Chapter: 2

Research Outline and Literature Review

2.1 Objective of Study

2.2 Literature Review

2.3 Research Problem

2.4 Criterion for Development

2.5 Research Question

2.6 The Study

2.7 Research Design

2.8 Research Methodology

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2.11 Contribution of Research Work

The researcher undertook research in planned manner, following is the research outline followed by researcher for the study.

2.1 Objectives of Study

1. To study development of Navi Mumbai.
2. To study management strategies of CIDCO and its functions.
3. To study various City Development Plans of Navi Mumbai drafted by CIDCO during 1980 - 2010.
4. To study the status of different projects undertaken by CIDCO in Navi Mumbai during the period 1980 - 2010
5. To study benefits and limitations of the projects within the framework of its objectives.
6. To find out gaps in the development of the City and make suggestions for the same.
Parameters for Development: To ascertain fulfillment of study objectives following Parameters are selected to study development of Navi Mumbai. Housing, Education, Market places, Healthcare, Employment, Transportation, Recreation, Hygiene and Physical infrastructure including Water supply, electricity, stormwater drainage, social and religious centres.

2.2 Literature Review

The review of literature provides micro insight in the past development. The researcher review different types of informative material related to the area of study selected, which includes the reference books, project report of nodes, reports published by CIDCO, journals, magazines, websites etc. a brief review of work done so far in this context is given below.

A] Review of Books

B] Review of Project Reports

C] Review of Reports of CIDCO and Other Authorities

D] Review of Articles

E] Review of Websites

A] BOOKS

1. Memorandum of Association and Articles of Association of CIDCO

CIDCO is a company registered under Companies Act, 1956. As per legal requirement it needs to prepare Memorandum of Association.

Different clauses of Memorandum of Association of CIDCO provide basic information about the organization which includes name, registered office, objectives, capital etc.

Just like any other companies the memorandum and articles of association provide guidelines for function and management of CIDCO.
2. Issues in urban Development (A case of Navi Mumbai); 2001; Rawat Publications Jaipur and New Delhi; Editors- R.N.Sharma, K.Sita; ISBN 81-7033-688-0.

The book is basically collection of 18 research papers related to various aspects of Navi Mumbai contributed by well known authorities in the subject matter. The book contain four sections

Section I Planning and Development: This section specifically deals with planning and development of Navi Mumbai. Under this section there are 3 research papers. These research papers were contributed by Annapurna Shaw, Shirish Patel and Arun Mhaisalkar

Section II Land, People, and Economic Activities: This section focuses on Land use pattern demographic profile and economic activities in Navi Mumbai. 5 research papers are found under this section which were written by K. Sita, M. Ray, Kamal Gupta, Ardhendu Bhattacharya, Tapati Mukhopadhyay and Mohan Gurnani

Section III Housing and Infrastructure: This section has 5 research papers contributed by Alain Jacquemin, Swapna Banerjee-Guha, R. N. Sharma, S. Siva Raju, R. K. Jha, P.M. Deshpande, Sanghmitra Acharya and Reema Dixit.

Section IV Issues in Urban Development: This sections also has 5 research papers written by J. B. D’Souza, S. B. Deshmukh, Minar Pimpale, Pallavi Matkari, R. N. Sharma, A. K. Bhattacharya and Uma Adusumilli


This book is written by Ms Shaw which provides details of development of Navi Mumbai.

The book has 9 chapters which contains different aspects of development such as historic background of city planning in India, Political and Economic framework of Urban policy making in India,
Planning of Navi Mumbai, Development of Navi Mumbai, Rehabilitation efforts by CIDCO for project affected peoples etc.

This book provides an insight in respect of political situation and urban policies existed in Maharashtra. The book provided input that helped researcher to identify gaps and research areas for the study.


