RESEARCH DESIGN

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2.1 RATIONALE OF THE STUDY

The idea of Rural Bank is neither new nor original, since the Maclegan Committee (1915) and many other important Commissions and Committees went into the question of rural finance. The first five Regional Rural Banks were set up in 1975. Setting up of the Regional Rural Banks has been a significant development in Indian Banking. These banks were promoted because of the failure of Cooperative and Commercial Banks to meet the credit requirements of the poor. At present, there are 196 Regional Rural Banks in the country. Like rest of the country Regional Rural Banks in Punjab were established to overcome the deficiencies of the existing rural credit system consisting of rural branches of Commercial Banks and Cooperative Banks. The objectives sought to be achieved by the banks were twofold:

1. To develop the rural economy by providing relatively cheaper credit for the growth of agriculture, trade and industries in rural areas; and

2. To make available credit to vulnerable sections of rural society viz. small and marginal farmers, agric-cultural labourers, small entrepreneurs and artisans.

The first three Regional Rural Banks in the State of Punjab were set up in 1983. Then two more such banks were established in 1985. Hence, during the period of study there were 5 Regional Rural banks catering to 10 of the 12
districts in Punjab.

The Districts not having RRBs are that of Jalandhar and Ludhiana. Regional Rural Banks in Punjab started with 11 branches but at present there are 201 branches. These five RRBs have been sponsored by Punjab National Bank, State Bank of Patiala and Punjab and Sind Bank.

Almost a decade has passed since the emergence of RRBs in Punjab. No comprehensive study has been conducted to determine the extent to which these banks have been able to meet the objectives for which they were set up. This is the right time to appraise the performance of RRBs in Punjab so as to determine the extent to which these banks have contributed towards removing the gaps in the rural credit, at the same time, maintaining their commercial viability.

2.2 CONCEPT OF PERFORMANCE APPRAISAL IN A PUBLIC ORGANIZATION

The performance appraisal criteria of a Public Enterprise have to be different from the criteria used for evaluation of a private sector enterprise. In case of a private organization, the main criteria are: profitability, growth, expansion, diversification etc. On the other hand, a public sector enterprise is expected to contribute significantly towards the social well being as per the public policy. Therefore, the objectives sought to be achieved by public enterprises are multiple, covering both financial and social aspects. Both the financial and social objectives
need to be clearly delineated for the purpose of performance appraisal of public enterprises. In the light of these objectives, the progress made by these organizations needs to be evaluated to determine the extent to which they have fulfilled the objectives for which they were established. The performance appraisal system of a public enterprise should consist of following aspects:

(i) Clarity on expected performance i.e. objectives specification.
(ii) Suitable evaluating criteria i.e. objective measurement yardstick.
(iii) Collection of relevant data on actual performance; and
(iv) Determination of the degree of success in fulfilling financial and social objectives on the basis of expected and actual performance.

The performance appraisal of a public organization like a Regional Rural Bank, involves many problems of measurement and methodology. The first problem is with regard to the meaning that should be assigned to the concept of performance appraisal and the second is the selection of an appropriate methodology for this purpose. The erratic behavior of variables relating to the performance of Public Sector undertakings and the errors in observation are some of the causes of inexactness. The methodology applied for the
appraisal of performance of a public enterprise has to be applied in social sciences. In contrast to physical sciences, the opportunity for controlled experiments in social sciences is very limited.

2.3. PERFORMANCE APPRAISAL IN BANKING INDUSTRY

Performance appraisal of banks has evoked considerable interest since nationalization of banks in July, 1969. The banks have no more kept themselves restricted to accepting deposits and making loans based on principles of economic and financial viability of proposals. Since nationalization, the resources of banking industry are being utilized to meet social-economic policy objectives also. The normal method of appraisal of performance of banks is to see to what extent the actual performance in key areas varies from the estimates given in the budget prepared on basis of performance budgeting. Appraisal of performance in banks varies from one unit of organization to another viz, it differs from branch or areas or divisions or Zonal/Regional offices to the Head Office. Mainly, appraisal is centered round the goals and objectives of the unit. Broadly, in banking the key performance areas are:

(a) Deposits
(b) Advances
(c) Advances to priority sectors.
(d) Costs and expenditure.
(e) Profitability.
(f) Customer services.

