of Loans in terms of Growth

Indicators	Cluster		
	1	2	3
Agricultural Loan disbursed	10.69	9.07	13.62
Agricultural Allied Loan disbursed	12.12	1.22	9.36
SHG Loan disbursed	-1.08	13.51	19.20
Total Loan disbursed	10.16	8.73	13.33

(Cluster 1: Haripur; Cluster 2: Jitpur, Khishma and Bholadanga Saguna and Cluster 3: Dharampur, Pipulbaria and Mahishbathan).

Table 4: Cluster Centres Showing Growth of per caput Diverse Loans

Indicators	Cluster		
	1	2	3
Per Capita Agricultural Loan disbursed	-2.92	7.10	2.50
Per Capita Agricultural Allied Loan disbursed	-1.44	-1.31	-0.01
Per Capita SHG Loan disbursed	0.09	3.60	-0.84
Per Capita total Loan disbursed	-3.30	6.24	2.18

(Cluster 1: Khishma and Bholadanga Saguna, Cluster 2: Pipulbaria and Cluster 3: Haripur, Jitpur, Dharampur and Mahishbathan).

Table 5: Cluster Centres Showing Growth of Loans Overdue, NPA, Share capital, Total Loan Disbursed and Total Deposit

Indicators	Cluster		
	1	2	3
Overdue per PACS	-18.03	4.75	8.89
NPA per PACS	-28.03	0.23	-5.39
Share Capital per PACS	10.91	8.12	14.55
Total Loan disbursed per PACS	10.16	9.11	14.86
Total Deposit per PACS	10.34	8.60	14.69

(Cluster 1: Haripur; Cluster 2: Jitpur, Dharampur, Khishma and Bholadanga Saguna. and Cluster 3: Pipulbaria and Mahishbathan).

negative trend in overdue- and NPA have been recorded. These two indicators obviously indicate excellence in financial management. Growths of share capital, total deposit are impressive for Haripur PACS. The second cluster has been suffering from the perennial problems of overdue and NPA over the years under study. Alarming growth of overdue has been evidenced in cluster -3 comprising Pipulbaria and Mahishbathan. The bright aspect of this cluster has been of negative growth in NPA. This cluster showed highest growths in share capital, loan disbursement and deposit mobilization comparing to other clusters.

Table 6: Mean Credit-Deposit (CD) Ratio across PACS at two different periods

PACS	2007-08 to 2010-11 Average CD Ratio	2011-12 to 2016-17 Average CD Ratio	2007-08 to 2016-17 Average CD Ratio
Haripur	62.17	61.67	61.92
Jitpur	66.19	66.70	66.44
Dharampur	62.92	64.51	63.72
Pipulbaria	61.48	64.44	62.96
Mahishbathan	88.51	88.44	88.47
Khishma	79.73	73.11	76.42
Bholadanga Saguna	72.22	80.25	76.24

Table 7: Cluster Centres Showing Growth of CD Ratio, Overdue and NPA during 2007-08 to 2016-17

Indicators	Cluster		
	1	2	3
Growth of Credit-Deposit (CD) Ratio	-0.16	-0.33	0.51
Growth of Overdue	-18.03	5.65	6.22
Growth of NPA	-28.02	-11.32	0.29

(Cluster1: Haripur; Cluster 2: Mahishbathan and Cluster 3: Jitpur, Dharampur, Khishma, Pipulbaria Ltd, Bholadanga Saguna).

Table 8: Cluster Centres Showing Growth of SHG

Indicators	Cluster		
	1	2	3
No of SHG Group	-1.38	13.82	19.86
No of SHG Members	-1.38	13.31	19.39

(Cluster 1: Haripur, Cluster 2: Jitpur, Khishma and Bholadanga Saguna. and Cluster 3: Dharampur, Pipulbaria and Mahishbathan).

Table 6 shows mean CD ratio of respective PACS over two segments of time period as well as the entire period under study. The table shows that CD ratios were more than 60% in both the periods. Further, Mahishbathan displayed more than 88% CD ratio during the two phases. Bholadanga Saguna also recorded more than 80% CD ratio during 2011-12 to 2016-17. A slight fall in the CD ratio was observed in case of Khishma but the mean CD ratio stood at 73.11% in the later period. High CD ratio represents PACS aggressiveness in credit disbursement relative to total deposit. The merit of high CD ratios irrespective of PACS scanned through the growths of overdue and NPA as shown in Table 7.

It is clear from above table that Haripur is the single PACS showing negative growths in CD ratio, overdue and NPA over the period under study.

Growth of CD ratio along with high positive growth in overdue has been evidenced in cluster-3. This particular cluster also witnessed positive growth of NPA. In contrast, Mahishbathan showed negative growth of CD ratio with positive trend of overdue. Mahishbathan also witnessed decreasing growths in NPA. Overall impression of this table is of PACS poor performance in financial management.

Social Impact

Social impact of PACS has been measured in terms growths in SHGs formation and members' enrolment under respective PACS. Haripur PACS has showed poor outcome in above contexts as seen in Table 8. All other PACS have shown positive trend in shouldering social responsibility. Amongst the PACS Dharampur, Pipulbaria and Mahishbathan are leading PACS showing impressive social impact.

CONCLUSION

Summarizing above discussions it could be said that PACS have broadened their base in terms membership growth and quantum of loan-disbursement. However, they have showed poor performance in recovery and decelerating NPA growth.

The reasons for growths in Overdue and NPA need critical observations at ground level. An exhaustive evaluation is needed whether overdue or NPA are owing to growth of wilful or non-wilful defaulters. For non-wilful defaulters PACS need to be pragmatic in loan disbursement. Credit should commensurate with the production and creating surplus at farmers' hands. PACS will have to provide skills along with necessary inputs at time and mobilize farmers in adopting high value package practises. Supervision of credit and monitoring credit periodically would definitely curb the magnitude of overdue and NPA and ensure better performance in PACS.

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