International Journal of Innovative Research and Advanced Studies (IJIRAS)
Volume 3 Issue 8, July 2016

ISSN: 2394-4404

Mechanism Of Possible Factors Behind Different Types Of Income Inequality: A Critical Review

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Abstract: ***Economic inequality in the distribution of wealth, income or expenditure is very harmful and serious problem for a community and government should take some necessary policies to tackle this. Measurable economic inequality can be explained by different families of inequality measures of which two are very popular and convenient – the Gini family and the SD-CV family. Inequality measures in any family may be of three types – relative measure of inequality, absolute measure of inequality and index measure of inequality. Searching the significant reasons/factors for explaining economic inequality is the central question. Economic inequality especially income/expenditure inequality is affected by various factors which can be divided by socio-economic categories, demographic categories, political categories, macroeconomic categories and other categories. Though large numbers of factors fall under each categories but it is difficult for researchers to incorporate all types of factors/variables into the model due to lack of information. Some of them affects inequality directly (positively), some affects inversely and some affects both ways. However, the present paper attempts to discuss two issues. The discussion regarding different types of income inequality in both families is the first one and to find out some necessary and significant factors and, their influence mechanism for explaining income inequality of all types is the second one.***

Keywords: ***Economic inequality, Relative inequality, Absolute inequality, Socio-economic factors, Demographic factors, Political factors, Macro economic factors.***

JEL Codes – D63, H52

I. INTRODUCTION

Economic inequality also known as the gap between rich and poor, income inequality, wealth disparity, or "wealth and income differences" comprises all disparities in the distribution of economic assets and income. The term typically refers to inequality among individuals and groups within a society, but can also refer to inequality among countries. In macroeconomic context, income distribution is defined by how a nation's total GDP is distributed amongst its population. The issue of economic inequality is related to the idea of equity: equality of opportunity and equality of outcome. Though progressive taxation is thought to be the main instrument which reduces economic inequality and is demonstrated to be effective in international comparisons of income and wealth distribution, it creates disincentive towards income and employment and cannot use in the long run.

Income distribution is always being a central concern of economic theory and economic policy. Classical economists such as *Adam Smith*, *Thomas Malthus* and *David Ricardo* are mainly concerned with factor income distribution, that is, the distribution of income between the main factors of production, land, labour and capital. Modern economists have also addressed this issue, but have been more concerned with the distribution of income across individuals and households. Important theoretical and policy concerns include the

ISSN: 2394-4404

relationship between income inequality and economic growth. The distribution of income within a community may be represented by the Lorenz curve. The Lorenz curve is closely associated with measures of income inequality, such as the Gini coefficient.