There are certain other variables viz. recovery, documentation, accounts keeping, inspection report etc, which also assume significance for the banking industry to evaluate the branch level performance.

The criteria of branch performance when related to the performance plan of the branch may, thus, reflect the performance of the branch in terms of:

(a) Business development i.e. growth in the amount of deposits, advances, and profits.
(b) Development of different types of clients from different market segments i.e. increase in the number of accounts.
(c) Strategies of business development.
(d) Utilization of the potentialities of staff.
(e) Work organization i.e. improvement of customer service, systems of work etc.
(f) Training within the branch
(g) Expenditure of the branch.
(h) Problems of the branch i.e. staff problems, administrative problems and customers’ complaints.

Indeed, there are considerable difference of opinion about the criteria by which the efficiency and health of the banking industry, both at the branch and at the head office levels, can be assessed. It is the level of deposits
or level of advances or number of operating branches i.e. location and physical growth, or the level of capital and reserves that is, capital adequacy or simply the profits. Other indicators, in addition to traditional ones, which may also be considered are, the number of rural branches opened, the level of advances to the priority sectors and hitherto neglected sectors etc. These can be grouped as measures of social profitability which is an important yardstick to measure the success of the banking system in terms of social priorities.

Moreover, banking being a service industry, its health depends on the level of customer services and the effective and efficient development of human resources in the industry.

All these variables have to considered for banking industry in order to obtain the overall picture of the particular branch, as well as, the banking industry as a whole. It appears to be in the fitness of things here to quote a former Governor of R.B.I. on this subject.

"On the subject of performance evaluation, I am tempted to offer a few remarks on credit budgeting and credit planning. While the performance evaluation is somewhat internal to the banks functioning, the performance evaluation in terms of resources mobilization and credit deployment is basic to an evaluation of the banking system, particularly, in the light of the role we expect it to play".
The evaluation of the unit, firstly, depends upon its performance in relation to budget and variations in the performance have to be substantiated by the environmental factors affecting the operations in the key areas. Another factor that should be given due weightage is the credit policy of RBI and the Government directives.

Generally, the performance budget acts as a norm to evaluate the performance of the branches, but it also provides scope for evaluating inter-branch efficiency and performance in key sectors.

2.4. SCOPE OF THE PRESENT STUDY

The present study attempts to sketch a picture of the performance of Regional Rural Banks in Punjab against the backdrop of Regional Rural Banks in India. The study attempts to intensively examine and compare the various aspects of performance of RRBs in the State and appraise the extent to which the rural segment of Punjab has benefited from these institutions, which were set up primarily to cater to the needs of the rural sector. The study covers all the five R.R.Bs operating in Punjab, serving 10 districts of the State and having 201 branches. These RRBs are:

(a) **Gurdaspur-Amritsar Kshetria Gramin Bank** sponsored by the Punjab National Bank and operating in the Districts of Gurdaspur and Amritsar.
(b) **Malwa Gramin Bank** - sponsored by State Bank of Patiala and operating in Districts of Sangrur and Patiala.

(c) **Shivalik Kshetriya Gramin Bank** - sponsored by Punjab National Bank and catering to districts of Hoshiarpur and Ropar.

(d) **Kapurthala-Ferozepur Kshetriya Gramin Bank** - sponsored by Punjab National Bank and operating in districts of Kapurthala and Ferozepur.

(e) **Faridkot-Bathinda Kshetriya Gramin Bank** - sponsored by Punjab & Sind Bank and operating in districts of Faridkot and Bathinda.

The time period that has been covered by the study is from the inception of the respective banks till the year ending March 31, 1991. The criteria used for the appraisal of performance are both social and financial. These criteria consist of the following:

(a) Suitability of location of the branches of Regional Rural Banks to the beneficiaries in the State.

(b) Branch expansion and spread of banking facilities.

(c) Deposit mobilization by RRBs in the State in terms of amount, categories and number of accounts.

(d) Advances in terms of amount, categories and number of accounts.