This book is autobiography of Mumbai. In this author depicts history of city it provides details from 16\textsuperscript{th} century till recent times. It gives details how islands were seized by portuguese then transferred to british. How the British develop this island into a thriving city. How the Indian government tried to develop the city since independence. The book had given special importance to Navi Mumbai as Navi Mumbai is a satellite city of Mumbai. It describe formation of CIDCO which is the development authority of Navi Mumbai and developmental efforts by CIDCO

5. Draft Urban & Regional Development Plans Formulation & Implementation Guidelines 2014 Vol 1; Feb 2014; Ministry of Urban Development:

This book can be called as bible for development for Indian cities. The government of India had published these guidelines for development of cities. This book provides guidelines for urban and regional development. These guidelines incorporates various aspects of development such as planning process, contents of plans suggested in planning system, resource mobilization for implementation of plan, institutional reforms required at state level etc.

6. Smart City Mission Statement and Guidelines, Ministry of Urban Development 2015:

This book was published after announcement of development of 100 smart cities in India which is also called as smart city project by Government of India.
The book provides guidelines for development of smart cities. The book elaborate various aspects of smart city such as essential features of smart city, planning of smart city, smart city selection process, financing of smart cities etc.

B] PROJECT REPORTS

The Economics department of CIDCO prepared project report for each node. This report was focused on Airoli node. This report provides details regarding development of Airoli Node. The details of development include gross area of node, its geographic details, planned usage of land etc. These details provide valuable inputs regarding development process of Node as well as Navi Mumbai since beginning till the date of project report.

The Economics department of CIDCO prepared project report for each node. This report was focused on Ghansoli node. This report provides details regarding development of Ghansoli Node. The details of development include gross area of node, its geographic details, planned usage of land etc. These details provide valuable inputs regarding development process of Node as well as Navi Mumbai since beginning till the date of project report.

The Economics department of CIDCO prepared project report for each node. This report was focused on Kopar-Khairane node.
This report contains details regarding gross area available for development, its geographic details such as boundaries of node, planned usage of land etc. of Kopar-khairane node since beginning till the date of project report. All these details are proved to be valuable inputs which throw light on process of development as well as development of node.

The Economics department of CIDCO prepared project report for each node. This report was focused on Vashi and Sanpada node.

This report provides details regarding development, such as gross area, its geographic details, planned usage of land etc. of Vashi and Sanpada node since beginning till the date of project report.

These valuable inputs are useful to understand development of city and node.

The Economics department of CIDCO prepared project report for each node. This report was focused on Nerul node.

Nerul is second most developed node. This report provides details regarding development, such as gross area, its geographic details, planned usage of land etc. of Nerul node since beginning till the date of project report.

These details provide valuable inputs regarding development process of Node as well as Navi Mumbai since beginning till the date of project report.

The Economics department of CIDCO prepared project report for each node. This report was focused on CBD Belapur node.
CBD i.e Central Business Distric is the node which is specifically planned for offices and commercial activities. This report provides details regarding development such as gross area, its geographic details, planned usage of land etc. of CBD Belapur node since beginning till the date.

The project report is useful for researcher to understand progress of development of node as well as city.

Prepared by Economics Department of CIDCO:

The Economics department of CIDCO prepared project report for each node. This report was focused on Kharghar node.

Kharghar is one of the most important node in Navi Mumbai, it is also termed as model township developed by CIDCO. This report provides details regarding development such as gross area, its geographic details, planned usage of land etc. of Kharghar node since beginning till the date of project report.

This report provides valuable inputs in respect of development of node which also help to understand progress of Navi Mumbai.

Prepared by Economics Department of CIDCO:

The Economics department of CIDCO prepared project report for each node. This report was focused on Kalamboli node.

Kalamboli is a special node it is developed as alternative steel market and transport hub. This report provides details regarding development that include gross area, its geographic details, planned usage of land etc. of Kalamboli node since beginning till the date.

These details provide valuable inputs regarding development process of Node as well as Navi Mumbai since beginning till the date of project report.

The Economics department of CIDCO prepared project report for each node. This report was focused on New Panvel node.

New Panvel is important node as it is in close vicinity of proposed international airport. This report provide details regarding development such details include gross area, its geographic details, planned usage of land etc. of New Panvel node since beginning till the date.