Economic inequality occurs due to many reasons and these are often interrelated. A major cause of economic inequality within modern market economies is the determination of wages by the market. Some small part of economic inequality is caused by the differences in the supply and demand for different types of work. However, where competition is imperfect; information unevenly distributed; opportunities to acquire education and skills unequal; and since many such imperfect conditions exist in virtually every market, there is in fact little presumption that markets are in general inefficient. This means that there is an enormous potential role for government to correct these market failures. Another cause is the rate at which income is taxed coupled with the progressivity of the tax system. A progressive tax is a tax by which the tax rate increases as the taxable base amount increases. In a progressive tax system, the level of the top tax rate will often have a direct impact on the level of inequality within a society, either increasing it or decreasing it; provide that income does not change as a result of the change in tax regime. Additionally, steeper tax progressivity applied to social spending can result in a more equal distribution of income across the board. The difference between the Gini index for an income distribution before taxation and the Gini index after taxation is an indicator for the effects of such taxation. There is debate between politicians and economists over the role of tax policy in mitigating or exacerbating wealth inequality. Many economists argue that tax policy in the post World War II era is indeed increased income inequality by enabling the wealthiest Americans far greater access to capital than lower-income ones. An important factor in the creation of inequality is variation in individuals' access to education. Education, especially in an area where there is a high demand for workers, creates high wages for those with this education, however, increases in education first increase and then decrease growth as well as income inequality. As a result, those who are unable to afford an education, or choose not to pursue optional education, generally receive much lower wages. The justification for this is that a lack of education leads directly to lower incomes, and thus lower aggregate savings and investment. Conversely, education raises incomes and promotes growth because it helps to unleash the productive potential of the poor. John Schmitt and Ben Zipperer (2006) of the CEPR point to economic liberalism and the reduction of business regulation along with the decline of union membership as one of the causes of economic inequality. In an analysis of the effects of intensive Anglo-American liberal policies in comparison to continental European liberalism, where unions have remained strong, they concluded "The U.S. economic and social model is associated with substantial levels of social exclusion, including high levels of income inequality, high relative and absolute poverty rates, poor and unequal educational outcomes, poor health outcomes, and high rates of crime and incarceration. At the same time, the available evidence provides little support for the view that U.S.-style labour-market flexibility dramatically improves labour-market outcomes. Despite popular prejudices to the contrary, the U.S. economy consistently affords a lower level of economic mobility than all the continental European countries for which data is available." Sociologist Jake Rosenfield of the University of Washington asserts that the decline of organized labour in the United States is played a more significant role in expanding the income gap than technological changes and globalization, which are also experienced by other industrialized nations that don't experience steep surges in inequality. He points out that nations with high rates of unionization, particularly in Scandinavia, have very low levels of inequality, and concludes "the historical pattern is clear; the cross-national pattern is clear: high inequality goes hand-in-hand with weak labour movements and vice-versa." British researchers Richard G. Wilkinson and Kate Pickett have found higher rates of health and social problems (obesity, mental illness, homicides, teenage births, incarceration, child conflict, drug use), and lower rates of social goods (life expectancy by country, educational performance, trust among strangers, women's status, social mobility, even numbers of patents issued) in countries and states with higher inequality. Using statistics from 23 developed countries and the 50 states of the US, they found social/health problems lower in countries like Japan and Finland and states like Utah and New Hampshire with high levels of equality, than in countries (US and UK) and states (Mississippi and New York) with large differences in household income.

Measurable economic inequality can be explained by different families of inequality measures of which two are very popular and convenient – the Gini family and the SD-CV family. Inequality measures in any family may be of three types – relative measure of inequality, absolute measure of inequality and index measure of inequality. They are equally important. The singular measure (either relative measure of inequality or absolute measure of inequality) of inequality cannot explain the proper nature and pattern of inequality. However, the objective of the present paper is to give the answer of two questions. Why do we consider the plural measure (both relative measure of inequality and absolute measure of inequality) of inequality rather than a singular measure in both the families? And what factors do affect inequality?

II. METHODOLOGY

Many people propose that reduction of economic inequalities as a basic aim of society. But a very serious question is that, what inequality do we want to reduce – relative or absolute? If we really want to reduce inequality we should consider both relative measure of inequality and absolute measure of inequality. In a situation of positive growth in income, richer section/capitalist class of the community prefers a relative measure (a rightist view) and poorer section/labour class prefers an absolute measure of inequality (a leftist view) (Kolm, 1976).

There are strong debates between relative measure and absolute measure of inequality in literature. Kolm in his famous article ‘Unequal Inequalities I’ (Kolm, 1976) is well

ISSN: 2394-4404

taken up this debate between absolute and relative inequality. He is being of the opinion that inequalities can be measured by both the ways and the researchers in this field are used both of them. He is tried to define a relative measure of inequality as a 'rightist' measure of inequality as the richer section of the community or the capitalist class or their union prefers to accept it when income increases (by equal amount or by equal proportion) and an absolute measure of inequality as 'leftist' measure of inequality as the poorer section of the community or the labour class or the labour union prefers to accept it when income increases. However, viewing relative measure of inequality as 'rightist' and absolute measure of inequality as 'leftist' is not completely true, because when income falls (by equal amount or by equal proportion) the richer section of the community or the capitalist class or their union prefers to accept an absolute measure of inequality and the poorer section of the community or the labour class or the labour union prefers to accept a relative measure. Nevertheless, these are two well accepted views and Kolm himself is convinced of both the views.

