CHAPTER – 3

RESEARCH DESIGN

Introduction

The previous chapter discussed about the research studies conducted in organizational performance and municipal performance. Based on the literature survey, the researcher has identified the research gap in the area of research in organizational performance of Chennai Municipal Corporation: An assessment. In this chapter design of the study is framed on the basis of previous research conducted in the field of organizational performance. This chapter examines the framed objectives and formulated hypotheses. The methodology of the study has been explained in this chapter with respect to content and coverage of the study. The methodology part deals with sampling frame work, mode of data collection, tools of data collection and data analysis procedure. This chapter gives due attention towards types of statistical tools usage in data analysis and operational definition of key concepts applied in the study. This chapter concludes with limitations and delimitation of the study.

Objectives:

1) To study the performance of Chennai Municipal Corporation in terms of growth of revenue and expenditure during the period 2003-2004 to 2013-2014.

2) To examine the physical achievements of Chennai Municipal Corporation in terms of urban infrastructure development during the period 2003-2004 to 2013-2014.
3) To study the organizational performance procedure from the point of view of employees of Chennai Municipal Corporation.

4) To analyze the information exchange process in Chennai Municipal Corporation and its effectiveness towards organizational performance.

5) To examine the employer-employee relationship in Chennai Municipal Corporation from the point of view of employees of Chennai Municipal Corporation.

6) To study the job involvement and job satisfaction level of employees of Chennai Municipal Corporation.

7) To suggest some policy measures towards improving the performance of Chennai Municipal Corporation.

**Hypothesis:**

1) The performance of Chennai Municipal Corporation in terms of growth of revenue and expenditure with respect to financial targets and achievements is quite significant during the period 2003-2004 to 2013-2014.

2) The physical achievements of Chennai Municipal Corporation in terms of urban infrastructure development are quite significant during the period 2003-2004 to 2013-2014.

3) There is a significant occupational and educational variation towards respondents’ realization on organizational performance procedure.
4) There is a significant occupational and educational variation towards respondents’ realization on the information exchange process in Chennai Municipal Corporation and its effectiveness on organizational performance.

5) The occupational and education status have significant influence on respondents’ realization on employer-employee relationship in Chennai Municipal Corporation.

6) The realization of job involvement level of the employees of Chennai Municipal Corporation depends on the socio economic status along with their job satisfaction level of the employees.

**Methodology**

This study aims at analyzing the performance of Chennai Municipal Corporation in Tamil Nadu. The performance can be measured both in terms of time series analysis over a period of time as well as current status of performance through field investigation. Thus this study employs both the secondary data as well as the primary data. This study is undertaken in two dimensions. The first dimension relates to the organizational performance analysis based on secondary data analysis. In this context, the data relating to financial indicators could be used during the period 2003-2004 to 2013-2014. Further the physical achievement of Chennai Municipal Corporation relating to number of road works undertaken, number of storm water drain works undertaken, number of building works undertaken, number of electrical works undertaken and number of
solid waste management works undertaken during the period 2003-2004 to 2013-2014 could be examined in the present study.

The second dimension relates to the organizational performance analysis based on primary data. In this context, the indicators relating to organizational performance procedure, information exchange process, nature of employer–employees relationship, job involvement and job satisfaction level of Chennai Municipal Corporation employees could be identified under exploratory research method.

The identified organizational performance indicators are cross tabulated with occupational status of the employees, educational status of the employee, income status of the employees and the gender status of the employee and thereby it gives analytical orientation to the study. Thus this study is partly exploratory in nature and partly analytical in nature.

The researcher faced some problems and challenges during the process of data collection from the employees of the Chennai Corporation. Some of them were reluctant to give answer, due to fear of higher authorities. Anyhow, the researcher to a maximum extent collected the data from the employees since the researcher has served in Chennai Corporation for a period of more than 34 years. The researcher has collected the primary data with much hardship.
The researcher has selected the Chennai Municipal Corporation for the purpose of present study. It is a very oldest corporation in Tamil Nadu and it has long tradition with well developed organizational framework and it is the reason behind the selection of Chennai Municipal Corporation. The Chennai corporation was established in 1687 and it has been developed both financially as well as performing a large number of physical functions over a period of a more than 300 years. It has well developed organization network as well as different work divisions. It could be noted that Chennai Municipal Corporation has five selected important groups of employees. From each group of employees 20 per cent of them are selected as sample.

It could be noted that Chennai Municipal Corporation has 432 Engineers and out of them 86 Engineers are selected as sample, constituting 19.90 per cent of the universe. This Corporation has 72 section officers and among them 15 section officers are selected as sample representing 20.83 per cent of the universe. Chennai
Municipal Corporation has 135 Superintendents and out of them 27 Superintendents is selected as sample, constituting 20.00 per cent of the universe.

