MAHARASHTRA STATE

JALGAON DIST.
NATURAL DIVISIONS

The Northern Belt
The Central Belt
The Southern Belt

SAMPLE TALUKAS
1) Yawal
2) Erandol
3) Jamner

NUMBER OF SAMPLE VILLAGES IN EACH SAMPLE TALUKA:
- Yawal - 20
- Erandol - 33
- Jamner - 33
RESEARCH METHODOLOGY

INTRODUCTION:

Methodology would be a process through which certain objectives of research could be achieved on scientific basis. It gives a direction by which a researcher has to complete his work scientifically. He has to select a sample from the universe on which a survey work would be based.

"Rural Transport of Jalgaon District" is the subject of this research. From the universe of Jalgaon district, three sample talukas were selected from the natural divisions of Jalgaon district. From these three sample talukas eighty six villages as a sample were selected as a sample for field survey. The facts and figures which could be obtained in the process of field survey are logically applied to the universe of research. This research work would also be based on the collection of Statistical data by paying personal visits and analysis of the collected data, and also secondary data - available from the published materials. The research methodology which I had applied to this research work would be as follows:

1) Natural Divisions:

Jalgaon district consists of thirteen talukas such as - Jalgaon, Chopda, Yawal, Raver, Edlabad, Bhusawal, Pachora, Jamner, Chalisgaon, Bhadgaon, Parola, Erandol and Amalner. On the basis of topography Jalgaon district is
divided into three natural belts - i) The Northern Belt; ii) The Central Belt; and iii) The Southern Belt.

While drawing these natural belts or the divisions of Jalgaon district following facts were considered -

i) The hilly regions of the district;
ii) The plain region made by the Tapi and its tributary rivers.

The Northern and Southern belts of natural divisions are hilly regions. Because the ranges of Satpuda and Satmala mountains cover these natural divisions respectively. The Central belt is a plain region made by the Tapi and its tributary rivers. According to natural divisions, the talukas in Jalgaon district would be classified as follows:

1) The Northern Belt - i) Chhopda
   ii) Yawal
   iii) Raver.

2) The Central Belt - i) Amalner
   ii) Erandol
   iii) Jalgaon
   iv) Bhusawal
   v) Edlabad

3) The Southern Belt - i) Chalisgaon
   ii) Parola
   iii) Bhadgaon
   iv) Pachora
   v) Jamner

A comparative study of these natural divisions would
be stipulated in order to find out the conditions of rural transport in Jalgaon district.

2) **Sample Talukas:**

To study the facts and prospectus of rural transport of Jalgaon district, I have selected three sample talukas as samples from natural divisions. They are as follows:

i) Yawal taluka - from the Northern belt;

ii) Erandol taluka - from the Central belt;

iii) Jamner taluka - from the Southern belt.

I applied a specific criteria while selecting the sample talukas from each natural division. The talukas which were selected as samples possessed the less village road length per 100 Sq. Km. of area. The following table shows the village road length per 100 Sq. Km. of area according to natural divisions of Jalgaon district.

**TABLE No.10.1**

Village road length per 100 Sq.Kms. of area according to natural divisions of Jalgaon district contd.-
<table>
<thead>
<tr>
<th>Natural Divisions</th>
<th>Name of the taluka</th>
<th>Village road length per 100 sq Km.</th>
<th>Sample taluka</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) The Northern Belt</td>
<td>i) Chopda</td>
<td>15.7</td>
<td>Yawal</td>
</tr>
<tr>
<td></td>
<td>ii) Yawal</td>
<td>9.2</td>
<td></td>
</tr>
<tr>
<td></td>
<td>iii) Raver</td>
<td>10.2</td>
<td></td>
</tr>
<tr>
<td>2) The Central Belt</td>
<td>i) Amalner</td>
<td>14.4</td>
<td>Erandol</td>
</tr>
<tr>
<td></td>
<td>ii) Erandol</td>
<td>11.6</td>
<td></td>
</tr>
<tr>
<td></td>
<td>iii) Jalgaon</td>
<td>13.6</td>
<td></td>
</tr>
<tr>
<td></td>
<td>iv) Bhusawal</td>
<td>13.7</td>
<td></td>
</tr>
<tr>
<td></td>
<td>v) Edlabad</td>
<td>13.8</td>
<td></td>
</tr>
<tr>
<td>3) The Southern Belt</td>
<td>i) Chalisgaon</td>
<td>12.7</td>
<td>Jamner</td>
</tr>
<tr>
<td></td>
<td>ii) Parola</td>
<td>12.5</td>
<td></td>
</tr>
<tr>
<td></td>
<td>iii) Bhadgaon</td>
<td>19.5</td>
<td></td>
</tr>
<tr>
<td></td>
<td>iv) Pachora</td>
<td>15.7</td>
<td></td>
</tr>
<tr>
<td></td>
<td>v) Jamner</td>
<td>9.1</td>
<td></td>
</tr>
</tbody>
</table>