(e) Working results in terms of:
   (i) Components of Income
   (ii) Expenses
(iii) Profits
(iv) Profitability

(f) The various challenges before the Regional Rural Banks:
   (i) Mounting overdues
   (ii) Coordination in lending.
   (iii) General drawbacks like lack of effective supervision etc.
   (iv) Erosion of paid up capital.

(g) Analysis of quality of services provided by RRBs
(h) Effect of the operations of RRBs on the well being of Rural people.

2.5. OBJECTIVES OF THE STUDY

The scope of the study puts forth the objectives of the study. These can be stated as:

(a) To sketch a general picture of the Regional Rural Banks in India in terms of its evolution and present state of affairs.

(b) To evaluate the precise role played by these banks in Rural Credit structure of Punjab ; deposit mobilisation, credit disbursement and recovery position.

(c) To evaluate the Profitability of the Regional Rural Banks in Punjab.

(d) To evaluate the quality of services of RRBs to the beneficiaries and to examine the role played by these
bills in rural development.

(e) To evaluate the motivation and satisfaction level of the bank officers providing these services

(f) To identify the problems that affect the performance of Regional Rural Banks in Punjab and to make suggestions for improving their performance.

2.6. METHODOLOGY

In order to capture the true position of Regional Rural Banks in Punjab and to make a comprehensive analysis of the performance, an attempt has been made to go beyond the three variables, namely, branch expansion, deposits mobilization and credit deployment and examine the extent to which the rural segment of the State has benefited from these Regional Rural Banks. All this has been analyzed keeping in view the Government policy in this regard.

2.6.1. COLLECTION OF DATA

The study is based on both PRIMARY, as well as, SECONDARY data. The operational activities of the banks have been analyzed on the basis of published and unpublished data from the banks.

Primary data has been collected by actually visiting the Head Office of NABARD and the Regional office of NABARD in Sector - 17, Chandigarh and the Districts Head Offices of these Regional Rural Banks. Data has also been collected by conducting personal interviews with officials of these banks, as well as, the beneficiaries, Government officials and
sponsoring banks. QUESTIONNAIRES were distributed amongst the beneficiaries so as to collect information. The questionnaire included questions relating to the amount of loan taken, number of formalities that need to be complied with, services provided by RRBs, problems in getting credit etc. Also separate questionnaires containing questions relating to sanction and disbursement of loans, recovery position, policies and practices of RRBs, difficulties faced by the employees of RRBs, extent of job satisfaction etc., were administered to bank officials to elicit information.

For Secondary data, the publications of Government of India, Reserve Bank of India, NABARD, sponsoring Banks and Regional Rural Banks have been relied upon. This has been supplemented by already published works, articles in newspapers and Journals etc.

2.6.2. **SELECTION OF SAMPLES**

(a) **Beneficiaries:** For the purpose of collection of information from the beneficiaries, a sample survey was conducted. The sample was stratified so as to cover the beneficiaries of all districts in which RRBs are having their operations. A total of 550 beneficiaries were selected for the purpose of collection of data. Each RRB in Punjab is having its operations in 2 districts. Therefore, approx. 20 percent beneficiaries were taken from the operational area of each RRB, approx. 10 per cent from each district. While
selecting the sample, it was kept in mind that beneficiaries from all trades / occupations / castes / age-groups / income level/educational level were included. Out of the sample selected, forty beneficiaries did not respond and finally, the information received from 510 respondents was used for the purpose of analysis.

(b) **RRB employees**: The total sample size was 100 employees selecting 20 employees from each bank and its branches. However, 6 employees did not respond and 3 gave self-contradictory information and thus had to be excluded from the analysis. The results of the study are based on the information supplied by the remaining 91 employees. Employees included branch managers, managers, officers and clerks.

2.6.3. **ANALYSIS OF DATA**

The study involves both a TEMPORAL, as well as, CROSS SECTIONAL ANALYSIS. For this purpose, both financial, and statistical tools have been used.

Following analysis have been carried out:

(a) **TREND ANALYSIS**

(b) **STRUCTURAL CHANGE ANALYSIS**

(a) **TREND ANALYSIS**

A trend analysis becomes imperative as its clearly indicates the magnitude and direction of operations over time. It helps to identify banks in respect of their level of efficiency in operations. With the help of trend analysis, we can determine whether we are progressing in the right direction
or not. This helps in taking remedial measures, to bring the operations on the required path in case there are any deviations.

