

Productivity Performance of Co-operative Banks in Punjab

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Abstract

The paper makes an attempt to analyse the productivity performance of Central Co-operative Banks in Punjab on the basis of Employee Productivity and Branch Productivity. The variables selected for the study are deposits, loans and net profit. The study is based on secondary data gathered from the annual reports of Punjab Central Co-operative Banks for the period 1997-98 to 2007-08. Mean, Standard Deviation and Coefficient of Variation have been used to analyse the productivity. Based on the findings, appropriate policy suggestions are made for improvement of productivity of Central Co-operative Banks in Punjab.

INTRODUCTION

Co-operative movement in India owes its origin to agriculture and allied sectors. Co-operative Banks are an important constituent of Indian financial system. Co-operative movement originated in the West, but the importance that such banks have assumed in India, is rarely paralleled anywhere else in the world. The beginning of co-operative banking in India dates back to about 1904 when official efforts were initiated to create a new institution based on the principles of co-operation which were considered to be suitable for solving the problems related to Indian agricultural conditions. Co-operative banks were given an important role after national economic planning was started in independent India. Co-operative banks became a part for rural development particularly agricultural development. With the advent of planning

process, co-operatives became an integral part of the five-year plans. Co-operative banks are Government sponsored, government supported and government subsidized financial agency in India. They get financial and other help from Reserve Bank of India, National Bank for Agriculture and Rural Development (NABARD), Central Government and State Governments.

In Punjab, the first co-operative bank was established in Gurdaspur on 25th October, 1909. The Punjab State Co-operative Bank was established on 31st August, 1949 with a view to provide credit support to the rural masses particularly to the agricultural sector for their production needs which was otherwise not available at that time from any other financial institution. This bank has its three Divisional offices at Amritsar, Jalandhar and Bathinda. It has 20 Central Co-operative Banks affiliated to it. The co-operative movement in the state in the modern era of reforms gained more importance than the early sixties after the enactment of Punjab Co-operative Societies Act, 1961 which enabled the state in achieving overall growth.

REVIEW OF LITERATURE

Many micro and macro level studies have been conducted to analyse the performance of co-operative banks. Some of them are reviewed as follows :

Asaithambi (1988) analysed the performance of Andaman & Nicobar State Co-operative Bank on different parameters: deposits, advances and overdues. He observed that the bank has been maintaining high degree of efficiency in every aspect. He found that the success of the bank is due to farsightedness of the management and dedicated services of its employees.

Dayanandan and Sasikumar (1993) evaluated the performance of Central Co-operative Banks (CCBs) in Kerala on the basis of their progress in membership, share capital, deposits, reserve funds, loans overdue and net profit earned. The study found that the CCBs have achieved better performance in share capital, membership, deposits and reserve fund but there is no achievement in net profit because of steady increase in overdues. They suggested that management of the banks should take suitable measures for controlling its overdues to perform well in future.

Raikar (2005) observed the impact of reforms on the growth, functioning and performance of Urban Co-operative Banks (UCBs) in India. He compared the UCBs with other co-operative and commercial banks and concluded that performance of UCBs is better as compared to other banks. But due to application of prudential norms, their performance has deteriorated

since 2001-02. But now the performance is improving and he stated that the imposition of norms by Reserve Bank of India (RBI) has improved the confidence among people.

Teli (2005) attempted to evaluate the performance of Urban Co-operative Banks (UCBs) in Kohlapur district. He evaluated the performance from different angles and concluded that the UCBs in Kohlapur district showed a considerable growth in deposits, loans and net profits. But the amount of overdues is also increasing. He suggested that banks should diversify their loan portfolio and should increase their income from other sources. For the growth and survival of the banks Non-Performing Assets (NPAs) of the banks should be decreased. He suggested that the banks have to ensure greater transparency in their overall working to rebuild the confidence of their business by avoiding political interference.

Ganesan (2005-06) studied the relative performance of State Co-operative Banks (SCBs) in India. For analysing the performance of the banks, different input parameters (i.e., membership, labour, borrowed funds and number of branches) and output parameters (i.e., advances and investments) are used. In traditional self efficiency approach, he found that SCBs of Andhra Pradesh (A.P.), Gujarat, Maharashtra and West Bengal have high self-efficiency and in cross efficiency approach he found that SCBs of Andhra Pradesh, Assam, Tripura, Nagaland and Mizoram are the worst performers.

Goyal et al. (2006) made an attempt to study the changes and regional variations in growth of Primary Agricultural Co-operative Societies (PACs) in Haryana. They analysed that there is significant growth in share capital, owned funds, working capital, loan advance and membership. But the growth rate of overdues is very high. There are large scale variations in membership per society and loan advanced per society, proportion of profit making societies was more in Western region than the eastern region. The variables with regard to membership and overdue are increasing but loan advanced are reducing. They suggested that the societies should streamline the recovery drive to improve the viability of societies.

Lakshmanan and Dharmendran (2007) analysed the performance of all the District Central Co-operative Banks in Tamil Nadu taking into account some financial indicators. They observed that regarding deposits and loans the bank has positive growth rate but the overdues of the banks are increasing. It may be due to poor recovery rate. They suggested that the banks should try to mobilize more deposits from the untapped sources and should try to extend loans to uncovered sectors. The banks should take proper recovery proceedings and level of Non-Performing Assets should be brought down to maintain liquidity.

Samantaray (2008) evaluated the growth of performance indicators, i.e. membership, working capital, investment, loans & advances and net profit, etc. of Cuttak Credit Co-operative Limited. He observed that growth of performance indicators is found improving as compared to the past years. However, he suggested that efforts should be made to maintain stability in the growth to remain in the competitive market with increasing rate of productivity.

The preceding review of some important and relevant research works reveals that though co-operative banks have been subjected to examination from different important perspectives, there is still a room for other researches. The present work is an attempt in that direction.

