Chapter III

RESEARCH DESIGN

Objectives

1. To study the business status of Life Insurance Corporation branches in Trichirapalli district.

2. To study the trends in the growth of budget policies, sum assured amount and first premium income of Life Insurance Corporation branches in Trichirapalli district.

3. To examine the trends in the growth of actual policies, actual sum assured amount and first premium income among the selected Institutions.

4. To study the trends in the growth of average sum assured per policies, average first premium income per 1000 sum assured and average first premium income per policy during study period.

5. To find out the trends in achievement in policies, achievement of first premium income and achievement of sum assured amount.

6. To examine the trends in growth of policies share to budget, sum assured amount share to budget and first premium income share to budget.
7. To study the trends in the growth of share of policies to the actual, share of sum assured to the actual and share of first premium income to the actual.

8. To suggest some rational measures to increase the performance of Life Insurance Corporation branches in Trichy district.

Hypotheses

The following hypotheses are formulated on the basis of content and meaning of the framed objectives and employing appropriate statistical tools treats them.

1. There is a significant inter-branch variation with respect to business status of Life Insurance Corporation branches in Trichirapalli district.

2. There is a significant increase in the growth of budget policies, sum assured amount and first premium income of Life Insurance Corporation branches in Trichirapalli district during the study period.

3. There is a significant increase in the growth of actual policies, actual sum assured amount and first premium income among the selected Institutions.

4. Life Insurance Corporation branches differ significantly in their growth of average sum assured per policies, average first premium
income per 1000 sum assured and average first premium income per policy during study period.

5. There is a significant variation among the Life Insurance Corporation branches in their achievements in policies, achievement of first premium income and achievement of sum assured amount.

6. Life Insurance Corporation branches differ significantly in their growth of policies share to budget, sum assured amount share to budget and first premium income share to budget.

7. There is a significant inter-branch variation with respect to trends in the growth of share of policies to the actual, share of sum assured to the actual and share of first premium income to the actual.

Methodology

This study attempts to examine the performance of non banking finance institution by making an experiment of Life Insurance Corporation branches in Trichirapalli district. This study aims at evaluating its performance of Life Insurance Corporation branches by making use of available data. It is evaluative in nature in the sense that it analyses trends in the growth of sum assured amount, number of policies and first premium income.
Sampling

This study takes into account all the Life Insurance Corporation branches in Trichirapalli District by adopting census method.

Data Collection

The relevant data are collected from various reports of Life Insurance Corporation in Trichirapalli District. The researcher has visited each branch and collected necessary data from the authorities by establishing a very good rapport. The Life Insurance Corporation authorities provided all the necessary data.

Data Analysis

The collected data are classified and tabulated with the help of computer programming. Cross tabulation is made representing chronological order and branch. In order to study the growth of policies, saving schemes, first premium income etc. The compound growth rate model base on multiple regression is applied. It is written as,

\[
\text{Antilog of Coefficient} - 1 \times 100
\]

In order to study the fluctuation in the growth of policies, saving scheme, sum assured amount and first premium income coefficient of variation is applied. It is written
\[
\sigma \frac{C.V.}{\times} = \times 100
\]

Where \( \sigma \) = standard deviation

\( X \) = mean

To study the inter-branch variation, the ANOVA two way model is applied. It shows variation due to branches, due to schemes and due to years. It is written as:

<table>
<thead>
<tr>
<th>Source of Variation</th>
<th>Sum of Squares</th>
<th>Degrees of Freedom</th>
<th>Mean Sum of Squares</th>
<th>Ratio of F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Samples</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 or Error</td>
<td>SSE</td>
<td>(c-1)(r-1)</td>
<td>MSE = SSE/(r-1)(c-1)</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>SST</td>
<td>n-1</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

\[ SSC = \text{Sum of squares between columns} \]

\[ SSC = \text{Sum of squares between rows} \]

\[ SSE = \text{Sum of squares due to error} \]

\[ SST = \text{Total sum of squares} \]

The sum of squares for the source ‘Residual’ is obtained by subtracting from the total sum of squares the sum of squares between columns and rows, i.e.,

\[ SSE = SST - (SSC + SSR) \]

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

Where \( c \) refers to number of columns, and \( r \) refers to number of rows,
Number of degrees of freedom between columns = \((c-1)\)

Number of degrees of freedom between rows = \((r-1)\)

Number of degrees of freedom for residual = \((c-1)(r-1)\)

The total sum of squares, sum of squares for between columns and sum of squares for between rows are obtained in the same way as before.

Residual or error sum of square = Total sum of squares − sum of squares between columns − sum of squares between rows.

The F values are calculated as follows:

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

Where,

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

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

Where,

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

It should be carefully noted that may not be same in both cases in one case \(V_1 = (c-1)\) and another case \(V_1 = (r-1)\)
The calculated values of $F$ are compared with the table values. If calculated value of $F$ is greater than the table value at pre-assigned level of significance, the null hypothesis is rejected, otherwise accepted.

The general data interpretation is done with the help of percentage and average analysis. Further diagrammatic and graphical representation data are also made to strengthened field study.

Concepts

The following concepts are operationally defined for the purpose of present study.

Performance

It is analysed in terms of trends in growth of saving schemes, policies and first premium income.

Life Insurance

It is a contract for payment of a sum of money to the person assured or falling him/her to the person entitled to receive the same on the happening of the event insured against.

Investment

This include investment made Life Insurance Corporation to Central Government, electricity Housing, Water supply and sewerage, state road transport corporation, industrial estate, development purpose, power generation etc.
**Limitation**

The findings of the study are applicable to the Insurance Corporation alone and it does not denote to other non-balancing financial institution. Due to data constraints at the branch level some aspects of analysis is not brought under the preview of the present research.

**Plan of the study**

The first chapter deals with Introduction and statement of the problem.

The second chapter devotes to Review of Literature.

The third chapter deals with Research design.

The fourth chapter deals with Area profile.

The fifth chapter analyses empirical data and field investigations.

The sixth chapter concludes with findings and policy measures.