For analyzing trend, growth rates viz. compound growth rates and exponential growth rates have been calculated.

(i) **COMPOUND GROWTH RATES:** For making calculations with regard to annual compound growth in deposits, credit, branches etc., the following equation has been used:

\[
r = \left( \frac{A_n}{A_0} - 1 \right) \times 100
\]

where:

- \(A_n\) = Amount/Number at the end of ‘n’ years.
- \(A_0\) = Amount/Number in the base year.
- \(r\) = Rate of growth.
- \(n\) = Time period in years.

(ii) **EXPONENTIAL RATE OF GROWTH:** It reflects the strength of movement of any variable. The operations of the banks normally grow from year to year, each year enabling it to have an enlarged base to compound the growth rate. The exponential function fits in as follows:

\[
Y = ab^x
\]

This function when translated into logarithmic form, gives a log-linearity function.

\[
\log Y = \log a + x \log b
\]
To obtain the value of the constants ‘a’ and ‘b’ the two normal equations to be solved are:

\[ \sum \log Y = N \log a + \log b \sum x \]
\[ \sum (x \log Y) = \log a \sum x + \log b \sum x^2 \]

Where:

- \( a \) = y-intercept
- \( b \) = Slope of the curve

When deviations are taken from the middle year that is \( \sum x = 0 \),

the above equation takes the following form:

\[ \sum \log Y = N \log a \text{ and } \sum (x \log y) = \log b \sum x^2 \]

Therefore, \( \log a = \frac{\sum \log Y}{N} \) and \( \log b = \frac{\sum (x \log Y)}{\sum x^2} \)

Antilog of log b gives the value of b. Growth rates are derived from this equation using the following relationship.

\[ b = 1+r \]

Where \( r \) is exponential growth rate.

If we multiply ‘r’ value by 100, it will give the growth rate in percentage form, that is,

Exponential growth rate = Antilog of log b \times 100-100

**STRUCTURAL CHANGE ANALYSIS:**

For conducting structural changes analysis, the following tools have been used:

1. Coefficient of concentration
2. Ratio analysis
3. Decomposition analysis.
(1) **CO-EFFICIENT OF CONCENTRATION**: In order to assess the concentration of any variable in a few channels, the coefficient of concentration has been used:

\[ X = \frac{i}{p} \sum |P_i - P| \]

Where:

- \( X \) = coefficient of concentration which varies from '0' to '100'
- \( P \) = Number of channels in which a variable can be put.
- \( P_i \) = The percentage share of ith channel in the total value of the variable.

If the co-efficient of concentration is 100, it implies 100 percent concentration of the variable in one channel only. On the contrary, if its value is 'O' it means there is no concentration.

(II) **RATIO ANALYSIS:**
For analyzing structural changes, a number of ratios have been used. These ratios pertain to productivity, functional progress and profitability of Regional Rural Banks.

(a) **PRODUCTIVITY RATIOS**
For analyzing productivity, the following ratios have been used:

(i) **Interest Earned Ratio** 
\[ 'r' = \frac{\text{Total Interest Earned}}{\text{Volume of Business}} \]
(ii) Other Income Ratio 'c' = \frac{\text{Non-interest Income}}{\text{Volume of Business}}

(iii) Total Income Ratio 'j' = \frac{\text{Total Income}}{\text{Volume of Business}}

(iv) Interest Paid Ratio 'k' = \frac{\text{Total Interest paid}}{\text{Volume of Business}}

(v) Manpower Expenses Ratio 'm' = \frac{\text{Total Manpower Expenses}}{\text{Volume of Business}}

(vi) Manpower Expenses Productivity Ratio 'b' = \frac{\text{Net Profit}}{\text{Manpower Expenses}}

(vii) Other Expenses Ratio 'o' = \frac{\text{Other Expenses}}{\text{Volume of Business}}

(viii) Total Expenditure Ratio 'l' = \frac{\text{Total Expenses}}{\text{Volume of Business}}

(ix) Spread to volume of Business Ratio 'd' = \frac{\text{Spread}}{\text{Volume of Business}}