OBJECTIVES OF THE STUDY

The study has been conducted to analyse the performance of Central Co-operative Banks in Punjab in terms of employee productivity and branch productivity. Production is the amount of absolute flow of product during the given period and as productivity is the measure of efficiency in production of factors and inputs, hence, this measure has been used in the present study.

Time Period of the Study

The study covers a period of eleven years from 1997-98 to 2007-08.

Database and Methodology

Data has been collected from published Annual Reports of Punjab State Co-operative Bank, Chandigarh. Statistical tools such as Mean, Standard Deviation and Coefficient of Variation have been used for measuring the productivity of Central Co-operative Banks. From the view point of banking organization, productivity aspect can be studied by examining the efficiency of employees and branches. Employee productivity has been analysed on the basis of

- (a) Deposits per employee
- (b) Loans per employee
- (c) Net Profit per employee.

Whereas Branch Productivity has been analysed on the basis of

- (a) Deposits per branch
- (b) Loans per branch
- (c) Net Profit per branch

In addition to this, performance indices for Employee productivity and Branch productivity have also been worked out for all the Central Co-operative Banks (CCBs).

RESULTS AND DISCUSSIONS

SECTION-A

EMPLOYEE PRODUCTIVITY

As per the parameters mentioned earlier, the employee productivity is analysed and discussed as follows:

(A) Deposits per Employee

This ratio indicates the capacity and contribution of employees in mobilizing deposits. Table 1 depicts the trends in deposits per employee for all Central Co-operative Banks in Punjab during the period of study. It can be observed from the table that deposits per employee was the highest for Nawashahar Central Co-operative Bank throughout the period of study except the year 2005-06 when Ropar Central Co-operative Bank had maximum deposits per employee.

Bank-wise analysis shows that the average deposits per employee taking all the Central Co-operative Banks in Punjab is Rs. 72.79 lakh. The average deposit per employee was maximum for Nawashahar Central Co-operative Bank (Rs. 120.62 lakh) and minimum for Ferozepur Central Co-operative Bank (Rs. 39.07 lakh). It is evident from table that nine Central Co-operative Banks have average deposits per employee more than the average deposits per employee of all the Central Co-operative Banks in Punjab taken together. Maximum variations in deposits per employee were witnessed by Mansa Central Co-operative Bank (58.12 per cent CV) and minimum for Jalandhar Central Co-operative Bank (33.41 per cent CV).

Year-wise analysis shows that average deposits per employee increased from Rs. 30.27 lakh to Rs. 134.78 lakh during the period of study. Maximum variation in the ratio was observed in the year 1997-98 (38.14 per cent CV) and minimum in 2007-08 (27.96 per cent CV).

(B) Loans per Employee

Table 2 exhibits the trends in loans per employee for all the Central Co-operative Banks in Punjab during the period under study (1997-98 to 2007-08). Muktsar Central Co-operative Bank had the highest loans per employee during the years 1997-98, 1999-00 and from 2002-03 to 2006-07, and Mansa Central Co-operative Bank had the highest loans per employee in 1998-99, 2000-01, 2001-02 and 2007-08.

The table reveals that Mansa Central Co-operative Bank had maximum loans per employee (Rs. 219.11 lakh) and Amritsar Central Co-operative Bank had minimum average loans per employee (Rs. 59.82 lakh). Average loans per employee

Table 1
Deposit Per Employee

Name of Bank	(Rs. in lakh)													
	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	MEAN	SD	CV
Amritsar	27.60	32.18	34.65	44.50	51.66	54.70	60.49	62.16	69.92	80.46	91.05	55.40	19.21	34.67
Bathinda	33.33	38.37	47.09	56.45	65.84	76.20	88.13	102.52	116.83	129.24	163.67	83.42	39.30	47.11
F. Sahib	18.61	24.51	26.52	39.52	46.00	52.12	54.70	59.15	79.99	92.64	99.14	53.90	25.92	48.08
Fazilka	22.25	27.81	28.43	40.20	46.37	50.64	57.98	67.18	74.65	89.11	113.38	56.18	26.85	47.79
Ferozepur	18.67	22.30	26.75	24.80	32.92	37.62	36.70	39.98	48.19	59.63	82.26	39.07	17.76	45.46
Faridkot	18.25	21.55	26.36	36.60	41.90	44.94	50.78	56.07	66.01	72.38	89.57	47.67	21.21	44.49
Gurdaspur	31.73	36.50	47.48	54.53	61.85	68.09	74.51	85.43	90.31	94.13	123.20	69.80	26.09	37.38
Hoshiarpur	42.40	41.06	45.46	60.59	69.76	78.85	86.09	94.72	108.12	126.06	153.00	82.37	34.43	41.80
Jalandhar	48.07	56.20	62.23	75.89	86.80	99.20	105.28	109.97	119.67	133.18	154.96	95.59	31.94	33.41
Kapurthala	41.97	48.77	60.20	72.42	85.25	96.27	102.51	115.74	132.90	157.91	179.33	99.39	42.16	42.41
Ludhiana	36.32	44.15	49.93	60.25	68.22	77.66	88.28	99.21	126.25	135.72	152.61	85.33	37.26	43.67
Mansa	18.61	26.52	32.88	49.71	61.67	78.05	78.15	93.73	108.82	105.28	178.45	75.62	43.95	58.12
Moga	28.47	33.48	38.28	50.29	59.17	63.44	67.68	78.52	95.63	103.32	130.29	68.05	30.23	44.42
Muktsar	17.13	22.75	33.11	43.12	53.42	68.26	67.87	75.88	85.06	119.19	121.18	64.27	33.49	52.10
Nawanshahr	58.00	64.69	79.10	91.43	111.40	127.73	141.19	134.58	144.84	174.93	198.87	120.62	42.68	35.39
Patiala	27.17	33.71	43.89	59.13	67.40	74.18	81.99	88.59	104.56	115.51	157.87	77.64	36.69	47.26
Ropar	42.96	57.54	69.67	77.10	90.72	101.29	109.40	120.18	159.32	159.30	190.54	107.09	44.48	41.53
Sangrur	22.67	26.84	32.68	45.21	50.72	56.76	63.47	68.37	80.33	94.28	110.34	59.24	26.55	44.82
Tarn Taran	20.90	20.45	23.93	36.27	39.87	44.82	46.11	47.18	53.91	61.39	71.06	42.35	15.62	36.89
Mean	30.27	35.76	42.56	53.58	62.68	71.10	76.91	84.17	98.17	110.72	134.78	72.79		
SD	11.54	12.91	15.48	16.31	19.35	22.42	24.85	25.28	29.65	31.93	37.68	21.77		
CV	38.14	36.11	36.38	30.44	30.86	31.54	32.32	30.04	30.20	28.83	27.96	29.90		

