SURENDRANATH COLLEGE

2021

A Project On

APPLICATION OF STATISTICAL CONCEPT IN RURAL DEVELOPMENT

Presented By-

SEM VI Students
(2018-21 Batch)

INTRODUCTION:

Economic growth in India has been a double-edged sword — higher incomes have led to significant declines in poverty, while structural changes in the economy have been accompanied by increased economic inequality. Recent years have seen growing interest in understanding the drivers of rising income inequality in India. However due to several data limitations, most of the discussion is focused on the national level. Rural India is home to 70% of the nation’s population. The rural population resides mainly in villages — the 2011 Census Reports roughly 800 million people living in more than 6,00,000 villages and in this villages we see a disparity in the income distribution. As of November 2016, India is the second most unequal country in the world after Russia. The richest 1% of Indians own 58.4% of wealth. The richest 10%of Indians own 80.7% of the wealth. Inequality worsened since the establishment of income tax in 1922, overtaking the British Raj’s record of the share of the top 1% in national income, which was20.7% in 1939-40. This trend is going in the upward direction every year, which means the rich are getting richer at a much faster rate than the poor.

In order to measure the income inequality we use two tools viz., Lorenz Curve and Gini Coefficient. A Lorenz Curve is a graph on which the cumulative percentage of total National Income (or some other variable) is plotted against the cumulative percentage of the corresponding population (ranked in increasing size of share). The extent to which the curve sags below a straight diagonal line indicates the degree of inequality of distribution. While Gini Coefficient or Gini Index is defined as the ratio of the area that lies between the line of equality and the Lorenz Curve over the total area under the line of equality. To overcome this inequality in income we may follow some steps or policies like increase the minimum wage, expand the earned income tax, build assets for working familie, invest in education, make the tax code more progressive etc.

KEYWORDS:-

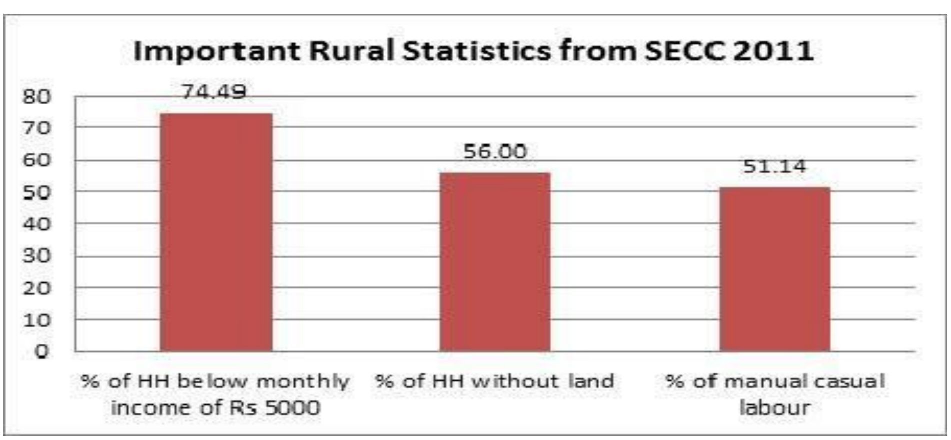
i) Lorenze Curve:-

Lorenz curve is smaller than the slope of the diagonal line of equality. Since the slope at a point on the Lorenz curve is given by the incremental proportion of income divided by the incremental proportion of the population, the slope goes on

increasing, as we approach the richer of the population. As a result the Lorenz curve must lie below the diagonal line. The greater the departure of Lorenz curve from the line of equal distribution, the higher is the concentration of the variable (or income) values in a few members. Hence the area between the line of equality and the curve of concentration or Lorenz curve, called the area of concentration, is a measure of the degree of concentration of the variable (income, wealth etc.); the larger the area more is the concentration.

In economics, the Lorenz curve is a graphical representation of the distribution of income or of wealth. It was developed by Max O. Lorenz in 1905 for representing inequality of the wealth distribution.

The curve is a graph showing the proportion of overall income or wealth assumed by the bottom x% of the people, although this is not rigorously true for a finite population. It is often used to represent income distribution, where it shows for the bottom x% of households, what percentage of the total income they have. In such use many economists consider it to be a measure of inequality.



ii) Gini-Coefficient:-

The Gini index or Gini coefficient is a statistical measure of distribution developed by the Italian statistician Corrado Gini in1912. It is often used as a gauge of economic inequality, measuring income distribution on or less commonly wealth distribution among a population. The coefficient ranges from 0 to 1 with 0 representing perfect equality and 1 representing perfect inequality.

$$G = \frac{1}{2n^2\mu} \sum_{i=1}^{n} \sum_{j=1}^{n} | x_i - x_j |$$

Where G = Gini's Coefficient of concentration, in case of a set of n values of x, say, x_1, x_2, ………………….x_n

μ = mean of x values.