Literally, Gini measure is very popular measure for inequality measurement whether we want to measure relative inequality or absolute inequality. But Gini measures fail to satisfy some general criterion of inequality (Mondal, 2014). According to Mondal, both Sen and Kolm find that standard deviation (SD) and coefficient of variation (CV) satisfy the basic properties of absolute and relative measures of inequality respectively. Kolm is observed that these measures though satisfy the 'income transfer principle'; they fail to satisfy the 'principle of diminishing income transfer'. Kolm writes: "However, their decrease for a one pound transfer to an income smaller by a given amount is proportional to this amount and thus independent of the income levels." Kolm is not preceded further with this family of measures because he is more interested to define a 'centrist' measure of inequality and that also in the Atkinson family.

Sen rejects these measures on three grounds one of which is their failure to satisfy the 'principle of diminishing income transfer'. The second reason is the way the deviations are taken in the formula of standard deviation and coefficient of variation. According to Sen, deviations of income from the mean are less reasonable than deviations of one income from the other. Sen observes: "There is another methodological issue. Is it best to measure the difference of each income level from the mean only, or should the comparison be carried out between every pair of incomes? The latter will capture everyone's income difference from everyone else, and not merely from the mean, which might not be anybody's income whatsoever." The third reason lies in the squaring principle applied in the formula of standard deviation and coefficient of variation. He finds no justice in applying this principle; rather he finds that this squaring principle is making the increase in inequality from regressive transfer invariant to the levels of income of the two individuals hence dissatisfying the 'principle of diminishing income transfer'. In this connection he writes: "… the procedure of squaring the differences is a particular one. And the question may be asked: Why choose this particular formula? It is easily checked that CV does have the characteristic of attaching equal weights to transfers of income at different income levels". But Gini measure is very popular measure for determining inequality. Thus, we take two views of income inequalities, viz, the rightist view of inequality or relative measure of inequality as measured by Gini coefficient in Gini family and coefficient of variation method in SD-CV family, and the leftist view of inequality or absolute measure of inequality as measured by absolute Gini in Gini family or by Standard deviation of income/expenditure in SD-CV family. Index measure of inequality in Gini family is nothing but the Gini coefficient for large population size but differs significantly for small population size. However, it should consider these six measures and this work attempts to find out the factors affect income inequality.

If $Y_1, Y_2, \ldots, Yn$ are income levels of n individuals of a region/country in non-decreasing order with mean income μ then Gini coefficient for income distribution of this population is given by $G = \dfrac{\sum_{i=1}^{n}\sum_{j=1}^{n}|Y_i - Y_j|}{2n^2\mu}$.

Some academicians prefer to express Gini coefficient as,

$$G = \frac{\sum_{i=1}^{n}\sum_{j=1}^{n}|Y_i - Y_j|}{2n(n-1)\mu}.$$

The numerator of G can also be expressed as the weighted sum of absolute deviations of incomes from their median (M) with weights all positive starting from 2(n-1) for lowest income, gradually falling to reach 0 for median income and then again increasing to reach the maximum value of 2(n-1) for highest income. The sum of the weights is $2n^2$.

$$\sum_{i=1}^{n}\sum_{j=1}^{n}|Y_i - Y_j| = 2(n-1)|Y_1 - M| - 2(n-3)|Y_2 - M| - \ldots\ldots + 2(n-3)|Y_{n-1} - M| + 2(n-1)|Y_n - M|$$

Thus, $\dfrac{\sum_{i=1}^{n}\sum_{j=1}^{n}|Y_i - Y_j|}{2n^2}$, the absolute inequality in the Lorenz-Gini family, is just the weighted mean absolute deviations – a measure of dispersion.