Source : Compiled from various annual reports of Punjab State Co-operative Bank, Chandigarh

Table 2
Loans Per Employee

Name of Bank	(Rs. in lakh)															
	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	MEAN	SD	CV		
Amritsar	21.71	27.43	37.20	39.36	49.01	57.32	67.39	72.46	79.89	91.55	114.75	59.82	27.30	45.64		
Bathinda	74.81	95.11	85.34	100.86	116.42	113.08	138.40	154.62	204.01	246.72	328.67	150.73	75.14	49.85		
F. Sahib	36.60	62.12	77.39	85.56	102.05	122.06	136.29	164.14	210.87	245.99	315.73	141.71	81.52	57.53		
Fazilka	67.08	67.20	79.81	86.85	104.27	99.16	127.66	136.41	171.49	205.50	274.80	129.11	62.03	48.04		
Ferozepur	85.85	106.36	86.64	92.39	111.73	121.12	136.44	150.98	182.17	227.22	319.56	147.31	68.43	46.45		
Faridkot	59.52	57.79	68.50	88.59	103.50	122.33	141.62	151.92	151.84	178.22	211.49	121.39	48.32	39.81		
Gurdaspur	23.15	32.28	42.48	56.34	68.84	81.15	91.69	102.55	124.71	131.18	169.26	83.97	43.34	51.61		
Hoshiarpur	18.55	27.91	32.58	41.05	55.06	63.66	64.58	73.93	84.54	102.69	154.10	65.33	37.02	56.67		
Jalandhar	33.15	60.32	71.27	85.97	88.82	131.01	123.55	91.32	104.00	118.73	163.38	97.41	34.50	35.42		
Kapurthala	14.82	31.44	47.94	47.90	54.21	60.58	63.07	69.98	91.34	111.27	137.69	66.39	33.70	50.76		
Ludhiana	67.51	88.67	109.03	121.15	124.63	139.53	161.16	165.99	181.32	205.76	275.15	149.08	55.56	37.27		
Mansa	84.58	103.01	108.63	141.69	151.96	175.60	194.35	238.54	332.78	409.88	499.95	221.91	129.78	58.48		
Moga	26.21	82.15	90.93	93.54	101.87	114.13	131.23	173.18	209.27	261.88	319.06	145.77	82.85	56.84		
Muktsar	91.84	88.54	121.23	121.77	146.44	180.51	215.85	252.90	335.32	410.73	445.11	219.11	121.18	55.30		
Nawanshahr	41.14	49.76	71.98	101.15	114.51	147.53	129.39	101.98	125.16	142.65	164.83	108.19	38.17	35.28		
Patiala	61.21	71.18	79.07	95.52	129.27	166.03	193.44	234.93	258.18	350.58	465.85	191.39	122.38	63.94		
Ropar	44.76	61.11	72.48	93.38	114.34	140.01	144.20	157.26	189.47	309.16	304.52	148.24	85.48	57.66		
Sangrur	68.67	79.48	94.15	113.26	132.63	123.00	137.58	148.24	191.42	258.03	296.54	149.36	68.82	46.08		
Tarn Taran	45.11	44.75	47.10	59.05	67.22	75.09	88.79	94.72	111.66	116.20	149.45	81.74	32.43	39.67		
Mean	50.86	65.08	74.93	87.65	101.94	117.52	130.88	144.00	175.76	217.05	268.94	130.42				
SD	23.96	24.55	24.28	27.40	29.97	36.36	41.63	54.03	72.63	97.62	112.34	46.77				
CV	47.10	37.71	32.40	31.26	29.40	30.94	31.81	37.52	41.32	44.97	41.77	35.86				

Source : Compiled from various annual reports of Punjab State Co-operative Bank, Chandigarh

of ten Central Co-operative Banks were greater than the average loans per employee of all the Central Co-operative Banks. Variation was maximum and consistency was minimum for Patiala Central Co-operative Bank (63.94 per cent CV), while Nawashahar Central Co-operative Bank (35.28 CV) had the minimum variation and maximum consistency.

Year-wise analysis presents that average loan per employee was minimum in 1997-98 (50.86 lakh) and was maximum in 2007-08 (268.94 lakh). Average loans per employee increased from Rs. 50.86 lakh to Rs. 268.94 lakh during the period of study. Maximum variation in the ratio was observed in the year 1997-98 (47.12 per cent CV) and maximum consistency was found in the year 2001-02 (29.40 per cent CV).

(C) Net Profit per Employee

Table 3 exhibits the trends in net profit per employee for all the Central Co-operative Banks during the study period. It has been found that Muktsar Central Co-operative Bank had maximum net profit per employee in 1997-98, 1998-99 and 2004-05. In 2005-06 Ropar Central Co-operative Bank has maximum net profit per employee and Nawashahar Central Co-operative Bank had the maximum in other years.