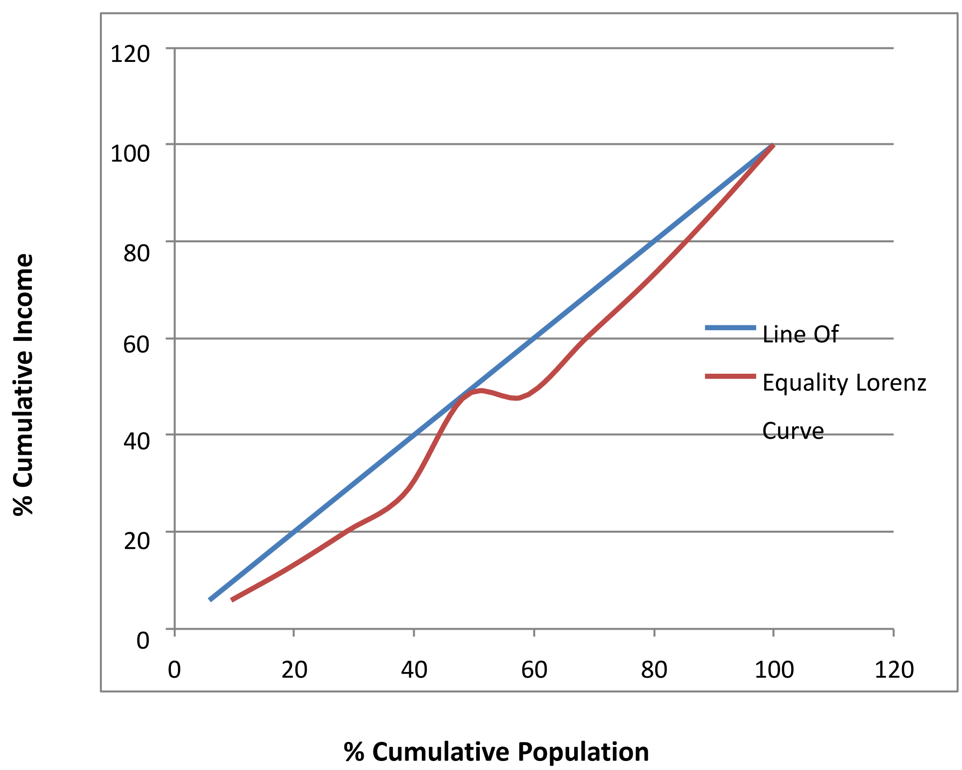
iii) Economic Inequality:-

Economic inequality is the unequal distribution of income and opportunity between different groups in society. It is a concern in almost all countries around

the world and often people are trapped in poverty with little chance to climb up the social

DATA:-

Year		Income (trillion rupees)		Population		% Cumulative Income		% Cumulative Population
2010		33.3086		818122600		5.818821771		9.463640086
2011		38.0696		828889120		12.46936299		19.05182198
2012		43.5206		839456260		20.07216271		28.76223936
2013		46.2576		849757560		28.15310067		38.59181712
2014		51.6028		859925940		48.03434		48.53901769
2015		62.2031		870027860		48.03434		58.60307231
2016		68.9751		880063320		60.08389518		68.7832122
2017		68.3054		890032320		72.0164576		79.07866858
2018		76.8798		898966059		85.44691862		89.47746606
2019		83.306		909662957		100		100
Total		572.4286		8644903996				



IMPACT:

India’s economy continues to grow with its GDP (Gross Domestic Price) rising faster than most nations. But a rise in national G.D.P is not indicative of income equality in the country. The growing income inequalty in India has negatively impacted poor citizens access to education and healthcare. Rising income inequality makes it difficult for the poor to climb up the economic ladder and increases their risk of being victims to poverty trap. People living at the bottom 10% are characterised by low wages; long working hours; lack of basic services such as first aid,drinking water and sanitation.

<u>MEASURES TO OVERCOME THE INCOME INEQUALITY</u>

The Government of India has taken many steps to reduce the income inequality all over the country, especially around the rural areas during the plan-periods. Such measures can be broadly classified into two groups:

a) Measures to level down the income of the rich people, and

b) Measures to raise the income of the poor people

Here we shall discuss about the steps and policies undertaken by the government to reduce the income inequality in India.

