

RESEARCH METHODOLOGY

1. Introduction

This chapter entails the methodology that is utilized in order to obtain and collect the information necessary. The methodology concentrates upon the analysis of the data obtained and expound the findings in order to achieve the objectives of the research as mentioned in previous chapters.

The chapter also justify the methods which are adopted in order to assist the research methodology based on the derived research sub-questions and the perception of the information sought for. In the same way, the chapter will discuss in detail the research paradigm, research design, sampling techniques, data collection methods, interpretation techniques and the ethics of the research. The research methodology has been framed keeping the cultural and practical issues into consideration.

2. Research paradigm

Webster Dictionary defines paradigm as “an example or pattern: small, self-contained, simplified examples that we use to illustrate procedures, processes, and theoretical points.” While for Kuhn paradigm is more of a concept in the Nature of Science Revolution (Forster 1998, pp. 232). This is where the investigation process of the research is conducted on basis of the logical structure provided by the research paradigm. Paradigms can be seen as staircase leading towards the completion of the investigation prompted by the research (Weaver & Olson 2006, pp. 459). Research paradigms falls into two categories by name (1) Positivism and (2) Interpretivism.

Positivism is the term used to conduct investigation of society on basis of logic, for example, analyses and measurements. While, Interpretivism is opposite to positivism as according to this theory the social part of the world cannot be seen through the lens of logic. For this reason, it is also known as anti-positivism. According to this theory, the social world does not work on the factual basis and thus, need a different knowledge to be applied. In this approach, it is necessary to understand that an individual’s concepts and thoughts give structure to the understanding of the surrounding world. Therefore, interpretative method needs to be employed (Heshusius & Ballard, 1996, pp. 41-42).

2.1 Research Paradigm Adopted

Positivist approach aligns with quantitative method while the interpretivism aligns with qualitative one. In the present research, both of the research paradigms are employed in order to achieve the results. This was mainly because it yielded better understanding of the data and aided in the development of the research. In terms of qualitative analysis the Panchayat development reports were examined from which the indicators were derived. These indicators are literacy, employment, and population of non-Scheduled Caste/Scheduled Tribe people and the number of families above poverty line. The socio-economic status of a Panchayats was assessed using a simple average of indicators (expressed in percentages) pertaining to all these variables. While the quantitative analysis involved the use of tables and graphs with trend lines for assessing the trends of decentralized planning in the State.

3. Data Collection

The data collection is an inevitable procedure required in a research where the researcher concentrates on his study and goal in order to gather applicable data. The data collection usually involves two techniques: essential and optional.

1) The essential collection of data procedure comprises of new and crisp data assembled in order to achieve the target of the study which can be done through questionnaires, surveys, face to face interviews, narrative, recordings, telephonic discussions, bunch talks, Pilot study and so on (Kolb, 2008).

2) Optional data or Secondary data is for the most part the current data that is accumulated by scientist to prove the hypotheses of the research and to make contrast with the study and other significant and relevant data. It is gathered through diaries, sites, books, articles, websites, e-books, magazines, new-papers and so on (Fagarasanu & Kumar, 2002).

For the convenience of the study, this study focused on the Ninth (2002-17) Five Year Plan period onwards. Therefore, the data collected on Tenth, Eleventh and Twelfth Five Year Plans (2002-2017) are utilized.

4. Data Sources

The data is sourced from the estimated plan funds from 2002-2017 Five Year Plan documents, State Planning Board, and Reports from Information Kerala Mission, non-plan funds from State Finance Commissions of 2002-03 to 2016-17 and other sources such as Reports as Census, panchayats level statistics, development reports, secondary data from Local Self-Governments and the data from Internet sources.

5. Population and Sampling Methods

The specimen size is the refined or particular number assembled from target populace. The example unit is the zone or field of the exploration on which the investigator concentrates upon.

The population is the general population selected by the investigator keeping in mind the goal of the investigation. It is regularly separated into two classes that is, Target and Sample Population.

Target Population: The target population is the all individuals selected by the investigator in a particular zone. In this study the investigator's target population is from the total number of people from the Gram Sabha.

Sample Population: The sample is the procedure where the aggregate (target) population is lessened to indicate a certain number by the researcher to concentrate on the accumulated data by using strategies and techniques (clarified in the accompanying area). Here the researcher is concentrating upon the population which participated in 2011 Panchayat report.

4.1 6. Data Analysis

According to Sanders & Churchill (2007, pp. 62) data investigation and elucidation of data involves various operations that are performed to analyse the gathered data and sort them out in such a way so as to yield answer to research questions, inquiries or hypotheses. The examination and elucidation of data include the target material owned by the scientist and his subjective response and longing to derive details in connection to the problem. In this study, the collected data will be analysed using text analysis and the statistical analysis. The observation data will be evaluated by using text analysis and the survey data collection will be evaluated by using the statistical tools such as chi-square tests, percentage method.

6.1. Research Instrument

Research instrument are the tools and aids which assist in the completion of research by carrying out the procedures necessary for the collection of data and for justifying the hypotheses or arguments of the study which makes the data analysis possible.