Bank-wise analysis shows that Nawanshahr Central Co-operative Bank (2.85) had maximum average net profit per employee. Amritsar Central Co-operative Bank had net losses per employee. Only Seven Central Co-operative Banks have average net profit per employee greater than the average net profit per employee of all the Central Co-operative Banks. Net profit per employee was more consistent in terms of dispersion (CV) for Nawanshahr Central Co-operative Bank (32.90 CV) and less consistent for Faridkot Central Co-operative Bank (139.16 CV).

Year-wise analysis shows that average net profit per employee which was 0.57 lakh in 1997-98 increased to 2.38 lakh in 2004-05 and then decreased to 0.42 lakhs in 2007-08. In terms of variability measured by dispersion (CV) maximum variation in net profit per employee was observed in the year 2007-08 (302.14 per cent CV) and minimum variation in the year 2004-05 (51.04 per cent CV).

Table 3
Net Profit Per Employee

Name of Bank	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	MEAN	SD	CV
Amritsar	-0.15	0.14	0.22	0.24	0.15	0.49	0.62	0.15	0.20	-0.23	-3.66	-0.17	1.13	-673.28
Bathinda	0.40	0.15	0.71	0.61	1.03	1.34	1.63	2.05	1.80	0.13	0.23	0.92	0.66	72.44
F. Sahib	0.02	0.11	0.26	0.83	1.19	1.72	2.07	2.70	2.44	0.17	1.43	1.18	0.93	79.21
Fazilka	0.84	0.30	0.79	0.90	0.91	1.30	1.89	2.08	1.66	0.04	0.07	0.98	0.66	67.91
Ferozepur	0.14	0.66	0.50	0.27	0.45	1.15	1.23	1.31	0.65	-0.84	0.06	0.51	0.59	116.37
Faridkot	1.57	0.32	0.66	0.32	0.70	1.25	1.35	1.50	0.14	-0.41	-1.09	0.57	0.80	139.16
Gurdaspur	0.15	0.32	0.45	1.19	1.49	1.20	1.23	1.17	1.21	0.08	-0.24	0.75	0.58	76.71
Hoshiarpur	0.06	0.43	0.73	1.10	1.22	1.41	1.70	1.75	1.60	0.62	0.86	1.04	0.53	50.58
Jalandhar	0.65	0.40	0.68	1.04	1.20	1.69	2.33	1.67	1.30	1.35	1.59	1.26	0.53	42.10
Kapurthala	0.47	0.59	1.14	1.64	1.44	2.07	2.64	2.40	2.08	0.90	1.18	1.50	0.69	46.04
Ludhiana	1.34	1.06	1.60	2.56	2.86	2.95	3.97	4.11	1.91	0.67	0.81	2.17	1.15	53.26
Mansa	0.05	0.37	-0.67	0.24	1.41	2.38	2.81	2.28	1.99	0.42	0.24	1.05	1.11	105.84
Moga	0.34	0.21	0.61	0.75	0.84	1.15	1.70	2.05	1.33	0.12	0.16	0.84	0.62	73.43
Muktsar	1.78	2.61	2.17	2.38	3.12	3.91	4.36	5.09	3.97	0.58	0.62	2.78	1.40	50.51
Nawanshahr	1.36	1.68	2.40	2.90	3.30	3.99	4.78	3.40	2.61	2.58	2.37	2.85	0.94	32.90
Patiala	0.62	0.03	0.07	0.34	1.25	1.47	2.44	3.82	3.17	0.40	0.61	1.29	1.24	96.21
Ropar	0.74	0.77	1.45	2.20	2.79	3.59	4.06	4.33	4.24	1.32	2.24	2.52	1.31	51.90
Sangrur	0.08	0.02	-0.20	0.11	0.84	1.25	1.59	1.69	1.07	0.17	0.28	0.63	0.65	103.48
Tarn Taran	0.31	0.14	0.53	0.51	0.03	0.45	0.79	1.63	0.30	0.10	0.20	1.45	0.43	94.46
Mean	0.57	0.54	0.74	1.06	1.38	1.83	2.27	2.38	1.77	0.43	0.42	1.27		
SD	0.56	0.63	0.73	0.85	0.93	1.03	1.19	1.21	1.12	0.73	1.26	0.78		
CV	98.34	115.29	98.93	80.00	67.75	56.44	52.30	51.02	63.44	169.20	301.54	61.44		

Source : Compiled from various annual reports of Punjab State Co-operative Bank, Chandigarh

SECTION-B

BRANCH PRODUCTIVITY

As per the parameters mentioned earlier, the branch productivity is analysed and discussed as follows :

(A) Deposits per Branch

Table 4 presents the trends in deposit per branch for all Central Co-operative Banks in Punjab during the period of study. The table shows that deposits per branch were maximum for Nawanshahr Central Co-operative Bank from 1999-00 to 2003-04 and Kapurthala Central Co-operative Bank had maximum deposits for rest of the years.

Bank-wise analysis presents that average deposits per branch for Kapurthala Central Co-operative Bank (Rs. 815.03 lakh) was the maximum and minimum for Ferozpur Central Co-operative Bank (Rs. 200.03 lakh). Out of nineteen Central Co-operative Banks only seven have higher average deposits per branch as compared to those for all the Central Co-operative Banks. Deposits per branch were more consistent in terms of dispersion (CV) for Jalandhar Central Co-operative Bank (CV = 26.26) less consistent for Mansa Central Co-operative Bank (CV = 43.76).

Year-wise analysis shows that deposits per branch increased from Rs.208.57 lakh in 1997-98 to Rs. 664.11 lakh in 2007-08. Average deposits per branch of all the Central Co-operative Banks in Punjab were the highest in 2007-08 (Rs. 664.11 lakh) and the lowest in 1997-98 (Rs. 208.57 lakh). In terms of variability measured by dispersion (CV) maximum variation in deposits per branch was observed in the year 1997-98 (CV = 56.84 per cent) and minimum variation in the year 2007-08 (CV = 38.84 per cent).

