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THE GINI INDEX:

An overview

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ABSTRACT

Ever thought about why the rich becoming richer and the poor becoming poorer? Well, this is because of the unequal distribution of resources in the population of a particular country. The primary example of resources which is not being equally distributed is income. To understand the gap between the haves and haves not of society, and also to compare the income as well as wealth across societies, Gini Index is a tool for summarizing the whole economic data.

The Gini index is a measure of statistical dispersion, commonly used to represent the inequality of a probability distribution. Gini index even helps us to analyze the salary structure of an organization. It is not really important that how income is unevenly distributed in the past, but it is important for us to know whether the distribution is becoming more or less unequitable in the present and for that matter this paper will provide a detailed information about Gini Index.

In this research paper of Gini Index, you will get to know about the historical background, implications of Gini index, limitations, present status of Gini index in India.

INTRODUCTION:

To attain equality among the population based on income and wealth, Gini coefficient is one of the ways to measure it. The Gini index or Gini coefficient serves as an instrument to measure and give us a visual representation of economic inequality throughout the population. (1)

A Gini scale varies from 0 (0%) to 1(100%). For instance, a particular country showed an income Gini coefficient of 0 (A particular country showed a Gini index of 0) which depicts that all households in that country earn the same amount of income which is called perfect equality. And if the country shows a Gini coefficient of 1 that means a large number of households have all the income and consume all resources and the other has none which indicates perfect inequality. If incomes are distributed equally within the households, the Gini coefficient can be the same in high-income and low-income countries. The distribution of wealth can be analyzed similarly. (2)

HISTORY:

On expanding on the ideas of American economist Max Lorenz who produced a hypothetical way to depict total equality by a straight diagonal line on a graph in 1905, Corrado Gini developed his coefficient to measure the income inequality in 1912. In 1912, a book titled "Variabilità e Mutability," (Variability and Mutability) which was published in Italian, featured Corrado Gini's index for the first time. The Gini ratio is the distinction between the hypothetical line produced and the actual line created by people's earnings. (3)

GRAPHICAL REPRESENTATION:

The Gini coefficient for a country is represented visually using a graph called Lorenz curve. Lorenz curve is the curve that graphically represents the actual distribution of income. Lorenz curve is developed by Max Lorenz in 1905. The straight line at the 45^0 angles indicates perfect equal distribution of income while the diagonal line depicts the Lorenz curve and the gap between the straight line and the diagonal line is the inequality in the distribution of income. The size of the income distribution becomes much unequal the farther it is from the diagonal. (4)

In the above figure, the cumulative share of people from poorest to richest is plotted on the x-axis and the y-axis shows the cumulative share of incomes earned. The Gini index can be determined by dividing the area which is between the perfect equality line and the Lorenz curve (A) with the whole area under perfect equality line (A+B). (5)

Now the question arises that how the Gini coefficient is determined through Lorenz curve? Let's understand this through above diagram, the Gini coefficient is low when the Lorenz curve is much closer to the line of equality in the given area A. And if the Lorenz curve is further away from the line of equality, then there is a high level of inequality.

PRESENT STATUS OF GINI INDEX IN INDIA:

As stated by World Bank, India's Gini index is 35.7 as of 2019. According to the World Bank research, India's large population and unequal distribution of wealth are to blame for the country's poor index performance. India is one of the most unequal nations in the world, according to the "World Inequality Report 2022" with rising poverty and most unequal country for both income and wealth inequality. Talking about the wealth inequality, India's wealth Gini coefficient was 82.3 at the end of 2021. In terms of the wealth distribution, the reality is even striking. We are aware that the last few decades have seen an increase in the worldwide concentration of wealth. For the well do-to families it was easier to survive the pandemic but other than those family's people have suffered losing their livelihood and with their low incomes. And by this we can say that in the pandemic Covid-19, the wealthy has particularly pleasant time, while, for the extremely poor, it was difficult. The wealth of the richest men in the world has doubled and likewise the rich become richer and poor becomes poorer. According to the analysis, the distribution of public resources among nations has been declining for several decades. Public buildings housing governments, educational institutions, healthcare facilities, and other public services are examples of public assets. The pandemic has made the increase in private wealth and a decline in public wealth. The governments' relative lack of money may have an effect on future efforts to reduce inequality. According to the study, after changing their regulated economies, rising economies like India had quicker gains in private wealth than wealthier nations. Private wealth increased, particularly in India, from 290% in 1980 to 560% in 2020. The point which is to be noted is that even the urban-rural divide in India is also an important factor affecting income inequality. The unequal distribution of opportunities and resources plays a vital role in this context as it creates a gap between the urban-rural income. As we all know India has a large population and over a large number of populations resides in rural areas, to be precise, 67% of the households resides in rural areas. However, still the rural economy lacks in various opportunities and resources which are mentioned below:

•**Agriculture**: For the large number of people residing in rural areas, agriculture is still the main occupation as people there consider it as a traditional profession. As people there are still not aware about the machinery and how they can use the adequate resources for better productivity and high wages, they certainly have low productivity and low wages. In comparison with urban areas, they have better job opportunities to work on as there are more factories, industries, healthcare infrastructures which in result give them a scope to earn high wages. In result to this, urban areas have access to better education, better infrastructure, and above these greater economic opportunities, causing an inequality in income between urban and rural areas.