(x) Incremental Advances to Manpower Expenses 'g' = \frac{\triangle \text{Advances}}{\text{Manpower Expenses}}

(xi) Incremental Deposits to Manpower Expenses 'h' = \frac{\triangle \text{Deposits}}{\text{Manpower expenses}}

(xii) Volume of Business per Employee Ratio 'a' = \frac{\text{Volume of Business}}{\text{Total Number of Employees}}
(b) **PROFITABILITY RATIO**

The following ratio highlights the net effect of the operations of Regional Rural Banks:

(i) Net profit to volume of Business $P_i$

\[
\text{Net profit} \times \frac{100}{\text{Volume of Business}}
\]

(c) **FUNCTIONAL PROGRESS RATIOS**

Branch expansion, deposit mobilization and credit deployment are the three main functions of a banking institution. The following ratios have been used to highlight the functional progress made by Regional Rural Banks in Punjab over the period under study:

(i) **Credit-Deposit Ratio (C/D)**

\[
\frac{\text{Outstanding Advances}}{\text{Deposits}} \times 100
\]

(ii) **Incremental Credit Deposit Ratio (ICDR)**

\[
\frac{\text{Change in advances over a period of time}}{\text{Change in deposits over that period}}
\]

(iii) **Deposits per Branch (D/B)**

\[
\frac{\text{Total deposits}}{\text{No. of Branches}}
\]

(iv) **Credit per Branch (C/B)**

\[
\frac{\text{Total Advances}}{\text{No. of Branches}}
\]

(v) **Deposits per employee (D/E)**

\[
\frac{\text{Total Deposits}}{\text{No. of employees}}
\]
DECOMPOSITION ANALYSIS: In decomposition analysis, the different portfolios are regarded as given and changes over time in the shares of this to various portfolios are studied to detect, the factors/reasons for the changes. Decomposition Measures ($D_m$) have been used in the study to pinpoint factors responsible for changes in:

- Deposits
- Advances

A summary of the procedure to find out the structural change measures (decomposition measures) is given in the table 2.1

$$\text{DECOMPOSITION MEASURE} = D_m^{1983/1984} = D_{m1/2}$$

$$\sum_{i=1}^{n} \pi_i(2) \times \log\left(\frac{\pi_i(2)}{\pi_i(1)}\right)$$

Like wise decomposition measure of $i$th type of advance for any year ‘t’ based on ‘t-1’ year will be $D_m(t-1/t)$

$$D_m(t-1/t) = \sum_{i=1}^{n} \pi_i(t) \times \log\left(\frac{\pi_i(t)}{\pi_i(t-1)}\right)$$

A Summary is given below:

Let $x_{i(1)}$, $x_{i(2)}$ ....... $x_{i(t)}$ be absolute values of $i$th type of advances given by a Regional Rural Bank ($i = 1, 2, ......., n$) in the years 1, 2 ............ t respectively.

$$\sum x_{i(1)}, \sum x_{i(2)} - - - \sum x_{i(t)}$$ be the total values of all advances for the year 1, 2 ............ t. From the individual absolute values of advances and their total value for each year, we can compute relative values as given in the table, denote by $\pi_{i(1)}$, $\pi_{i(2)}$ ..... $\pi_{i(t)}$ for the year 1, 2 .................t. The decomposition measure for any year ‘t’ based on previous year
### TABLE 2.1
**PROCEDURE FOR COMPUTING DECOMPOSITION MEASURES**

<table>
<thead>
<tr>
<th>TYPE OF ADVANCES</th>
<th>ABSOLUTE VALUES</th>
<th>RELATIVE VALUES</th>
<th>( p_{i}^{2}/p_{1}^{1} )</th>
<th>Log of Col. 6</th>
<th>( p_{i}^{2}/p_{1}^{1} )</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>2 ( x_{1} )</td>
<td>3 ( x_{2} )</td>
<td>4 ( p_{1} )</td>
<td>5 ( p_{2} )</td>
<td>6</td>
</tr>
<tr>
<td>1. SMALL AND MARGINAL FARMERS</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. AGRICULTURAL LABOURERS</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. SMALL ENTREPRENEURS</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. RURAL ARTISANS</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. OTHERS</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

\[ \sum \]

\[ X_{1} \quad X_{2} \quad p_{1} = 1.00 \quad p_{2} = 1.00 \]
will be \( Dm(t_{-1}/t) = \sum p_i t \times \log \left( \frac{P_i(t)}{P_i(t-1)} \right) \)