(B) Loans per Branch

Table 5 depicts the trends in loans per branch for all Central Co-operative Banks in Punjab during the period of study. It is observed from the table that loans per branch were maximum for Ludhiana Central Co-operative Bank during the period 1997-98 to 2000-01, were Nawanshahr Central Co-operative Bank during 2001-02, Jalandhar Central Co-operative Bank during 2002-03 and Patiala Central Co-operative Bank from 2003-04 to 2007-08.

Bank-wise analysis presents that Patiala Central Co-operative Bank had maximum average loans per branch, while Amritsar Central Co-operative Bank minimum deposits per branch. Thirteen Central Co-operative Banks had higher average loans per branch as compared to those for all the Central Co-operative

Table 4
Deposits per Branch

Name of Bank	1997-	1998-	1999-	2000-	2001-	2002-	2003-	2004-	2005-	2006-	2007-	MEAN	SD	CV
	98	99	00	01	02	03	04	05	06	07	08			
Amritsar	203.83	242.82	253.30	329.18	334.95	381.06	410.29	443.98	485.70	522.27	573.47	380.08	114.56	30.14
Bathinda	186.80	229.13	265.21	296.02	344.03	365.07	451.69	522.88	575.37	623.57	702.58	414.76	163.94	39.53
F. Sahib	149.69	183.28	201.82	295.51	279.28	318.54	364.66	382.04	496.62	540.42	590.68	345.69	139.99	40.50
Fazilka	148.36	184.37	188.50	254.60	262.79	281.92	313.09	342.64	375.74	424.78	502.67	298.13	103.09	34.58
Ferozepur	95.02	125.63	126.88	135.44	156.35	185.29	210.62	215.56	261.91	308.51	379.10	200.03	83.25	41.62
Faridkot	118.65	147.74	174.94	242.88	276.18	262.12	285.62	313.05	352.03	386.01	459.06	274.39	97.95	35.70
Gurdaspur	225.72	254.65	335.57	382.94	413.27	451.85	489.42	512.60	517.25	543.37	663.60	435.48	124.10	28.50
Hoshiarpur	299.60	366.01	374.10	481.72	525.39	585.20	642.92	688.62	767.13	866.43	953.30	595.49	202.04	33.93
Jalandhar	407.26	495.62	495.24	600.81	681.17	757.79	799.87	814.10	854.34	924.84	1030.90	714.72	187.67	26.26
Kapurthala	478.46	561.67	584.29	655.94	675.59	760.55	812.42	950.32	1045.71	1162.09	1278.27	815.03	249.55	30.62
Ludhiana	249.59	338.78	329.52	386.22	404.76	446.57	475.25	580.58	699.06	728.87	765.88	491.37	168.31	34.25
Mansa	74.44	114.06	124.36	187.56	219.85	273.16	273.52	311.00	336.35	280.74	438.70	239.43	103.34	43.16
Moga	145.53	175.05	185.33	218.30	254.31	272.67	279.34	299.04	341.82	347.33	418.58	267.03	79.00	29.58
Muktsar	73.91	116.41	144.03	190.97	221.32	242.03	240.63	265.59	282.23	363.00	380.07	229.11	90.81	39.64
Nawanshahr	452.38	516.03	597.68	657.92	721.67	802.47	850.22	881.94	939.93	1068.22	1176.29	787.70	215.20	27.32
Patiala	176.62	227.51	283.35	357.37	385.36	411.24	440.23	456.42	552.34	558.76	649.85	409.01	138.22	33.80
Ropar	228.09	340.46	354.99	392.85	477.95	514.04	549.75	600.90	749.96	698.47	754.82	514.75	167.78	32.59
Sangrur	144.91	188.35	197.13	263.96	246.18	305.83	327.77	345.94	395.63	459.42	504.19	307.21	108.67	35.37
Tarn Taran	104.02	160.71	154.43	222.83	243.87	263.68	274.44	294.85	312.69	340.72	396.13	251.67	82.83	32.91
Mean	208.57	261.49	282.67	344.90	374.96	414.79	446.93	485.37	544.31	586.73	664.11	419.53		
SD	118.56	134.69	142.15	151.83	165.10	183.55	195.34	211.84	229.56	253.41	264.58	184.74		
CV	56.84	51.51	50.29	44.02	44.03	44.25	43.71	43.64	42.17	43.19	39.84	44.03		

Source : Compiled from various annual reports of Punjab State Co-operative Bank, Chandigarh