The index measure of inequality in any family of additive measures is obtained either by dividing the absolute measure by its maximum value or by dividing the relative measure by its maximum value. In the Lorenz-Gini family when $\dfrac{\sum_{i=1}^{n}\sum_{j=1}^{n}|Y_i - Y_j|}{2n^2}$ is divided by $(\dfrac{n-1}{n}\mu)$, or when $\dfrac{\sum_{i=1}^{n}\sum_{j=1}^{n}|Y_i - Y_j|}{2n^2\mu}$ is divided by $(\dfrac{n-1}{n})$ we have $\dfrac{\sum_{i=1}^{n}\sum_{j=1}^{n}|Y_i - Y_j|}{2n(n-1)\mu}$. This is the Gini coefficient of the second type.

The standard deviation can also be expressed as $\sigma = \sqrt{\dfrac{1}{2n^2}\sum\sum(Y_i - Y_j)^2}$.

As explains by Kolm and as is seen from the formula, SD is a per person inequality measure and thus an absolute measure of inequality. CV is a per person per rupee of mean income/expenditure inequality measure and so a relative measure of inequality. The upper bound of this relative measure is $\sqrt{n-1}$ and so CV has to be divided by

$\sqrt{n-1}$ to have an index measure of inequality in this SD-CV family.

To give the answer of the second issue we divide the factors of income inequality in various categories, viz, socio-economic categories, demographic categories, political categories, macro-economic categories, and other categories. Some of them are state specific and some of them are time variant. The influence mechanisms of these factors are considered theoretically and some of them are empirically tested as significant factors. Firstly, we frame the model for explaining income inequality in functional form separately in each category and finally incorporate all hypothetical and empirically tested factors in a general model, and also explain their character (signs).

III. FACTORS OF INCOME INEQUALITY AND THEIR INFLUENCE MECHANISM

In this section, all factors of income inequality are introduced which is proposed in previous literature as known to the author of this article. The theoretical hypotheses and the results of earlier studies about the character (sign) of these factors are discussed. It is worth mentioning that often it is not clear whether the authors of previous studies is discussed the direct or total effect of a particular factor. The factors of income inequality are taken to fall into the following categories: socio-economic factors, demographic factors, political factors, and macro-economic factors.

A. SOCIO-ECONOMIC FACTORS

Education achievement and education expenditure are very important factors in this category. Education is very powerful instrument for overcoming inequalities, promoting human development, accelerating social transformation and achieving economic progress. It is very important for a country to increase the education level of people. More educated people build more educated society via more education level. The educational level of population and education inequality is undoubtedly the most actively discussed factors of income inequality. Although it is often argued that the spread of education reduces income inequality (Nielsen and Alderson, 1995; Chu, 2000; Sylwester, 2002), the average level of education and educational variations have to be distinguished between. The average number of years of schooling, gross enrolment ratio and the adult literacy rate are often used as a measure for the educational level of the population and the results are contradictory again. For instance, Partridge, Partridge and Rickman (1998) find that income inequality is lower in U.S. counties with more average years of education. On the other hand, for example Sylwester's (2002) study, using a cross section of 50 countries, shows that countries with a higher average number of school years have also higher income inequality. Theoretically, higher education inequality should be associated with higher income inequality, as a higher educational level should duly ensure a higher income. This assumption is supported by the studies of Chiswick (1971), and Cornia and Kiiski (2001) using international cross-section data. Nielsen and Alderson (1997) use the indicator of educational heterogeneity, find that in U.S. counties in 1970–1990 the inequality- increasing influence of higher educational heterogeneity is become stronger in time. In some studies, the shares of population with different levels of education are used. According to Chevan and Stokes (2000), higher shares of population with both low and high educational levels are usually associated with higher income inequality, which is partly supported also by their analysis of U.S. data. Hence, education inequality can be assumed to increase income inequality. Very often also the indicators of school enrolment are used, but as their function is to enable to predict the educational level in the future rather than present, it would be premature to assume their impact on the income inequality at present. Therefore, the indicators of education inequality should be preferred. Thus average number of years of schooling (AYS), gross enrolment ratio (GER) and adult literacy rate (ALR) are considered as educational level index. All of them are inversely (considered hypothetically) related with income inequality. Increase (decrease) the quantity of these three factors decrease (increase) the income inequality.