These details provide valuable inputs regarding development process of Node as well as Navi Mumbai since beginning till the date of project report.


The Economics department of CIDCO prepared project report for each node. This report was focused on Dronagiri node. This report provide details regarding development such details include gross area, its geographic details, planned usage of land etc. of Dronagiri node since beginning till the date.

These details provide valuable inputs regarding development process of Node as well as Navi Mumbai since beginning till the date of project report.

C] REPORTS of CIDCO and OTHER AUTHORITIES

17. India’s Urban Vision 2021 (An Agenda for Shaping the Urban Future); Dr. U. Venkateswarlu (Minister of State for Urban Affairs and Employment); 1997:

This document is prepared for presentation at the national seminar on future cities: Urban vision 2021 in October 1997 in New Delhi. The report was prepared to provide vision for further urban development in India.
The report throws light on various issues in respect of urban development such as private public participation in development of city, urban management, financing model for development of cities various socio-economic issues in respect of development of the city.

18. **Survey of Industries in Navi Mumbai Region; Yuva Consulting; 2007; Published by CIDCO:**
The report is an outcome of census survey of various industries at MIDC in Navi Mumbai project area. Nodes of Navi Mumbai was planned around MIDC area considering the industries in MIDC will provide employment opportunities to the residents.
The report provides important statistical data on these industries such as no of industrial units employment opportunities growth prospects etc.

19. **Socio Economic Survey of Households in Planned Nodes in Navi Mumbai; 2005; CIDCO- Economic Section; Prepared by Kirloskar Consultants Ltd. Pune:**
This is a periodic survey undertaken by CIDCO. The objective of this report is to find out total housing stocks in Navi Mumbai and undertake study of the population in planned nodes in Navi Mumbai.

This report provides exact no of houses in planned nodes of Navi Mumbai, demographic features of population, socioeconomic profile of residents etc.

20. **Health Infrastructure, Facilities Personnel and Services in Navi Mumbai; 2008; statistics department CIDCO; published by CIDCO:**
This report was prepared to give an insight regarding health infrastructure, health services and health personnel in Navi Mumbai.
This is a crucial report as health infrastructure is one of the most important aspect of development of city. This report gives detail overview of general hospitals, private clinics, and pathology laboratories available in the nodes of Navi Mumbai.
21. **Impact of 12.5% Scheme on Socio Demographic and Economic Profile of PAPs (Project Affected Person) under the Navi Mumbai Project; Statistics Department (CIDCO) and Tata Institute of Social Science; 2009; Published by CIDCO:**

This study report was specifically designed to assess socio-demographic and economic profile of the Project Affected People in 14 villages of Panvel Taluka who had taken possession of land allotted under 12.5% scheme. The report also focuses on use of the plot allotted under 12.5% scheme and future plans if it is the plot are still undeveloped. It also tries to study that how the allotted land is shared by legal heirs of the PAP’s. The report also focuses on level of satisfaction of the PAP’s in respect of land allotted to the PAP’s, physical and social facilities, including benefits provided to them as part of their rehabilitation.

22. **Socio Economic Profile of Households in Planned Nodes in Navi Mumbai-2010; Statistics Department (CIDCO) & M/s Kirloskar Consultants Ltd.; 2011. Published by CIDCO:**

This is a periodic survey undertaken by CIDCO. The objective of this report is to find out total housing stocks in Navi Mumbai and undertake study of the population in planned nodes in Navi Mumbai.

Apart from providing exact no of houses in planned nodes of Navi Mumbai. This report highlights behavior of Navi Mumbai residents in terms of migration, demographic and socio economic characteristics.

23. **Wholesale, Retail, Service Industry and Open markets in Navi Mumbai- Employment, Investment and Turnover; Prof. P. C. Saxena and Statistics Department; 2009; Published by CIDCO**

Navi Mumbai was specifically planned for decongestion of Mumbai. It could be acheived by shifting market places from Mumbai to Navi Mumbai. Accordingly government had shifted APMC from Mumbai to Vashi and Steel Market to Kalamboli.
It is expected that due to migration of markets into Navi Mumbai employment opportunities in Navi Mumbai will increase. This report provides information on different types of commercial sector and quantum of employment generated in wholesale and retail markets, Service industries, and open markets in Navi Mumbai.