The current research makes use of both, qualitative and quantitative research. Therefore, text analysis will be used to evaluate the qualitative primary data that is collected from the aforementioned data sources. Text analysis will be useful in summarizing this abundant data and discover the different variables or hypotheses. On the other hand, statistical methods will be used to evaluate the quantitative primary data that will be derived from the qualitative approach. As Likert scale will be used in the close-ended questionnaire, using statistical methods will be appropriate such that the data can be well-organized and presented in a numerical form. The reason for using statistical methods is to minimize the errors and maximize the computational efficiency as the collected data can be summarized in the numerical form which will be easier to comprehend and evaluate.

There are various statistical methods such as Chi-square, t-test, ANOVA, MANOVA, linear regression, etc. However, this study utilizes three statistical methods that are fit for answering the research questions. Why these methods are selected is further discussed:

- i. Graphical method
- ii. Simple percentage method
- iii. Chi square test
 - Graphical method

After the ideal measurements of interests have been gathered, the data will be organized, examined and displayed by using different graphical techniques. It is imperative that the collected data is organized and categorized into classifications. Each of the measurements has to be classified in only single category (Ott & Longnecker, 2008, pp. 62).

As graphs are powerful data evaluation tools, they are efficient in presenting quick, visual data sets. Therefore, the data in this study will be presented in a graphical manner to clearly present the interpretations of the data. For example, indicators such as literacy, employment, and population of non-Scheduled Caste/Scheduled Tribe people and the number of families above poverty line will be presented through graphs in order to get a better understanding of the impact of resource management.

- Simple percentage analysis:

The analysis of simple percentage is used in comparing between more than two collections of data. In this method the percentages are used to represent relationship percentages. Simple percentage analysis is used to predict the percentage of the respondents in the selected sample that exhibit a similar attitude or response (McCormick, 1945).

$$\text{Percentage} = \text{No. of responses} \times 100 \div \text{Total number of responses}$$

In the current research, this method can be used to analyze the relationship between the indicators and how the aforementioned indicators

- Chi-square test

Chi-square test is used in testing the deviations that exist between two or more actual samples. It is used to test the strength of association between qualitative variables (Alexander, Scozzaro & Borodkin, 1989, pp. 329). The following is the formula for calculating the value of chi-square:

$$\chi^2 = \sum \frac{(\text{Observed frequency} - \text{Expected frequency})^2}{\text{Expected frequency}}$$

Chi-square test is used to determine whether there is an association among two variables or not. It helps the researcher determine whether there is an actual relationship among the variables in the population or not (Singhal and Rana, 2015, pp. 70). In the current study, as the aim is to analyze the process of resource transfer in terms of regional, political and developmental factors. The variables such as literacy, employment, population share of non-Scheduled Caste/Scheduled Tribe people and the share of families above poverty line will be analyzed in association with resource transfer. That is to say how it affects these variables and to what extent.

6.2 Software Tool Used

The statistical tools discussed above are implemented with the help of the following software tools

- **Microsoft Excel**

The spreadsheets of Microsoft excel is used to store and present the collected data. It already consists of basic statistical and data analysis tools. With the help of these tables, data can be easily interpreted (Winston, 2011, pp. 35-37). Also, Microsoft excel is used to create graphs for the evaluated percentages from the collected primary data in this study. It ensures that the data will not be misinterpreted. Also, tables will be used to present the data. However, its built-in statistical capabilities are limited, which is why SPSS tool will be used for carrying out more advanced statistical analysis.

- **SPSS**

According to Gupta (2000), SPSS is the acronym for Statistical Package for Social Sciences. It is a popular quantifiable task used as a piece of assorted investigative requests. In 1968, the SPSS first frame was made and SPSS was built up by Norman Nie, a science student of

Stanford University. SPSS is one of the boundlessly used software for making truthful examination in investigation and sociology schedules. The benefits of using SPSS are quantifiable examination, decided data, data documentation, case determination, record reshaping, data collection and so on. As this tool can produce tabulated charts, reports and evaluate complex statistical analyzes, this research makes use of SPSS software to implement the statistical methods.

7. Validation measures

The reliability is the procedure where the data assembled for the examination is checked or confirmed by the researcher to ensure that the facts and data accumulated are significant and solid. As explained by Silverman and Keating (2004, pp. 145) the level of discoveries along with the methods used in the study would be contrasted by the analyst and different studies towards finding the same result, consequently indicating that the current knowledge is dependable and could be alluded by future scientists for comparative investigations. Consequently, it is essential to lead a study that is dependable.

The validity is required to check if the accumulated data and apparatuses used are legitimate (right or erroneous). It fundamentally goes up against the social guidelines, qualities, rights and convictions of the group and individual conviction of the investigator himself (Webb, 2002, pp. 149). To guarantee the used devices are the right procedure to acquire the result, the creator needs to check till the last moment for the legitimacy of the collected data. This study acquire data from the official sources only which determine and ensure the validity of the data obtained.

8. Hypotheses

In every research there is a need of a statement derived from the base of the whole study with it being the aim or goal of the research.

This study is based on the following hypotheses;

1. Resource transfers in decentralized planning have a pivotal role in the development of local bodies in Kerala.

2. There is high degree of inefficiency in the utilization of transferred resources by the local bodies.

References

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SAMPLE WORK