Education expenditure is also often analyzed as a factor of income inequality. The government's expenditure on education can reduce income inequality if poorer people have access to public education. If their income is too low, they cannot benefit from public education and thereby income inequality even increases (Sylwester, 2002). Sylvester's (2002) empirical analysis of 50 countries shows that countries with larger government's expenditure on education have lower income inequality. More public expenditure on education plays a vital role to attain better education level of all people. If the people (mainly poor people) attain better education level, get more job opportunity. Consequently their income levels increase and the income gaps between rich and poor people decrease. More public expenditure on education especially expenditure on school level education and expenditure on higher education relative to the total of elementary and secondary expenditure can significantly help reducing income inequality in India for the period 1983 to 2012 (Kayet and Mondal 2015a). Thus total education expenditure may be divided into elementary expenditure (ELEEXP), secondary expenditure (SECEXP) and relative higher education expenditure (RELHIEXP) and all of them are significantly and inversely affects income inequality in India.

Another important factor in this category is social security policy (SSP), viz, pension scheme for retired person, old age allowance, unemployed allowance, widows' allowance, some social development scheme (mainly for under developed country) taken by government etc. All of them affect income inequality inversely as by these policies income of poor people increases and the gap between rich and poor decreases.

Thus the functional form of inequality within this category be,

INQ (all measures) = F [X_1, other factors]

Where, INQ denotes income inequality

Thus, **X_1 = f (AYS, GER, ALR, ELEEXP, SECEXP, RELHIEXP, SSP)**

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B. DEMOGRAPHIC FACTORS

Many demographic factors affect inequality directly or inversely. Population (POP) is one of the most important demographic factors for explaining inequality. Continuous increase in population is very important cause for rising income inequalities in India (Kayet and Mondal 2015b). Other important demographic factor that can explain income inequality is urbanization (URB). There are contradictory assumptions about the influence of urbanization on income inequality. Crenshaw (1993) shows that higher population density is associated with lower inequality, explaining it with better possibilities for advanced social organization in case of higher population density. On the other hand, Nielsen and Alderson (1997), and Litwin (1998) find that higher population density and urbanization increase inequality: income inequality is usually higher in urban than in rural areas. In the study of Li, Squire and Zou (1998), using panel data for 1947–1994, and also in the work of Xu and Zou (2000), which use Chinese data, the influence of urbanization on income inequality turns out to be insignificant.

Age structure of population (AGEGRP) is also an important demographic factor significantly affects inequality. The influence of the age structure on income inequality is not clear. According to Deaton and Paxson (1997), older people have a larger dispersion of incomes and so a larger share of older people in population leads to higher income inequality. This idea is supported by the empirical analysis of Deaton and Paxson (1997) using four countries' data. On the other hand, using panel data for the 1960s to 1990s Higgins and Williamson (1999) find that a larger share of the population aged 40–59 in population aged 15–69 decreases inequality. It can assume that a larger share of older and more experienced people reduces demand for them and the wage premium for experience, so the overall inequality is lower (Higgins and Williamson, 1999). In Nielsen and Alderson (1997) it appears that the influence of the share of elderly people (ages 65 and older) on income inequality in U. S. counties was different in different decades. The studies of Gustafsson and Johansson (1997) about OECD countries in the years 1966–1994, and by Muller (1988) using a cross-section from the years 1965–1975 both shows that a larger share of children (aged 0–14) increases income inequality. This can explain by the assumption that the birth rate is higher in families with a smaller income and so the incomes per family member become even smaller in this group of population, and hence the overall inequality increases.