24. Primary and Secondary Schools in Navi Mumbai Facilities, Student Enrollments and Performance and staff profile; Prof. P. C. Saxena and Statistics Department (CIDCO); 2010; Published by CIDCO

This report is an outcome of extensive survey of the schools in Navi Mumbai. The schools include Primary, Secondary and Higher Secondary schools.

The report reveals that there are 431 schools in Navi Mumbai accommodating 3,60,000 students and about 9000 teaching and non teaching staff.

This report gives insight on location and characteristics of the schools, infrastructure facilities, sports and extracurricular activities, student’s enrollment, performance, fee structure, student teacher ratio.

25. Higher and Professional Education in Navi Mumbai: Educational streams, Infrastructure, Sports facilities, Student Enrolments and Staff Profile; Statistics Department; 2010; Published by CIDCO:

This report was prepared to understand infrastructure available for higher and preprofessional education in Navi Mumbai.

The report provide all possible details like number of colleges of Higher and Professional education and training by location, year of establishment of colleges, authority of their registration and affiliation to the body of accreditation. It gives total strength of staff (teaching and Non-teaching) and their socio demographic and economic characteristics by type of college.
D) ARTICLES

26. Rahul Shrivastava, Planning the past: History of India’s Urban plans:

This article was published on http://infochangeindia.org/urban-india/backgrounder/planning-the-past-history-of-indias-urban-plans.html. This article provides an overview of urban development in India. It describes major policy decisions taken by government in respect of urban development under each 5 year plan.

27. Sanjay Banergee, 11 reasons to live in Navi Mumbai, Mumbai Mirror

This article was published on 11/11/2001 in Mumbai Mirror. In this article author Mr. Sanjay Banergee had evaluated life in Navi Mumbai. The article had identified and produces 11 different reasons to live in Navi Mumbai.

E) WEBSITES

28. www.cidco.maharashtra.gov.in:

This is official website of CIDCO. This website provides authentic details of CIDCO. It also provides details in respect of establishment of CIDCO, management of CIDCO, various projects undertaken by CIDCO.

29. www.nmsez.com:

This is the official website of Navi Mumbai SEZ. This provide all necessary details of Navi Mumbai SEZ. This website provide details in respect of area of SEZ, development plan of SEZ and other details.

2.3 Research Problem:

In earlier chapter it is already discussed that how need for development of Navi Mumbai arises and CIDCO was appointed as development authority for the same. CIDCO is developing Navi Mumbai from 1970 and its development is on the verge of its completion. Following are the research Problem for the Study.
1. To study the reasons for residing in Navi Mumbai.
2. To study about facilities provided by CIDCO to residents.
3. To know the availability of social infrastructure facilities in the area and their satisfaction.
4. To know whethere CIDCO is successful in developing Navi Mumbai
5. To study gaps in the project development

2.4 Criterion for Development:
The literature review reveals that the CIDCO was established for development of Navi Mumbai. Government had allotted land to CIDCO and entrust responsibility for development of physical and social infrastructure of Navi Mumbai. At that time concept of development was based on basic human needs i.e. easy and sufficient availability of food, shelter and clothings hence in initial stage developmental criterions of Navi Mumbai were circumstantial and factual.

Development of city is a continuous process. CIDCO understood this very well and moved ahade of its time by do not preparing a rigid master plan for development but adopted flexible approach in development which helps the CIDCO to incorporate changes in city development plan according to needs of society and need of time.

Now socio-economic situation is different advancement of science and technology and growth in income results in additional criterias for development. Following criterias are selected to study development of Navi Mumbai. Housing, Education, Market places, Healthcare, Employment, Transportation, Recreation, Hygiene and Physical infrastructure including Water supply, electricity, stormwater drainage, social and religious centres.