This Corporation has 342 junior assistants and among them 68 junior assistants are selected as sample representing 19.88 per cent of the universe. Chennai Municipal Corporation has 414 Office assistants and out of them 83 Office assistants are selected as sample, constituting 20.04 per cent of the universe. At the overall level Chennai Municipal Corporation has 1395 employees and out of them 279 employees is selected as sample, constituting 20.00 per cent of the universe.

**Description of the tool**

In this study factors of respondents perceptions on organizational performance, relating to organizational performance procedure, information exchange process, nature of employer – employees relationship, job involvement and job satisfaction level of Chennai Municipal Corporation employees, have been assessed on the basis of five point rating scale. Applying reliability and validity score tested this scale, it has been done after completion of the pilot study among the sample respondents.
Reliability and Validity

Pilot study

Psychological tests were used for the present study. Before using them for the final investigation, they were tested for reliability and validity. A preliminary study was conducted among a random sample of 50 respondents. The obtained information was scored and statistically treated. A correlation was worked between odd and even items for each scale separately product moment correlation method. This was subjected to Spearmen – Brown formula for the purpose of finding correlation coefficient for the entire scale. This gave reliability co-efficient for the scale. Further the validity coefficient were also worked out from the reliability coefficient. Both the reliability and validity coefficient were subjected to ‘t’-test separately. Its level of significance was fixed by employing the formula:

\[ t = r \sqrt{n-2}/1-r^2 \] as suggested by Edwards (1969).
Table 1 Reliability co-efficient and test of significance for the questionnaire used in the study

<table>
<thead>
<tr>
<th>Sl. No</th>
<th>Test</th>
<th>N</th>
<th>Reliability</th>
<th>Test of Significance</th>
<th>Levels of significance</th>
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<td>1</td>
<td>Factors of organizational performance standard</td>
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<td>0.01</td>
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<td>2</td>
<td>Factors of organizational information exchange pattern</td>
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<td>0.8930</td>
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<td>Factors of job involvement level</td>
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<td>0.7832</td>
<td>4.18</td>
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<td>4</td>
<td>Factors of job satisfaction level</td>
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<td>0.7105</td>
<td>6.19</td>
<td>0.01</td>
</tr>
<tr>
<td>5</td>
<td>Factors of employer-employees relation</td>
<td>50</td>
<td>0.7602</td>
<td>7.76</td>
<td>0.01</td>
</tr>
</tbody>
</table>

Table 1 presents data on the Reliability co-efficient and test of significance for the questionnaire used in the study. It could be noted that the reliability Co-efficient for the factors of perceptions on organizational performance is worked out to 0.85 and it is statistically significant at 1 per cent level as per the result of t test. The reliability Co-efficient for the factors of perceptions on organizational information exchange is worked out to 0.89 and it is statistically significant at 1 per cent level as per the result of t test. The reliability Co-efficient for the factors of perceptions on organizational job involvement is worked out to 0.78 and it is statistically significant at 1 per cent level as per the result of t test. The reliability Co-efficient for the factors of perceptions on Organizational job satisfaction is calculated as 0.71 and it is statistically significant at 1 per cent level as per the result of t test. The reliability Co-efficient for the factors of perceptions on organizational employer – employees relationship is estimated at 0.76 and it is statistically significant at 1 per cent level as per the result of t test.
Table 2 presents data on the validity co-efficient and test of significance for the questionnaire used in the study. The calculated validity Co-efficient for the factors of perceptions on organizational performance standard is 0.84 and it is statistically significant as per the result of t test. The factors of perceptions on organizational information exchange pattern have validity score of 0.74 correlation Co-efficient value and it is statistically significant as per the result of t test. The factors of perceptions on Organizational job involvement level have validity score of 0.87 correlation Co-efficient value and it is statistically significant as per the result of t test. The factors of perceptions of job satisfaction level have validity score of 0.72 correlation Co-efficient value and it is statistically significant as per the result of t test. The factors of perceptions on employer-employees relation have validity score of 0.77 correlation Co-efficient value and it is statistically significant as per the result of t test.

The five point scale consists of various levels of perceptions, such as very high level, high level, moderate level, low level, and very low level.
These levels of perceptions are given rating scores. Very high level denotes 5 score value, high level 4 score value, moderate level 3 score value, low level 2 score value, and very low level 1 score value. By summing all the score values for a given set of information the total score values are computed. This type of scaling method has been used to study the organizational information exchange pattern, job involvement level, job satisfaction level and employer–employees relationship. Then average score value for each and every attribute is worked out to show the generalized picture of subject discussion. The 5 point scale of always, frequently, occasionally, rarely, and not at all has been used to study the organizational performance standard in Chennai Municipal Corporation. It could be noted that always indicates the 5 point rating score, frequently 4 point rating score, occasionally 3 point rating score, rarely 2 point rating score, and not at all 1 point rating score. By summing all the score values for a given set of information the total score values are computed.