As income inequality is mostly measured on the basis of the average income of the household members, the composition of household (CH) plays an important role in forming income inequality. More the different types of households, the higher the income inequality, because the households of different types have different incomes per household member (Wilkie, 1996). Larger households are more able to equalize the income per household member, so, as the average number of household members decreases (children leave their parents earlier, fewer marriages and more single persons), the overall inequality increases (Blank and Card, 1993). Most studies are focused on the impact of the proportion of single-female-headed households. Whereas such households usually have one employed person instead of two like in the traditional family type, it assumes that single female- headed households have a lower income per household member and so the overall inequality is higher in case of more single-female-headed households (Partridge, Partridge and Rickman, 1998). Using U.S. data many studies support this assumption, such as Maxwell (1990), Nielsen and Alderson (1997), Bishop, Formby and Smith (1997), Partridge, Partridge and Rickman (1998), and Chevan and Stokes (2000).

Thus the functional form of inequality within this category be,

$$\textbf{INQ (all measures)} = F[X_2, \textbf{other factors}]$$

Where, $X_2 = f(\text{POP}, \text{URB}, \text{AGEGRP}, \text{CH})$

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C. POLITICAL FACTORS

There are also political factors that are supposed to influence income inequality, such as the shares of the government and the private sector, democratization, liberalization, etc.

The share of the government sector in economy is mostly measured as the share of government expenditure in the GDP. A large proportion of government expenditure is formed by transfers, such as pensions, subsidies, grants, which have a redistributive and equalizing function in society. Hence, a higher share of the government sector should bring about lower income inequality. Thus there is an inverse relationship between income inequality and government expenditure (GOVEXP). In addition, earnings inequality in the public sector is usually lower than in the private sector (Gustafsson and Johansson, 1997), which is the second possible mechanism of the inequality reducing influence of the share of the government sector. The inequality-reducing influence of the share of the government sector has appeared in many panel data studies: Durham (1999), for example, analyzes the years 1960–1992, Gustafsson and Johansson (1997) the years 1966–1994, Clarke, Xu and Zou (2003) the years 1960–1995. Stack (1978) gets the same result using a cross-section from the 1960s. However, the inequality-reducing influence of government expenditure depends on the share of transfers in total expenditure. If most of the government's expenditure is addressed to more well-to-do people, government expenditure can, on the contrary, increase income inequality (Xu and Zou, 2000; Clarke, Xu and Zou, 2003). The work of Blejer and Guerrero (1990) shows that higher income inequality is connected with larger government expenditure which is addressed to industrial projects benefiting rich people rather than to social insurance. Consequently, there is no clear assumption about the influence that the share of the government sector can exert on income inequality.

Since the shares of the government and private sectors are connected unambiguously (if one increases, then the other one decreases), there is no need to include the share of the private sector into the analysis that already includes the government sector. The share of the private sector in economy is taken into account mainly when analyzing transition countries. Ferreira (1999a), e.g, points out that privatization increases income inequality, because the hitherto poorer people have fewer

chances to benefit from privatized assets. The second reason is higher earnings inequality in the private sector (Ferreira, 1999a). These findings are in accordance with the assumption about the inequality-reducing effect of the share of the government sector.

There exists no unique and widely used indicator of democratization (DEM). In a more democratic society, poor people have more political rights and possibilities to achieve larger redistribution and a more even distribution of income (Sirowy and Inkeles, 1990; Gradstein and Milanovic, 2002). Gradstein and Milanovic (2002) find that the expansion of franchise has reduced income inequality. Li, Squire and Zou (1998) analyze the panel data of 49 countries for the years 1947–1994 and find that an improvement in civil liberties reduces income inequality. Lundberg and Squire (2003) obtain similar results using similar data. On the other hand, it is argued that it is simpler to accomplish the redistribution in authoritarian societies (Sirowy and Inkeles, 1990). Further, the higher centralization of an authoritarian regime involves more opportunities to diminish the differences between incomes in different regions (Durham, 1999). Crenshaw (1993), for example, finds an inequality- increasing influence of democracy using a cross-section of the year 1970. Nielsen and Alderson (1995) show that income inequality is used to be significantly lower in the communistic countries. However, in the studies of Nielsen (1994) and Nielsen and Alderson (1995) the index of political democracy, in the work of Higgins and Williamson (1999) the index of civil liberties and political rights, and in the study of Durham (1999) different indicators of democracy appear to be insignificant in determining income inequality. Some authors point out that it is the length of democratic experience that matters and not the current state of democracy (Nielsen and Alderson, 1995; Gradstein and Milanovic, 2002). Muller (1988), for example, using a cross section of the years 1965–1975 and finds income inequality to depend on the age of democracy. However, there is an inverse relationship between these two.