Thus, decomposition analysis involves the following 6 steps:

1) Take 2 years
2) Write absolute values relating to variables & total it
3) Find out variable relative share by dividing its absolute value by total value.
4) Divide current year variable relative value by the previous year relative value.
5) Take log of above division results of each variable
6) Multiply the log value by current year’s relative shares of the variables and total it to obtain decomposition measure (Dm)

Decomposition measure can be used to detect the occurrence of structural changes. Decomposition measures (Dm) generally vary from ‘o’ to ‘1’. If Dm for a particular period is ‘o’ it means that there has been no structural change in assets composition in that period. Again, higher the Dm greater is the structural change.

(iv) OTHER TOOLS USED:

To study the inter-sectoral differences with regard to the various qualitative aspects highlighted by respondents, the following statistical tools have been used:

(a) CHI-SQUARE TEST (\( \chi^2 \)-TEST)
Chi-square test, a non-parametric test, helps in describing the magnitude of the discrepancy between theory and observation. It is defined as:

$$\chi^2 = \frac{(O-E)^2}{E}$$

Where, 

- $O =$ observed frequencies
- $E =$ Expected frequencies

The calculated values of $\chi^2$ is compared with the table value of $\chi^2$ for given degrees of freedom at a specified level of significance (5 per cent in this case). If the calculated value of $\chi^2$ is more than table value of $\chi^2$, the difference between theory and observation is considered to be significant, that is, it could not have arisen due to fluctuations. If $\chi^2$ is less than corresponding table value, the difference between theory and observation is not considered significant and hence ignored.

(b) **ANALYSIS OF VARIANCE (ANOVA)**

Analysis of variance tests for the significance of the difference among sample means. This is done via the mechanism of F-test for testing the significance of the differences between two variables, but the test is so designed that the variables being compared are different only if the means under consideration are not homogeneous.

When two independent factors might have an effect on the response variable of interest it is possible to design the test so that an analysis of variance can be used to test
for the effects of the two factors simultaneously. This is done with the help of a two factor analysis of variance, with which we can test two sets of hypothesis with the same data at the same time.

In a two way classification the data are classified according to the differences in criteria of factors. The analysis of variance table takes the following form:

**TABLE 2.2**

**ANALYSIS OF VARIANCE TABLE**

<table>
<thead>
<tr>
<th>SOURCE OF VARIATION</th>
<th>SUM OF SQUARES</th>
<th>DEGREE OF FREEDOM</th>
<th>MEAN SUM OF SQUARES</th>
<th>F-VALUE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between columns</td>
<td>SSC</td>
<td>(c-1)</td>
<td>MSC=SSC/(c-1)</td>
<td>MSC/MSE</td>
</tr>
<tr>
<td>Between Rows</td>
<td>SSR</td>
<td>(r-1)</td>
<td>MSR=SSR/(r-1)</td>
<td>MSR/MSE</td>
</tr>
<tr>
<td>Residual Value or error</td>
<td>SSE</td>
<td>(c-1)(r-1)</td>
<td>MSE=SSE/(c-1)(r-1)</td>
<td>MSE/MSE</td>
</tr>
<tr>
<td>Total</td>
<td>SST</td>
<td>(n-1)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Where,

- SSC = Sum of squares between columns
- SSR = Sum of squares between Rows
- SSE = Sum of squares due to error
- SST = Total sum of squares

The sum of squares for the 'Residual' is obtained by
subtracting from the total sum of squares the sum of squares between columns and rows.

\[ \text{i.e. } \text{SSE} = \text{SST} - (\text{SSC} + \text{SSR}) \]

Total number of degrees of freedom = \( n-1 \) or \( cr-1 \)

where, \( c \) refers to number of columns and \( r \) to number of rows.

No. of degrees of freedom for error = \( (c-1)(r-1) \)

The total sum of squares, sum of squares for 'between column' and sum of squares for 'between rows' are obtained in the same way.