**Data collection**

The data relating to Corporation profile and economic and financial indicators are collected from the annual reports of the Chennai Municipal Corporation. The researcher has collected the primary data from the employees of the Chennai Municipal Corporation with help of interview schedule. The data collection was carried out by the researcher directly through face to face interview method. The respondents are encouraged to give their free and frank responses. The respondents have extended their full cooperation in successful data collection. The data collection was carried out from June 2013 to December 2013.
**Data analysis**

The collected data have been classified and tabulated with the help of computer programming. Cross tabulation is done by putting independent variables such as occupational status, educational status, income status and gender status and dependent variables of organizational performance procedure, information exchange process, nature of employer–employees relationship, job involvement and job satisfaction level of Chennai Municipal Corporation employees.

**Statistical Tools**

In order to study the trends in physical achievement in terms of number of works undertaken by the Chennai Municipal Corporation, financial achievement in terms of growth of revenue and expenditure of Chennai Municipal Corporation during the period 2003-2004 to 2013-2014, the research has applied growth rate analysis and Co-efficient of variation analysis. The growth rate analysis is applied to study the trends in physical and financial performance of Chennai Municipal Corporation and Co-efficient of variation analysis is applied to study the fluctuation in the physical and financial performance of Chennai Municipal Corporation during the study period.

In order to study the factors determining the job involvement level, the multiple regression model is applied. The dependent variable job involvement level, was computed on the basis of 8 independent variables on a 5 point rating scale. It is written as

The linear regression model formed is

\[ Y = a + b_1X_1 + b_2X_2 + \cdots + b_nX_n + E \]
\[ Y = \text{job involvement level} \]
\[ a = \text{Constant} \]
\[ b_1-b_n \] indicates the regression co-efficients of the given independent variables.

\[ X_1 = \text{Household income} \]
\[ X_2 = \text{Length of service} \]
\[ X_3 = \text{Education} \]
\[ X_4 = \text{Occupational status} \]
\[ X_5 = \text{Family Size} \]
\[ X_6 = \text{Household loan status} \]
\[ X_7 = \text{Employer Employee relationship} \]
\[ X_8 = \text{Job satisfaction} \]

In order to study the association between occupational status and respondents views on physical working conditions, the chi square test is applied. In order to study the variation within sample and between samples, the anova two-way model is applied. The t test is applied to study the difference between male employees and female employees in their perception on organizational performance procedure, information exchange process, nature of employer – employees relationship, job involvement and job satisfaction. The general data interpretation is done with the help of percentage and average analyses.

**Variables:**

1) Organizational performance standard: Identification of solution to the problem, effective decision making process, preparation of action plan, employee commitment, work adaptation, employee participation
evaluation, proper collection of individual performance data, prize and credit for the work, success rate in launching new services, interconnectedness of all parts of the organization.

2) Organizational information exchange: Seeking information from sources, information exchange through personal contact, team meetings, telephone contacts, e-mail, rewarding quality of information, utility of previous decision, information exchange through seminars, conference and workshops, information exchange through written memos, notes and letters.

3) Job satisfaction: salary, incentives, bonus, leave facilities, tour facilities, first-aid facilities, room facilities, ventilation facilities, fire protection facilities, drinking water facilities, toilet facilities, rest room facilities, separate toilet for women employees, crèche facilities, medical insurance facilities, noise control mechanism, uniform facilities, protective materials ...

4) Job involvement: Overtime work, thinking about timely completion of work, planning of work activities, perfection in doing job, involvement in work, getting suggestions from the field experts in doing difficult tasks, life satisfaction depends on doing job in a perfect way, timely completion of work, job related thinking towards completion of difficult task, non-consideration of time and efforts towards completion of assigned duties, avoiding absenteeism in work, working towards welfare of the organization, feeling a part of the organization, giving good suggestions to the organization towards its improvement.
Limitations

The findings of the study are applicable to Chennai Municipal Corporation and it does not apply to other Municipal Corporations. The result of the study deals with Chennai Municipal Corporation and it does not cover small municipalities in Tamil Nadu. The sampling framework of the study covers only the Chennai municipal corporation and it has a more than 1000 employs and out of them a sample survey has been undertaken. It is very difficult to study all the 10 municipal corporations in Tamilnadu. Since, it is beyond the capacity of individual researcher, owing to constraints imposed by energy, efforts and time. This study covers social science aspect of performance analysis and physical aspect of achievements of the corporation are not brought under the purview of the present study. In this study, performance measurement has been carried out on the basis of employees’ point of view and management point of view has not been covered. This study mainly focuses on organizational performance from the point of view of perceptions.

Conclusion

This chapter narrates the ways and means of conducting the research study through appropriate methodology and tools of data collection, data analysis and overall research framework. Before conducting any research study it is pertinent to observe the geographical background of the research area in the form of area profile analysis. The next chapter discusses the profile of the Chennai Municipal Corporation.