Policy liberalization (LIB) is also discussed as a factor of income inequality. Stewart and Berry (2000), for example, conclude that liberalization on the whole increases income inequality. The empirical analysis of Cornia and Kiiski (2001) shows that in 32 countries in the years 1985–1990 the reforms on average have an inequality-increasing influence. Unfortunately, the empirical analysis of the impact of liberalization on income inequality is constrained by the lack of appropriate indicators of liberalization. Liberalization indexes which synthesize different aspects of liberalization are not available for all countries or for all periods of interest. Since reforms in different spheres may affect income inequality in various ways, it makes sense to analyze the influence of the diverse aspects of liberalization separately. The liberalization of foreign trade can be analyzed as a macroeconomic factor, whereas smaller redistribution and privatization have already discussed together with the share of the government sector.

Thus in functional form of inequality within this category be,

INQ (all measures) = F [X_3, other factors]

Where, **X_3 = f (GOVEXP, DEM, LIB)**

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D. MACROECONOMIC FACTORS

GDP (or SDP for states) is one of the most important factors of income inequality under this category. There is a fast growth in wealth of entrepreneurs, industrialist and job creators as GDP/SDP increases but the condition of majority rural inhabitants whose principal occupation is agriculture does not improve significantly. So the income gap between rich and poor increases and consequently inequality rises. But taking GDP per capita or SDP per capita for states as an explanatory factor the sign is negative as income of the poor classes increase. Most of the studies about a country's wealth and income inequality rest on Kuznets' (1955) hypothesis about an inverted U relationship: as the GDP grows, inequality will first increase and then will start to decrease. This hypothesis is supported by the data available at the time when the labour force is moving from primary sector to secondary sector. One explanation offers that income inequality between sectors, for example, the less productive agricultural sector and the more productive industrial sector, is greater than inequality within them. Then at the beginning of the movement of labour force income inequality increases, but starts to decrease when most of the labour force is already in the industrial sector or the movement between the sectors has equalized the rates of return in both sectors (Ferreira, 1999b). There are also other hypotheses about the influence of a country's wealth on its income inequality. Chang and Ram (2000) propose that if a country's wealth increases, its wealthy people as entrepreneurs and resource owners have more opportunities to increase their incomes. In addition to a large number of articles testing Kuznets' hypothesis, most of the analyses covering several factors of income inequality includes GDP per capita. Kuznets' hypothesis is supported by many analyses using various data. For example, Higgins and Williamson (1999) use panel data for the 1960s to 1990s, Clark, Xu ja Zou (2003) panel data for 1960–1995, similar data are used by Barro (1999). Nielsen and Alderson (1997) analyze data about U.S. counties in the years 1970, 1980 and 1990; Weede and Tiefenbach (1981) study a cross-section from 1965. All these studies support to the inverted U hypothesis. On the other hand, Ram (1997) analyzes the panel data of developed countries for 1951–1992 and finds an un-inverted U-curve: with the increase in the GDP, income inequality decreased in the 1950s and 1960s, but increased from the 1970s on. Analogical results are yielded by an analysis of U.S. counties in a similar period (Ram, 1991). In the study by Gustafsson and Johansson (1997) about OECD countries in the years 1966–1994, a country's wealth turns out to be insignificant as a factor of income inequality. Hence, there is no clarity about the influence of a country's wealth on income inequality. A more exhaustive overview of the articles about a country's wealth and income inequality can find in Glomm (1997).