The \( F \) values are calculated as follows:

\[ F (V_1, V_2) = \frac{\text{MSC}}{\text{MSE}} \]

Where, \( V_1 = c-1 \) and \( V_2 = (c-1)(r-1) \)

\[ F (V_1, V_2) = \frac{\text{MSR}}{\text{MSE}} \]

Where, \( V_1 = r-1 \) and \( V_2 = (c-1)(r-1) \)

The calculated values of \( F \) are compared with table values. If calculated values of \( F \) is greater than table value at pre-assigned level of significance (5 per cent in this case), the null hypothesis is rejected, otherwise accepted.

2.7 **LIMITATIONS OF THE STUDY**

Due to the nature of the subject, objectives of the study, scope of the study in terms of time span and number of banks covered, number of criterion applied and variables examined,
the study is prone to certain limitations. These are:

1. Study is based, to quite an extent, on financial data reported by various banks. The limitations of financial accounting are likely to influence the results. Comparison of figures of years, for instance, 1983 and 1991, are likely to be misleading unless figures are adjusted for changes in price levels. If the various financial indicators of performance such as, deposits, profits etc. are deflated to the base year the conclusions are likely to change to a great extent.

2. The window dressing of annual financial statements, indulged in by banks to show the achievement of targeted levels of performance in terms of deposits and credit etc, at the time of closing of accounts, distorts the actual pictures. The study suffers from the common limitation of most of the studies relating to profitability and performance of the banks, due to unreliability of the figures of profit.

3. The results of this study are applicable to Regional Rural Banks of just one State, that is, Punjab. There are wide variations in the socio-economic profile of the different States and, thus, it is impossible to comment on the performance of the RRBs in the other States or the country as a whole, on the basis of this study.
4. In some cases detailed operational data from individual banks was not available. Though every effort was made to obtain detailed information, this was ruled out by the lack of, or, incomplete response of some bank employees/beneficiaries. Again, the political scenario of the State in the 1980's was very different from the current situation. Thus, what was applicable in 1980's might not be applicable today.

2.8. FORMAT OF REPORTING

The format of reporting adopted for the study comprises of seven chapters. Chapter I deals with the genesis of Regional Rural Banks and gives a review of various studies in rural banking. Chapter II starts the explanatory phase of the present study which carries on from the need of the study, scope and objectives to conceptualisation and methodology used for the present study. Chapter III presents the socio-economic profile of the State of Punjab including the present condition of banking in the State. Chapter IV examines the operational and functional performance of RRBs in Punjab and carries out a bank wise assessment of progress made by these banks in branch expansion, deposits mobilisation, credit disbursement and recovery position. Chapter V studies the trends in profits and profitability of RRBs in State. Chapter VI presents the perception of beneficiaries and bank
employees with regard to performance of RRBs in Punjab. Chapter VII summarises the findings and conclusions of the present research and attempts to give suggestions to bring an improvement in performance of RRBs.

NOTES AND REFERENCES

1. The Royal Commission on Agriculture (1926), the Indian Central Banking Enquiry Committee (1931). The Bhansali Mehta Committee (1938), Agriculture Finance Sub-Committee popularly known as Gadgil Committee (1944) recommended the creation of Agricultural Credit Corporation where Cooperatives were weak. The Cooperative Planning Committee (1949) allotted main role to the Cooperative Credit Structure rural credit and supplementary role to the commercial banking structure. The Rural Credit Survey Committee (1954) suggested reorganization of the Commercial Banking system to solve the problem of Rural Credit, supplemented by a strong state partnered, State associated and State sponsored State Bank of India. The Committee on Cooperative Credit, popularly known as Vaikunth Mehta Committee (1960), the study group of R.B.I. on Agricultural Credit Arrangements (1963-64), the Cooperative Credit Review Committee (1969). The All India Rural Credit Review Committee (1969) concluded that commercial banks must supplement the rural credit work of Cooperatives.
rural credit work of Cooperatives.


(4) Gupta, S.P., Statistical Methods, Sultan Chand and Sons, New Delhi, 1989.


(7) Gupta, S.P., op. cit., p.41.

(8) ibid, p.51.