Table 5

Name of Bank	Loans per Branch																(Rs. in lakh)		
	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	MEAN	SD	CV					
Amritsar	160.33	206.98	271.92	291.12	317.79	399.31	457.14	517.58	554.97	594.27	722.69	408.55	168.39	41.22					
Bathinda	419.31	567.99	480.59	528.91	608.30	541.73	709.29	788.56	1004.75	1190.42	1410.89	750.07	305.43	40.72					
F. Sahib	294.36	464.54	588.81	639.82	619.60	745.91	908.63	1060.06	1309.18	1434.92	1881.25	904.28	453.80	50.18					
Fazilka	447.22	445.52	529.10	550.05	590.89	552.01	689.39	695.72	863.16	979.57	1218.30	687.36	230.80	33.58					
Ferozepur	436.83	599.18	410.93	504.62	530.72	596.62	783.02	813.96	990.06	1175.61	1472.76	755.85	321.02	42.47					
Faridkot	386.86	396.26	454.60	587.89	682.16	713.57	796.62	848.20	809.81	950.53	1083.90	700.95	216.82	30.93					
Gurdaspur	164.65	225.25	300.25	395.66	459.99	538.53	602.27	615.28	714.25	757.24	911.71	516.83	222.39	43.03					
Hoshiarpur	131.06	248.77	268.11	326.39	414.66	472.50	482.23	537.46	599.83	705.81	960.15	467.91	222.72	47.60					
Jalandhar	280.86	531.92	567.17	680.59	696.99	1000.74	938.62	676.05	742.43	824.54	1086.94	729.71	218.93	30.00					
Kapurthala	168.90	362.14	465.27	433.87	429.63	478.59	499.87	574.56	718.69	818.87	981.49	539.26	215.23	39.91					
Ludhiana	464.00	680.42	719.60	776.64	739.49	802.27	867.56	971.34	1004.00	1105.03	1380.84	864.65	233.13	26.96					
Mansa	338.32	442.94	410.90	534.56	541.76	614.60	680.24	791.53	1028.59	1093.00	1229.05	700.50	284.65	40.63					
Moga	133.94	429.55	440.30	406.02	437.81	490.51	541.68	659.55	748.03	880.38	1025.07	562.98	237.56	42.20					
Muktsar	396.35	453.10	527.34	539.29	606.69	639.99	765.28	885.17	1112.66	1250.87	1396.03	779.34	323.14	41.46					
Nawanshahr	320.91	396.98	543.84	727.85	741.80	926.88	779.14	668.32	812.19	871.05	974.94	705.81	199.60	28.28					
Patiala	397.86	480.44	510.49	577.27	739.10	920.36	1038.71	1210.40	1363.86	1695.83	1917.55	986.53	488.74	49.54					
Ropar	237.65	361.58	369.30	475.78	602.36	710.55	724.62	786.31	891.89	1355.55	1206.39	702.00	334.20	47.61					
Sangrur	439.04	557.78	567.93	661.29	643.71	662.76	710.50	750.04	942.80	1257.39	1354.98	777.11	277.60	35.72					
Tarn Taran	224.47	351.59	303.89	362.72	411.16	441.81	528.50	591.99	647.63	644.93	833.19	485.63	172.51	35.52					
Mean	307.52	431.73	459.49	526.33	569.19	644.70	710.70	760.11	887.30	1030.83	1213.06	685.54							
SD	114.53	122.23	117.43	131.90	124.04	169.05	158.88	175.93	215.02	283.88	311.98	150.24							
CV	37.24	28.31	25.56	25.06	21.79	26.22	22.36	23.14	24.23	27.54	25.72	21.91							

Source : Compiled from various annual reports of Punjab State Co-operative Bank, Chandigarh

Banks taken together. The variation was maximum and consistency was minimum in loans per branch for Fatehgarh Sahib Central Co-operative Bank (CV = 50.18 per cent) while Ludhiana Central Co-operative Bank (CV = 326.96) had the minimum variation and maximum consistency.

Year-wise analysis presents that average loans per branch increased from Rs. 307.52 lakh in 1997-98 to Rs. 1213.06 lakh in 2007-08. In terms of variability measured by dispersion (CV) maximum variation in loans per branch was observed in the year 1997-98 (CV = 37.24 per cent) and minimum variation in the year 2001-02 (CV = 21.79 per cent).

(C) Net Profit per Branch

Table 6 exhibits the trends in net profit per branch for all the Central Co-operative Banks during the study period. The table reveals that Nawanshahr Central Co-operative Bank had maximum net profit per branch in 1997-98 to 2003-04, 2006-07 and 2007-08. In 2004-05, Ludhiana Central Co-operative Bank and in 2005-06 Ropar Central Co-operative Bank had maximum net profit per branch.

The analysis further brings out that average net profit per branch for Nawanshahr Central Co-operative Bank (Rs. 18.84 lakh) was maximum and there were losses in the case of Amritsar Central Co-operative Bank. Only eight Central Co-operative Banks have average net profit per branch greater than the average net profit per branch for all the Central Co-operative Banks in Punjab. Net profit per branch was more consistent in terms of dispersion (CV) for Nawanshahr Central Co-operative Bank (CV = 27.46) and less consistent for Faridkot Central Co-operative Bank (CV = 126.17).

Year-wise analysis provides that average net profit per employee increased from Rs. 3.66 lakh in 1997-98 to Rs. 12.97 lakh in 2004-05 and then decreased to Rs. 2.07 lakh in 2007-08. In terms of variability measured by dispersion (CV) maximum variation in net profit per branch was observed in the year 2007-08 CV = 362.83 per cent and minimum variation in the year 2004-05 CV = 48.40 per cent.

Table 6
Net Profit per Branch
(Rs. in lakh)