Source: Compiled from Road Development Plan for 1961-81, of Jalgaon district.

It would be clear from the above table that, Yawal taluka possessed less village road length per 100 Sq. Km. than other talukas like Chopda and Raver in Northern Belt. Therefore from Northern Belt Yawal taluka was selected as a sample. Erandol and Jamner talukas possessed less village road length per 100 Sq.Kms. than other talukas of Central and Southern belts respectively. Therefore Erandol and Jamner talukas were selected as samples from the Central and Southern belts of natural divisions respectively. Purposive Random sampling method would be underlyling in the selection of sample talukas from natural divisions.
Jalgaon district consists of 1451 villages and 15 towns. A case study of 86 villages from three sample talukas was undertaken for the field survey. The sample villages were selected on the basis of stratified random sampling method. The 1451 villages of Jalgaon district were divided into three groups as follows:

1) In the first group, a list of villages was made which possessed pucca roads.
2) In the second group, a list of villages was made which possessed kutcha roads.
3) In the third group, a list of villages was made which do not have any road linkages.

Out of 1451 villages, 357 villages possessed pucca road, 857 villages possessed kutcha road and 237 villages do not have any kind of road linkages according to 1971 census. It has been assumed that the villages which possessed pucca road do not have the problems of goods and passengers transport. The villages which possessed kutcha roads have to face various problems of passengers and goods transport in rural area of the district. The condition of the villages which do not have any road linkages would be very critical. Their problems of transport are obvious. For field work of this research, the villages which possessed kutcha roads were selected.

There were 857 villages possessed kutcha roads. As a 10 percent sampling of this universe, 86 villages were selected.
as sample for field survey. Out of 86 sample villages 20 villages from Yawal taluka, 33 villages from Erandol taluka and 33 villages from Jamner taluka. The number of sample villages were less in Yawal taluka, because only 40 villages having kutcha roads in this taluka. Following table would depicts the picture of number of villages possessing the kutcha roads in sample talukas.

**TABLE No.10.2**

<table>
<thead>
<tr>
<th>Sr.No.</th>
<th>Sample taluka</th>
<th>Number of villages possessing kutcha road.</th>
<th>Number of sample villages</th>
</tr>
</thead>
<tbody>
<tr>
<td>1)</td>
<td>Yawal taluka</td>
<td>40</td>
<td>20</td>
</tr>
<tr>
<td>2)</td>
<td>Erandol taluka</td>
<td>72</td>
<td>33</td>
</tr>
<tr>
<td>3)</td>
<td>Jamner taluka</td>
<td>99</td>
<td>33</td>
</tr>
<tr>
<td><strong>Total</strong>:</td>
<td><strong>211</strong></td>
<td><strong>86</strong></td>
<td></td>
</tr>
</tbody>
</table>

Source:- Own Collection.

It would be seen from table No.10.2 that out of 211 villages, 86 villages were selected for field survey. For the selection of sample villages from each of the three sample talukas, the method of **Simple Random Sample Without Replacement (SRSWOR)** was used. The procedure would be as follows :- Suppose in a sample taluka there are N villages possessing kutcha roads. These N villages are arranged alphabetically and numbered by the natural numbers 1 to N. Afterwards a random number was selected between 1 to N from random number table at random. Let the number selected be r. Then the village which is numbered by r was selected in the sample. This procedure was repeated until we got n distinct villages in our sample. This procedure is followed for every sample taluka.
4) **INTERVIEW**:

While studying the rural transport of Jalgaon district, I interviewed some top officials and knowledgeable persons in this field. The persons, with whom I interviewed were classified as follows:

1) Executive Engineer of Public Works Department and Zilla Parishad of Construction department.