2.5 Research Question
The appointment of CIDCO as town development authority for upcoming NAINA and Khopta cities on the basis of development of Navi Mumbai leads to the research question that “Whether residents of Navi Mumbai are satisfied with the efforts undertaken by CIDCO for development of Navi Mumbai?”
2.6 THE STUDY

The state government had assigned task for development of Navi Mumbai to CIDCO. The study evaluate role of CIDCO in development of Navi Mumbai, and find out CIDCO’s success and failures in developing Navi Mumbai based on its objectives by giving maximum weightage to beneficiary of this project i.e. residents of Navi Mumbai.

- The study evaluates reason of residents to choose Navi Mumbai as their place of residence.
- It also determines availability of different civic services and elements of social infrastructure to them.
- It obtains opinion of the residents on Whether CIDCO is successful in developing Navi Mumbai and
- The study also presents suggestions and complaints from Navi Mumbai residents which show their degree of satisfaction and required improvements in development of Navi Mumbai.

An attempt is made to provide guideline for future development systematically and scientifically to concern organization by finding out suggestions and complaints from residents of Navi Mumbai.

2.7 Research Design

The study is focused on role of CIDCO in development of Navi Mumbai. It depends on collection of primary as well as secondary data. Following table presents research design applied for the study.

**Table 2.1: Research design of the study**

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Type of Research</td>
<td>Descriptive Research</td>
</tr>
<tr>
<td>2</td>
<td>Nature of Research</td>
<td>Quantitative</td>
</tr>
<tr>
<td>3</td>
<td>Research Instrument</td>
<td>Structured Questionnaire and Interview</td>
</tr>
<tr>
<td>4</td>
<td>Dependent Variable</td>
<td>Development of Navi Mumbai</td>
</tr>
<tr>
<td>5</td>
<td>Independent Variable</td>
<td>Efforts of CIDCO</td>
</tr>
<tr>
<td>6</td>
<td>Control Variable</td>
<td>Not Available</td>
</tr>
<tr>
<td>7</td>
<td>Survey period</td>
<td>1980 – 2010</td>
</tr>
<tr>
<td>8</td>
<td>Method of data collection</td>
<td>Sample Survey</td>
</tr>
</tbody>
</table>
### Universe

<table>
<thead>
<tr>
<th>Population in planned nodes of Navi Mumbai</th>
</tr>
</thead>
</table>

### Population

11,80,598

(Source: Socio Economic Profile of Households in Planned Nodes in Navi Mumbai 2010)

### Sample Size

\[
\text{Sample Size} = \left(\frac{Z \cdot \text{score}}{\text{StdDev}} \cdot \left(1 - \text{StdDev}\right)ight) / (\text{margin of error})^2
\]

- \(Z \text{ score} = z\text{score @ 95\% confidence}\)
- \(\text{StdDev} = \text{Standard Deviation}\)
- \(e = \text{Margin of error}\)

\(Z \text{ score} = 1.96, \text{ Std Dev} = 0.5 \text{ and } e = 3.25\%\)

### Calculated Sample Size

909 rounded off to 900

### Sample elements

People in Navi Mumbai

### Sample Method

Random Sampling

### Data Collection Sources

Primary and Secondary Sources

### Primary Sources

Structured Questionnaire and Interview

### Secondary Sources

Books, Project Reports, Reports, Newspapers, websites etc.

### Question type

Rankings, Closed Ended, Open Ended

### Data Interpretation

Table, Graphs

### Tools for data analysis

Percentage, Graphical Presentation, Correlation

### Statistical software

MS Excel

### Test

\(z\text{-test}\)

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### 2.8 Research Methodology and Techniques Used.

The research is based on case study method as it is best suitable for the title of research study. In addition to collect statistical data and information to micro focus on the study following additional method of research will be taken into consideration.