•**Infrastructure**: Even though the government is launching various policies and programmes to develop infrastructure for better future prospects but still rural areas are lacking behind. Rural areas often lack in having basic amenities such as roads, electricity, proper water supply, sanitation facilities which in turn making it difficult for rural people to grow economically and develop like urban people. Talking about urban areas, they have more access to sanitation facilities, roads which raise their living standards and create economic opportunities. The lack of services and infrastructure also results in reduced productivity, which lowers salaries and increases economic disparity.

•**Education**: As education boosts a person's ability to work effectively and efficiently, gives information, confidence, skills and experience which is a requirement for modern industries in India. As per the requirement by industries they find the workforce easily in urban areas as they are more educated. In contrast, rural areas tend to have less educated as they don't have better education access, which limits their ability to participate in higher-paying industries and services. And because of lack of education rural areas contribute a bit less in economic growth as compared to urban areas.

•**Skill gap**: Another factor which contributes is skill gap. With skill, the people in rural areas can use new knowledge, improved technology, and techniques in their respective occupation even if it is agriculture. Skill will also help the rural people to find jobs other than agriculture like in services industry, manufacturing industry, trade and commerce. Urban areas tend to have more skilled workforce which benefits the industries. Rural areas, on the other hand, have a workforce that is less educated and trained, which restricts their capacity to work in higher-paying sectors and services.

•**Policies and programmes**: Moreover, policies and programmes designed to promote economic development unquestionably benefitted urban areas. For instance, metropolitan businesses typically receive more investment and incentives from industrial policy than rural ones. Similar to healthcare, social welfare programmes like education and healthcare are frequently better established in urban regions, which disadvantages rural residents. In India today, the urban regions are expanding quickly, providing higher wages, economic growth and to raising living standards to the urban people. This is because in India today, private sector is gaining the authority over the population than the public sector, and as we know private sector works for the profit for that matter, they need skilled workforce which drives them to urban areas.

•**Capital**: Rural residents have limited access to credit and other forms of capital. As mentioned above rural residents mainly rely on agriculture which costs them low productivity and low wages. So, they spend the whole amount of their income on basic amenities as they earn a low income which gives them no other option to save or spend on other things. This also makes it difficult for them to start businesses as there is no capital or saving left or invest in their own education and training. Banks and people who are providing the loans fear to giving them money on credit as they think that the rural residents will be unable to return their money.

In conclusion, income inequality in India is significantly influenced by the gap between urban-rural. To close this gap, policies and initiatives that support rural economic growth are needed, such as spending on infrastructure, education, and skill-building. Also, it's crucial to ensure that policies and programmes are designed to benefit all facets of the community regardless of where they are implemented.

ROLE OF GOVERNMENT IN DISTRIBUTING INCOME EQUALLY IN INDIA

The Indian government significantly contributes to the promotion of income equality via number of policies and programmes. Talking about the role of government in distributing the income equally in India are listed below:

•Progressive Taxation: Income equality is directly decreased by taxing the well-do-to families i.e., the wealthiest of the society more heavily than the poorest. This is what Indian tax system is designed which intended to be progressive, which means that individuals with higher incomes pay a higher percentage of their income as taxes.

And this higher percentage of income which the government collects as tax then used to fund various public goods and services and this would further reduce income disparity.

•Poverty allegation programs: The government has launched various poverty alleviation policies and programmes which helps the poor in a number of ways including by giving them access to food, credit, jobs etc. Here are some of the policies and programmes listed below:

•National Food Security Act (NFSA): It aims at providing subsidized food grains to poor households

•National Rural Employment Guarantee Act (NREGA): It provides employment opportunities to rural households.

•Pradhan Mantri Awas Yojana (PMAY): It aims to provide affordable housing to the urban poor.

The government's job is to develop and implement programmes or laws that ensure that money is distributed fairly. But in addition to this, the main responsibility for establishing policies is to monitor how they are governed and whether or not the goals of the policies are actually achieved.

•Agriculture reforms: As discussed above, agriculture is the main occupation on which a large section of Indian population depend on. As a result of the government's recognition of the importance of agriculture in India's socioeconomic system, a goal has been established to double farmer incomes through increased productivity, cost-cutting measures, and a shift to high-value agriculture. As a role of government various agriculture reforms are introduced to increase the income of farmers. The Pradhan Mantri Fasal Bima Yojana (PMFBY), which offers insurance coverage to farmers against crop failures, is one of the leading examples of an agriculture reform programme that the government has implemented.

In 2020, the Indian parliament implemented three significant agricultural reforms to increase farmers income, the three agricultural laws of 2020 are:

•The farmers produce trade and commerce (promotion and facilitation) act 2020.

•The farmers (empowerment and protection) agreement of price assurance and farm services, 2020.