2) S.T. Drivers, Truck and Tractor drivers whose who operating their vehicles in rural area.

3) Road construction contractors and farmers.

Oral discussion was done with all these persons in respect of problems of rural transport in Jalgaon district.

5) **QUESTIONNAIRE**:

In order to make a detail study of sample villages and farmers, I prepared two separate questionnaires. One questionnaire was prepared to obtain general information of the sample villages regarding rural transport, to be filled by the Chairmen of respective Grampanchayats and another for the farmers. The first questionnaire contents the following matter.

1) Primary information - name of the village, taluka and population;

2) Distance of the village from the towns and the condition of roads approaching to the villages;

3) Facilities regarding means of transport available to the villages;
4) Marketing facilities available to the villages;
5) Contact of the villages with the towns during rainy season;
6) Modes of transport available in the villages;
7) Condition of roads inside the villages;
8) Financial Assistance for road construction;
9) Road reconstruction, repair and maintenance;
10) Problems of rural transport;
11) Social Services and important amenities of life available to sample villages.

The Second questionnaire contents the following matter:

1) Name of the farmers and agricultural land possessed by them;
2) Name of the crops grown;
3) Sale of agricultural produce;
4) Modes of transport used for the transportation of goods;
5) Weekly bazar and fairs - held in the sample villages;
6) Information regarding farm roads;
7) Information regarding bullock carts etc.

The information was collected by visiting the villages along with the questionnaire sent to them by post. Eighty Six questionnaires were sent to the respective Grampanchayats of 86 sample villages on dated 27-12-83. But I got a very poor response from them. I received only Seven questionnaires from these villages. On 27-1-1984, I sent reminders to the remaining grampanchayats and thereafter four questionnaires were received. Thus, there was no response from 75 villages as such. The Survey work of these remaining
Sample villages has been completed by paying personal visits to these villages during the months of April, May and June, 1984. Personally I have visited 75 villages as sample on the account of field survey. I have checked out a plan for it. At first I took Erandol taluka for field survey. I have covered 30 villages from this taluka between 15th of April and 30th April, 1984. With the Luna moped as my vehicle, I established my contact with the sample villages. Personally I have contacted with the Chairmen of village Panchayats and filled the questionnaires with the help of statistical data and information was available through the records of village Panchayats. I got an appreciable response and kind co-operation from the respected people of such sample villages. Afterwards Yawal and Jamner talukas were surveyed in the months of May and June, 1984. The process of collection of data and information was the same as mentioned above.

In case of farmers, two villages from each sample taluka were selected on the basis of random sampling method. Four farmers of different size of land holdings were selected from each village. (i.e. 1 to 2.5 acres of land; 2.5 to 5 acres of land; 5 to 10 acres of land and 10 acres and above) - Accordingly 24 farmers were selected. What problems they faced on account of lack of roads in their region was discussed.

6. HYPOTHESIS :-

While studying the rural transport of Jalgaon district following hypothesis was taken into account:-

i) Present position of rural transport is not satisfactory in its quality and quantity;
ii) Kutchak village roads in rural area are creating bottlenecks into the marketing of agricultural produce and passenger transport.

iii) There is a lack of important amenities of life to the most of the villages especially those which are situated interior part of the district.

iv) Un-accessible villages are distant from the socio-economic changes taking place in urban areas.

Considering the facts mentioned in this hypothesis, following objectives are formulated:

1) To study the present state of rural transport in Jalgaon district;

ii) To study whether the transport facilities existing today in rural area are sufficient or not?

iii) To study the structure of transport in respect of modes of transport and classification of roads.

iv) To study the problems of rural transport in Jalgaon district and to find out ways and means in order to overcome them.

v) To study the importance of rural transport in creation of employment and its effect on socio-economic life of the village people.

Considering the nature of the collected information and inferences to be drawn, sample statistical techniques
such as percentage, charts and diagrams have been used for this study. Every effort has been made to make this study more representative and of practical utility to the Government and policy maker. Simple Statistical methods used would help a common man to understand this subject.

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