#### 2.8.1 Data collection

**a) Primary data:** The research is largely based on the data and information provided by CIDCO officer and general public which was obtained through interview and questionnaire.
**Sample size:** Sample of 900 respondents is decided on the basis of following formula by taking into consideration of Population size of Navi Mumbai.

\[
\text{Sample Size} = (Z\text{-score})^2 \times \text{StdDev} \times (1-\text{StdDev}) / (\text{margin of error})^2
\]

(Source : Scott M. Smith, Determining sample size)

Z score at 95% confidence level is taken at 1.96, Std. deviation is taken at 0.5 and margin of error is taken at 3.25% or 0.0325.

**By applying above formula sample size is derived at 909 respondents which were rounded off to 900. Responses for questionnaire are obtained from 900 respondents who live in different nodes of the city. Details of sample are presented in following table.**

**Table 2.2: Node wise details of sample**

<table>
<thead>
<tr>
<th>Node</th>
<th>Population</th>
<th>Sample</th>
<th>Node</th>
<th>Population</th>
<th>Sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>Airoli</td>
<td>115335</td>
<td>90</td>
<td>Kharghar</td>
<td>139693</td>
<td>105</td>
</tr>
<tr>
<td>Ghansoli</td>
<td>65593</td>
<td>50</td>
<td>Kamlamboli</td>
<td>62073</td>
<td>50</td>
</tr>
<tr>
<td>Kopar Khairane</td>
<td>132827</td>
<td>100</td>
<td>Kamothe</td>
<td>74249</td>
<td>55</td>
</tr>
<tr>
<td>Vashi</td>
<td>139573</td>
<td>105</td>
<td>New Panvel</td>
<td>123171</td>
<td>95</td>
</tr>
<tr>
<td>Sanpada</td>
<td>79894</td>
<td>60</td>
<td>Dronagiri</td>
<td>20382</td>
<td>15</td>
</tr>
<tr>
<td>Nerul</td>
<td>162366</td>
<td>125</td>
<td><strong>Total</strong></td>
<td><strong>1180598</strong></td>
<td><strong>900</strong></td>
</tr>
<tr>
<td>CBD Belapur</td>
<td>65442</td>
<td>50</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(Source :- Socio Economic Profile of Households in Planned Nodes in Navi Mumbai 2010)

b) **Secondary data:** Secondary data will be collected through newspapers, electronic media, magazines, websites, government plans, manuals, and various reports.

**2.8.2 Techniques used:** - The research report includes various statistical techniques such as various types of tables, graphs and diagrams for analysis of collected data and application of test for confirmation of inferences.
2.9 Hypotheses
Considering the objectives of the research following hypotheses are tested for its validity.

1. CIDCO has been successful in development of Navi Mumbai.
2. There are gaps in projected development plan and actual development of Navi Mumbai.

2.10 Limitations of the Study
1. The study is restricted to planned nodes of Navi Mumbai area only.
2. The study is focused on development of the city during 1980 – 2010.
   (At the time of approval of research proposal interaction made with committee and on its recomandation it was decided to cover period of 1980-2010)

2.11 Contribution of Research Work
The study is helpful to the society in many ways. The study is focused on to find out whether CIDCO is successful in developing Navi Mumbai, i.e whether it is successful in attaining its objectives set for establishing Navi Mumbai. The study tried to find out achievements of CIDCO as well as gaps between projected development plans and actual development. It also finds out reasons for such gaps. The study also tried to find out obstacles in future development of Navi Mumbai. This study has multiple facets it could benefit society at large. Today India is changing at very fast pace. Peoples are migrating to urban areas for employment, education and better quality of life. Government need to strengthen existing urban infrastructure and build new cities to absorb these immigrants. This study will provides guideline to management of CIDCO and other concerned authorities for future development of Navi Mumbai. This study could also act as a case for development of new cities in India. It will also act as a ready reckoner for the historians in future as it will contain development track of the Navi Mumbai during the research period of 3 decades i.e. 1980 – 2010.

Conclusion: This chapter provides review of literature done by researcher and manner in which research was conducted. Next chapter of thesis describes establishment of CIDCO and its management.