Name of Bank	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	MEAN	SD	CV
Amritsar	-1.11	1.04	1.61	1.79	0.94	3.40	4.21	1.04	1.40	-1.52	-23.05	-0.93	7.17	-769.69
Bathinda	2.23	0.89	4.01	3.20	5.36	6.40	8.34	10.45	8.87	0.62	1.00	4.67	3.31	70.91
F. Sahib	0.14	0.80	1.97	6.20	7.24	10.51	13.83	17.46	15.14	1.00	8.51	7.53	5.89	78.23
Fazilka	5.58	1.96	5.25	5.71	5.17	7.22	10.21	10.62	8.35	0.19	0.29	5.50	3.41	61.89
Ferozepur	0.72	3.71	2.35	1.49	2.13	5.68	7.05	7.05	3.52	-4.34	0.27	2.69	3.16	117.22
Faridkot	10.23	2.18	4.36	2.11	4.60	7.31	7.57	8.39	0.76	-2.19	-5.59	3.61	4.56	126.17
Gurdaspur	1.03	2.23	3.20	8.37	9.98	7.96	8.11	7.00	6.96	0.44	-1.29	4.91	3.68	75.06
Hoshiarpur	0.44	3.83	5.97	8.77	9.22	10.47	12.68	12.75	11.37	4.29	5.33	7.74	3.85	49.73
Jalandhar	5.51	3.55	5.42	8.24	9.39	12.90	17.73	12.36	9.27	9.38	10.55	9.48	3.79	39.99
Kapurthala	5.37	6.77	11.02	14.86	11.44	16.32	20.96	19.71	16.36	6.64	8.44	12.53	5.19	41.41
Ludhiana	9.19	8.12	10.56	16.43	16.95	16.97	21.35	24.06	10.55	3.60	4.07	12.90	6.42	49.78
Mansa	0.19	1.61	-2.52	0.90	5.01	8.32	9.82	7.57	6.15	1.12	0.58	3.52	3.82	108.50
Moga	1.76	1.10	2.96	3.24	3.61	4.96	7.02	7.79	4.74	0.42	0.52	3.46	2.37	68.54
Muktsar	7.67	13.36	9.45	10.55	12.91	13.87	15.44	17.80	13.17	1.76	1.94	10.72	4.94	46.07
Nawanshahr	10.59	13.37	18.13	20.89	21.39	25.08	28.76	22.27	16.95	15.78	14.01	18.84	5.17	27.46
Patiala	4.03	0.18	0.47	2.03	7.12	8.14	13.08	19.70	16.73	1.95	2.50	6.90	6.49	93.96
Ropar	3.95	4.55	7.39	11.22	14.68	18.22	20.40	21.64	19.97	5.77	8.85	12.42	6.48	52.16
Sangrur	0.51	0.17	-1.22	0.66	4.05	6.74	8.24	8.56	5.28	0.82	1.28	3.19	3.35	104.99
Tarn Taran	1.53	1.11	3.39	3.14	0.18	2.64	4.70	10.17	1.75	0.56	1.10	2.75	2.68	97.25
Mean	3.66	3.71	4.94	6.83	7.97	10.16	12.61	12.97	9.33	2.44	2.07	6.97		
SD	3.56	3.91	4.71	5.66	5.45	5.61	6.47	6.28	5.67	4.41	7.51	4.69		
CV	97.35	105.27	95.38	82.90	68.41	55.18	51.33	48.40	60.80	181.09	363.06	67.29		

Source : Compiled from various annual reports of Punjab State Co-operative Bank, Chandigarh

SECTION-C

PERFORMANCE INDICES — THE ANALYTICAL FRAMEWORK

To analyse the performance, six productivity indices are calculated for the study period (1997-98 to 2007-08). The indices computed are as follows :

$$\text{Index} = \frac{\text{Average ratio of the concerned Central Co-operative Bank}}{\text{Average ratio for the aggregate of all Central Co-operative Banks}}$$

With regard to these productivity indices, the performance of the Central Co-operative Banks has been assessed at four levels, i.e., excellent, good, fair and poor. For excellent performance level, the banks included are those lying at top 25 per cent areas of normal distribution, i.e. where growth index value is greater than $(\bar{X} + 0.6745\sigma)$. Good performance category the bank whose growth lies between $(\bar{X} \text{ to } \bar{X} + 0.6745\sigma)$. Fair performance category includes banks whose growth index value lies between $(\bar{X} \text{ to } \bar{X} - 0.6745\sigma)$. Poor performance category includes banks whose growth index value is lower than $(\bar{X} - 0.6745\sigma)$.

Table 7 depicts the bank productivity indices for nineteen Central Co-operative Banks, measured by employee productivity and branch productivity. Analysis provided that maximum employee productivity indices were revealed by Nawanshahr Central Co-operative Bank (1.66) in deposits per employee, Mansa Central Co-operative Bank (1.70) in loans per employee and Nawanshahr Central Co-operative Bank (2.25) in net profit per employee. On the other hand, least productivity indices were revealed by Ferozepur Central Co-operative Bank (0.54) in deposits per employee, Amritsar Central Co-operative Bank (0.46) in loans per employee and Amritsar Central Co-operative Bank (-0.13) in net profit per employee.

In Branch productivity analysis, maximum productivity indices were revealed by Kapurthala Central Co-operative Bank (1.94) in deposits per branch, Patiala Central Co-operative Bank (1.44) in Loans per branch and Nawanshahr Central Co-operative Bank (2.70) in net profit per branch. On the other hand least performance indices were revealed by Ferozepur Central Co-operative Bank (0.48) in deposits per branch, Amritsar Central Co-operative Bank (0.60) in loans per branch and Amritsar Central Co-operative Bank (-0.13) in net profit per branch.

The classification of nineteen Central Co-operative Banks under the productivity parameters is presented in Tables 8 and 9. Table 8 presents that in deposits per employee four banks are placed in 'Excellent' category, five banks in 'Good' category, four banks in 'Fair', and six banks in 'Poor' category. In loans per employee three banks fall in 'Excellent' category, seven banks in 'Good' category, three banks fall in 'Fair' category, and six banks in 'Poor' category. In net profit per