Monthly per capita expenditure (MPCE) and work participation rate (WPR) are two important macroeconomic determinants for explaining economic growth. There is a direct relationship between MPCE and WPR and, economic growth. If MPCE and WPR rise (fall) economic growth will also rise (fall). Theoretically there is an inverse relationship between economic growth and equity. If economic growth

rises (falls) equity will fall (rise) means economic inequality will rise (fall). Thus there is a direct relationship between economic growth and economic inequality. Hence theoretically MPCE and WPR are positively related with income inequality. These two are highly significant factors for explaining income inequality in India and positively affect inequality (Kayet and Mondal, 2015).

Consumer price index for agricultural labourer (CPIAL) for rural sector and consumer price index for industrial worker (CPIIW) for urban sector are very important macroeconomic variables for explaining income inequality. Larger the consumer price index smaller is the real income of people and their purchasing power. Thus it affects income inequality directly. But the rate of decrease of purchasing power of poor people is larger than that of rich people. So the income gap between rich class and poor class will increase. Thus hypothetically it affects income inequality directly. But there exist a contradictory result. Kayet and Mondal (2015b), show that it affects income inequality inversely in rural India. The probable reason for inverse relationship is that, in India when CPIAL/CPIIW increases, the real income of people decreases and their purchasing power also decreases. Consequently the incentive to work of poor people decreases. This leads to decrease in production in which reduces the income and expenditure of rich people. The expenditure of poor class cannot decrease much because of the availability of different benefit policies taken by government. So the expenditure gap between rich class and poor class decreases.

Share of non agricultural employment (SNAE) is also an important factor for explaining income inequality in rural India (Kayet and Mondal, 2015). If share of non-agricultural employment increases in rural area means a transfer of labourer from agricultural sector to non agricultural sector leading to an increase in income of rural poor, consequently the income gap between rich and poor is expected to decrease. Thus the relationship is expected to be inverse one. On the other hand, an increase in share of non-agricultural employment may imply the development of the capitalist sector leading to a larger increase in non wage income than wage income and so an increase in inequality.

Thus in functional form of inequality within this category be,

$$\textbf{INQ (all measures)} = F\,[X_4, \textbf{other factors}]$$

Where, $X_4 = f$ (GDP/NSDP, MPCE, WPR, CPIAL/ CPIIW, SNAE)

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E. THEORETICAL MODEL

However, we can incorporate all the possible and significant factors for explaining income inequality and their expected signs are mentioned in separate equations.

Thus,

$$\textbf{INQ (all measures)} = F\,[X_1, X_2, X_3, X_4, U]$$

Where, U captures other factors that also explain inequality.

IV. CONCLUDING REMARKS

In conclusion no doughty it can say that, if we really want to reduce inequality we should not consider a singular measure of inequality, viz, either relative measure of inequality or absolute measure of inequality. It should consider plural measure of inequality, viz, both relative measure of inequality and absolute measure of inequality. And also it can say that only Gini measure cannot fulfill all criterions of inequality. That's why it should consider both Gini measure and SD-CV measure for determining economic inequality. It is very difficult to explain variation in income inequality only by some measurable explanatory variables. There are varieties of socio-economic, demographic, political, macro-economic and other types of variables which can explain economic inequality and all of them are not measurable. Moreover, it is not possible to include all types of variables in the model due to lack of data in many countries. This article introduces some possible and significant factors of income inequality and also explains their influence mechanism. 19 factors can points out which can be divided into four categories: socio-economic factors, demographic factors, political factors, and lastly macro-economic factors. It can conclude that in the case of many factors there is no agreement as to whether their effect on income inequality is positive, negative or insignificant. One possible explanation is the differing number of other factors included into the analyses by different authors. Furthermore, often it is not being specified whether the direct or total effect of the particular factor on income inequality is studied.

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