•Amendment to the essential commodities act, 1955.

LIMITATIONS OF GINI INDEX:

Although Gini index is very useful in measuring the income and wealth inequality but like any statistical measure it has some limitations. Given below are some of the limitations of Gini index:

•Errors in data: As we know, the Gini index is calculated by the sample collected from the population. Sometimes while collecting data there can be errors, which means, for instance, the data collected on the income of any group has collected with faults in it that could affect the final Gini index. Therefore, inaccurate data can misrepresent the Gini index.

•Difficult to interpret: The Gini index is a complex measure that an individual may find difficult to interpret especially when comparing it across different countries. Data are not strictly comparable across nations or even across years within a country because the underlying household surveys utilise different techniques and types of welfare variables that are collected.

•Non-monetary sources: The Gini index does not consider other aspects of inequality, such as education, health, or social capital because it is purely measuring inequality in terms of income or wealth.

•Ignores the source of income: The Gini index treats all sources of income as equal, even if they are earned through different means or reflect different levels of effort or skill. As Both the size (number of people) and the degree of income distribution within households vary.

Implications of Gini index:

•Social unrest: A high Gini index shows a high level of inequality in income which is mentioned above as well. So, high Gini index can result in social unrest as it leads to negative impact on a society. By negative impact, it means that people earning low incomes can feel excluded from society, they may think that because of lower incomes they are losing the access to invest in resources like education, health or business. And also, because of lower incomes they are not able to raise their standard of living.

•Economic: A high Gini index i.e., high income inequality can lead to lower economic growth. This is because high level of income and wealth inequality limits the purchasing power of those who belong to middle and lower classes, which in turn reduces demand of goods and services and ultimately low economic growth. Therefore, mitigating factors and policies must be there in order to promote economic growth which will benefit the whole country and not just the middle and lower classes.

•Policies: High level of income and wealth inequality can lead the middle and lower classes to raise an object to the policies that government has launched. It can also lead to a variety of policy challenges. So, to tackle the challenges the government has to launch various policies to reduce the high Gini index. These policies include progressive taxation, social welfare programs, and education and job opportunities, it will help the middle and lower class to raise their standard of living and will increase their purchasing power.

•Political: Reducing inequality can help in promoting more democratic and equitable political institutions. As we still see in some areas of the country that the wealthy individuals has a high concentration of power and undue influence over the political process. Reducing the high Gini index can decrease the concentration of power and will increase the representation of those groups who earn low income in the decision-making process.

•Future research: The people who are keeping checks on the policies and programs launched by the government can easily investigate through Gini index. If it all there is high Gini index, the researchers can explore the impact of different policy interventions on reducing inequality and promoting positive outcomes. They can also research about how inequality is not only about income and wealth but it is also about other factors like education, health, and various opportunities.

Suggestions and measures to eliminate income inequalities:

•Monopolies and restrictive trade practices: An economic imbalance can be created by the monopoly market as it gives some company an advantage over others. It also reduces competition and increase consumer prices. As monopoly market reduce competition which results into fewer job opportunities and lower wages for workers. Government should enforce laws and regulations which restrict monopolies to form in markets, in order to keep the markets in competition which in result will create greater job opportunities for small business. Government should also ensure that practices that can harm consumers and workers like price fixing should be considered restrictive and regulation should be made for these restrictive trade practices.
Proper regulations and more competitive market can lead to lower prices, and can improve working conditions for employees. This will ultimately reduce income inequality, as workers will be then able to earn better wages and have more access to opportunities.

•Employment programs and wage policies: Government has launched various employment programs to cope up with the growing employment problem in India like National Rural Employment Programme (NREP), Rural Landless Employment Guarantee Programme (RLEGP). These programmes benefitted the rural areas in gaining employment opportunity. There is a wage provision also which is made by statutory and it has benefitted mostly the 10% workers engaged in the organized sector, this wage provision plays an important role in raising the income of the poorer sections of society.
Moreover, this wage policies and employment programmes has launched but most of the people still remain untouched. Although the government spend a huge amount of capital in launching these programmes but the implementation and achievement of these programmes are not at all encouraging. So, the government should keep a committee of few people to keep checks and balances on the implementation and achievement of these programmes and provisions.

•Empowering women: Now-a-days women are more aware about employment and are willing to work in order to contribute in the society. But women in rural areas are not that trained and skilled in order to work for bigger companies where they can earn good amount of income. Government should launch training programmes and policies to uplift the women of poorer sections of society. They should take measures with equal opportunities in education, employment and other areas. They can have resource and income development programmes for women, and can also provide works for creation of supplementary employment opportunities. This will help women to earn more and will help them by providing assets as well as eliminating unemployment or the rural women.

•Implementing progressive taxation: A progressive taxation system can help to reduce income inequality by taxing the rich more heavily than the poor. In a nation like India, the design of the tax system has been regarded as a crucial technique for reducing income disparities. Although while the progressive nature of the Indian tax system was intended to counteract income disparity and wealth concentration, it hasn't made much progress in this regard or kept track of the primary cause of such inequality.

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