Table 7
Indices of Productivity Performance

	D/E		L/E		NP/E		D/B		L/B		NP/B	
Amritsar	0.76	P	0.46	P	-0.13	P	0.91	F	0.60	P	-0.13	P
Bathinda	1.15	G	1.16	G	0.72	F	0.99	F	1.09	G	0.67	F
F. Sahib	0.74	P	1.09	G	0.93	F	0.82	F	1.32	E	1.08	G
Fazilka	0.77	P	0.99	F	0.77	F	0.71	F	1.00	G	0.79	F
Ferozepur	0.54	P	1.13	G	0.40	P	0.48	P	1.10	G	0.39	P
Faridkot	0.65	P	0.93	F	0.45	P	0.65	P	1.02	G	0.52	P
Gurdaspur	0.96	F	0.64	P	0.59	F	1.04	G	0.75	P	0.70	F
Hoshiarpur	1.13	G	0.50	P	0.82	F	1.42	E	0.68	P	1.11	G
Jalandhar	1.31	E	0.75	P	1.00	G	1.70	E	1.06	G	1.36	G
Kapurthala	1.37	E	0.51	P	1.19	G	1.94	E	0.79	P	1.80	E
Ludhiana	1.17	G	1.14	G	1.71	E	1.17	G	1.26	E	1.85	E
Mansa	1.04	G	1.70	E	0.82	F	0.57	P	1.02	G	0.51	P
Moga	0.93	F	1.12	G	0.66	F	0.64	P	0.82	P	0.50	P
Muktsar	0.88	F	1.68	E	2.19	E	0.55	P	1.14	G	1.54	E
Nawanshahr	1.66	E	0.83	F	2.25	E	1.88	E	1.03	G	2.70	E
Patiala	1.07	G	1.47	E	1.02	G	0.97	F	1.44	E	0.99	F
Ropar	1.47	E	1.14	G	1.99	E	1.23	G	1.02	G	1.78	E
Sangrur	0.81	F	1.15	G	0.49	P	0.73	F	1.13	G	0.46	P
Tarn Taran	0.58	P	0.63	P	1.14	G	0.60	P	0.71	P	0.39	P
Mean	1.00		1.00		1.00		1.00		1.00		1.00	
SD	0.30		0.63		0.61		0.44		0.22		0.67	

D/E= Deposits per employee

L/E= Loans per employee

NP/E= Net Profit per employee

D/B= Deposits per branch

L/B= Loans per Branch

NP/B = Net Profit per Branch

'E' = Excellent

'G' = Good

'F' = Fair

'P' = Poor

Table 8
Employees Productivity Performance

Index → Performance ↓	Deposits per employee	Loans per employee	Net profit per employee
Excellent	Jalandhar, Kapurthala, Nawanshahr, Ropar	Mansa, Muktsar, Patiala	Ludhiana, Muktsar, Nawanshahr, Ropar
Good	Bathinda, Hoshairpur, Ludhiana, Mansa, Patiala	Bathina, F. Sahib, Ferozepur, Ludhiana, Moga, Ropar, Sangrur	Jalandhar, Kapurthala, Patiala, Tarn Taran
Fair	Gurdaspur, Moga, Muktsar, Sangrur	Fazilka, Faridkot, Nawanshahr	Bathinda, Fatehgarh Sahib, Fazilka, Gurdaspur, Hoshiarpur Mansa, Moga
Poor	Amritsar, Fatehgarh Sahib, Fazilka, Ferozepur, Faridkot, Tarn Taran	Amritsar, Gurdaspur, Hoshiarpur, Jalandhar, Kapurthala, Tarn Taran	Amritsar, Ferozepur, Faridkot, Sangrur

Table 9
Branch Productivity Performance

Index → Performance ↓	Deposits per employee	Loans per employee	Net profit per employee
Excellent	Hoshairpur, Jalandhar, Kapurthala, Nawanshahr	Fatehgarh Sahib, Ludhiana, Patiala	Kapurthala, Ludhiana, Muktsar, Nawanshahr, Ropar
Good	Gurdaspur, Ludhiana, Ropar	Bathinda, Fazilka, Ferozepur, Faridkot, Jalandhar, Mansa, Muktsar, Nawanshahr, Ropar, Sangrur	Fatehgarh Sahib, Hoshairpur, Jalandhar
Fair	Amritsar, Bathinda, Fatehgarh Sahib, Fazilka, Patiala, Sangrur		Bathinda, Fazilka, Gurdaspur, Patiala
Poor	Ferozepur, Faridkot, Mansa, Moga, Muktsar, Tarn Taran	Amritsar, Gurdaspur, Hoshiarpur, Kapurthala, Moga, Tarn Taran	Amritsar, Ferozepur, Faridkot, Mansa, Moga, Sangrur, Tarn Taran

employee, four banks each fall in 'Excellent', 'Good' and 'Poor' categories, while seven banks in 'Fair' category.

Table 9 reveals that in deposits per branch majority of the banks, i.e., six banks each fall in 'Fair' and 'Poor' categories, four banks in 'Excellent' category, and three banks in 'Good' category. Majority of the banks, i.e., 10 Central Co-operative Banks fall in 'Good' category as far as loans per branch are concerned. In net profit per branch, seven banks fall in 'Poor' category and five banks in 'Excellent' category, three banks in 'Good' category, and four banks in 'Fair' category.

POLICY RECOMMENDATIONS

1. All the co-operative banks need to go for computerization at all levels for improving their performance. This would lead to transparency, economy in staff costs, greater productivity and efficiency.
2. Co-operative credit structure needs to improve its professionalism through adoption of modern management and usage of Management Information System.
3. The functions of the branches of the co-operative banks should not be restricted only to be a link between the District Central Co-operative Banks and PACs but they should initiate other banking services also.
4. A proper assessment of the staff to be recruited as per the need of job is required.
5. Training programmes need to be conducted in order to update the knowledge of the staff about the latest changes in the banking sector.
6. There is urgent need for adopting human resource development strategies in co-operative credit institutions including those for improving the quality and quantity of training for personnel.
7. Proper measures should be taken for the revival of sick branches of co-operative banks

CONCLUSION

Punjab has a good network of co-operative banks with 19 Central Co-operative Banks operating in various districts beside one State Co-operative Bank. In terms of providing assistance to rural masses, only a few banks are giving excellent performance which is clear from performance indices. A good number of banks have fallen in 'poor' category, namely, Amritsar Central Co-operative Bank, Moga Central Co-operative Bank, Ferozepur Central Co-operative Bank and Faridkot Central Co-operative Bank on various performance parameters. For improving

productivity in terms of employees, such banks must motivate their employees besides organizing training programmes for them. The banks should lay more stress on financial inclusion for improving branch productivity; and above all, these banks require re-designing their strategies, so that they can also remain active participants in development process.

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