1. Control over monopolies and restrictive trade practices:

In 1969 the government passed the Monopolies and Restrictive Trade Practices (MRTP) Act in order to stop the abuse of monopoly power of the large business houses and to prohibit the restriction of the trade practices. In 1991 this act was liberalized to a great extent and as per Industrial Policy of 1991, restrictions on monopoly houses with regard to their asset limit, was withdrawn. This act was meant for decentralization of the market to provide more equality in the market.

2. Tax Policies:

The Government of India, through a progressive direct tax, has also attempted to reduce the disposable income of the rich people. This tax policy also allowed tax exemption for the people in the low income groups in the rural areas. Such a policy would mean that the poor people of the rural areas of our country would get benefited and thus a step would be taken to curb the growing inequality of income.

3. Redistribution of agricultural land:

The land reform, policies of the Government of India aimed at reducing the inequalities in the distribution of agricultural land in the rural areas. This redistribution of the land in the rural areas would imply a reduction in the inequality related to the income of the people.

4. Implementation of the Minimum Wages Act:

In 1948, the Minimum Wages Act was passed to ensure the minimum acceptable wages for the working class, so that they could maintain a minimum acceptable standard of living. The provisions of this act are effective for the people of the rural areas who are engaged in working with the organized sector (small scale cottage industries). Since a very small percentage of people are engaged in organized sector, so this act was less effective for the rural areas.

5. Introduction of Different Employment Programmes:

We have already stated that the Government of India introduced different programmes during the plan periods to generate employment opportunities among the rural poor. Schemes like Integrated Rural Development Programme (IRDP), National Rural Employment Programme (NREP), Jawahar Rozgar Yojana (JRY), Employment Assurance Scheme (EAS), training of Rural Youth for Self- Employment (TRYSEM), National Rural Guarantee Programme (NREG) etc. were introduced for generating more employment and opportunities among the rural poor.

6. Implementation of Social Security Measures:

One part of the task of reducing economic inequalities in India involves the expansion of social security measures. During the Eighth Plan, to promote social insurance in the rural areas, the Government of India has launched the Rural Group Life Insurance Scheme (RGLIS). It also aimed at alleviating the distress caused by the death of the bread-winner among the rural poor. It is administered by the Life Insurance Corporation of India and implemented by the Panchayats in the rural areas for the age-group of 20-60 years. A life cover of Rs.5000 is provided under this scheme for an annual premium of Rs.60-70 depending upon the age of entry.

7. Introduction of Common Minimum Programme (CMP):

The CMP announced by the Government of India, has shown strong commitment to the development of social sectors for achieving distributive justice. It aimed at complete coverage of safe drinking water in rural and urban areas, complete coverage of primary health service facilities in rural and urban areas etc.

8. Steps to Reduce Gender Based Inequalities:

Gender-based inequality arises from the deprivation of the women work-force in relation to their male counterparts. With the vow to make woman economically stable and independent a number on interventions have been launched by the government during the plan periods. Some of the measures are as follows:

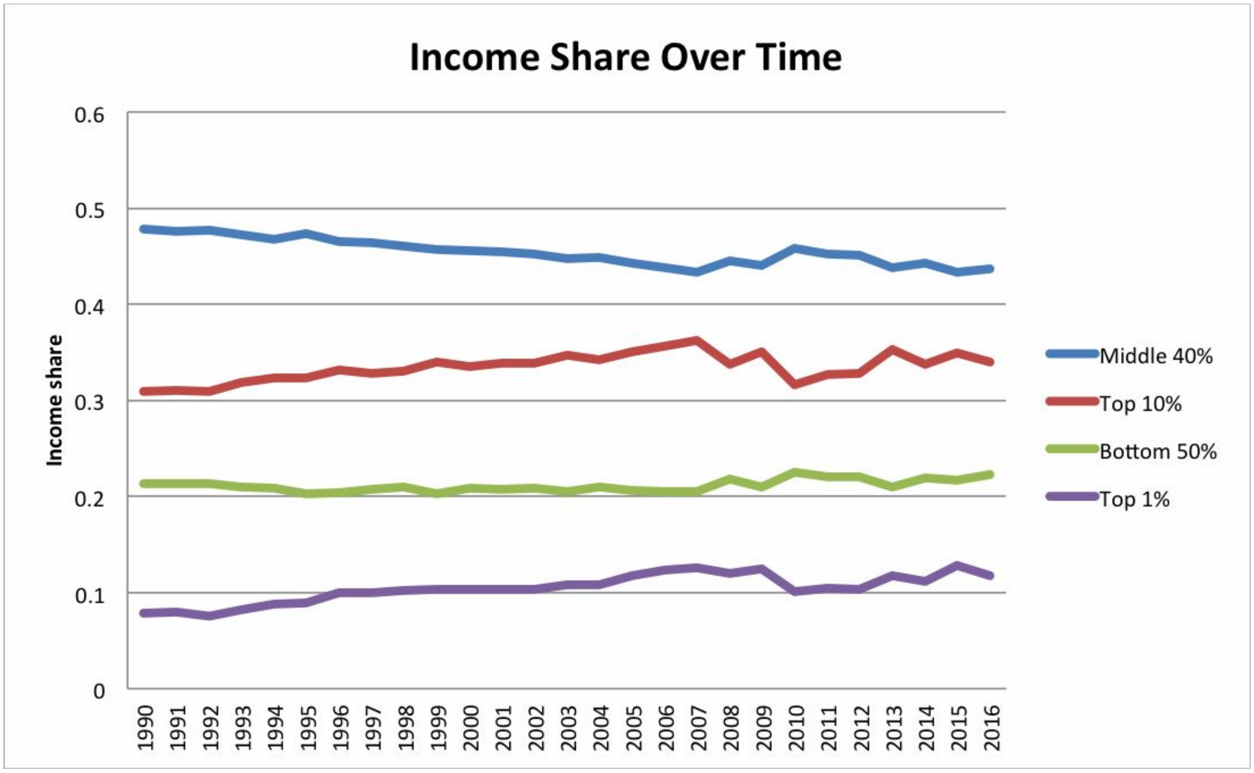
a) Support to Training and Employment Programme (STEP) was launched to train women for employment in traditional rural sectors of agriculture, animal husbandry, dairy, handlooms and handicrafts etc.

b) Rashtriya Mahila Kosh (RMK) was launched for meeting the needs of poor women, particularly for those who work in the traditional rural unorganized sector.

c) Mahila Samriddhi Yojana (MSY) was launched to inculcate the habit of thrift amongst the rural woman as well as to give them possession and control over their household resources. This schme ghas received an overwhelming response from all over the country.

9. Microfinance to the Self Help Groups (SHG):

One of the most important rural development schemes that helped in fostering the process of rural development and reduction in inequalities in income distribution is supposed to be formation of SHGs under Sampoorna Grameen Swarozgar Yojana programme that aimed at poverty eradication along with the generation of



C O N C L U S I O N :

We can conclude that inequalities in the distribution of income and wealth are quite severe in India. The government of India has been endeavouring to reduce inequalitites of wealth and income in the country. Several measures have been adopted in this direction but it could not gain much success. Following measures were suggested by the Planning Commission to minimize inequalities of wealth and income

i) Agricultural land and urban property should be re-distributed.

ii) Public enterprises should distribute essential goods at subsidisedprices to low-income consumers.

iii) More credit facilities be made available to small farmers and cottage and small industries. They should be provided essential raw materials on priority basis.

iv) Rural and urban poor should be organised. It will be easier for the administration to help them when they are organised.

v) Minimum employment facilities be provided. Emphasis has also been laid on the reduction of inequalities in the distribution of wealth and income during the course of various five year plans.

B I B L I O G R A P H Y

- ***FUNDAMENTALS OF STATISTIC (VOLUME – ONE)***
  --- A. M. GUN ; M. K. GUPTA ; B. DASGUPTA

- ***ECONOMIC DEVELOPMENT***
  ---- DR. DEBASISH MAZUMDER

- ***AN OUTLINE OF STATISTICAL THEORY (VOLUME ONE)***
  --- A. M. GUN ; M. K. GUPTA ; B. DASGUPTA

- ***MICROECONOMICS – I AND STATISTICS***
  --- SEBAK K. JANA ; ASIM K. KARMAKAR ; JNANRANJAN CHAKRABARTI

A C K N O W L E D G E M E N T

The project has given us an ample scope to become self confident and self dependent. We are lucky to get the guidance from our respected teachers, our respected Principal – Dr. Indranil Kar, Indian Science Congress and our respected Head of the Department of Statistics – Mrs. Champa Chakraborty. We are grateful to all of them to complete this Seminar.

1) **Nabarun Chakraborty**
2) **Soumadeep Bhattacharya**
3) **Sounak Ghosh**
4) **Subham Bose**
5) **Rituraj Dutta**
6) **Ratnadeep Mondal**

Signature of the students associated with the Seminar