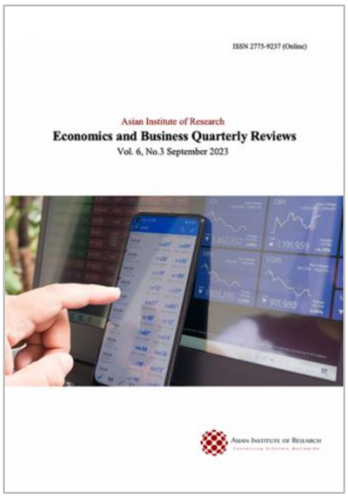

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Income Inequality in India: An Empirical Analysis of Changing Paradigms

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Abstract
In this paper we have analysed economic inequality in India more specifically expressed in terms of income inequality in an empirical and historical frame. The period to which the analysis belongs is predominantly consists of the two phases, first the colonial period and second the post-independent era. The analysis for post independent India is presented in two phases, the planned economy period from 1950 to 1990 and the post reform economic policy regime from 1991 to 2020. We have presented in most precise and in brief the estimates of some of the most notable quantitative enquiries through empirical trends and patterns. We have also presented broad interpretations concerning the predominance of institutional and technical factors that govern and prolong the status of economic affluence in a society in congruence to specifically distinct historical phases signifying the primacy of these factors in determining the scope of production and exchange in the economy. The inferences drawn on the basis of the estimates of income distribution available at our disposal reflect high income inequality during much of the colonial period. Amidst the limitations, concerning the availability and the robustness of data, we find that self-determination in form of political freedom has the potential to generate and maintain conditions for greater economic equality which we observe during planned economic development in India. However this potential is limited by state of technology and optimized by institutional development concerning public goods within the broad purview of modern welfare state.

Keywords: Colonial India, Five Year Plan, Income Inequality, National Income, Planned Economy, Post-reform Period

1. Introduction

The dynamics of economic inequality are specific to the compositional structure of different sectors of economic activities during a period in developmental history. In addition to compositional structure the nature in which various sectors are interconnected with each other also bear great impact on inequality dynamics. The nature and the degree in which the sectors are connected with each other are chiefly determined by the state of technology, however political influence on such interconnectedness is not insignificant rather sometimes overpowers technological factors. This has been experienced in history repeatedly that political force has often determined, to a significant level, the scope of technological adoption according to the interests of the ruling classes; this tendency has resulted in concentration of income and wealth to a small fraction of population. As the factors relating to increase in income inequality are exogenous whether technological or institutional; the curative efforts must also be exogenous; however these would mostly be institutional. In the subsequent sections we shall present some of the most prominent institutional efforts in form of policy orientations regarding problem of income inequality on part of the government and other entities.

According to Oxfam India Report (2023), top 10 % Indians own about 72-73 % of total national wealth whereas bottom 50 % population only shares 3 % of total national wealth; the rest is owned by the middle 40 %. There is further concentration of wealth within the top 10 % as the wealth owned by top 5 % is about 62 % and that of the top 1 % is about 41 % of the total national wealth. Various other sources also point to similar patterns in wealth and income distribution in India in contemporary times. World Inequality Report (2022), released by World Inequality Lab, shows that global top 10 % population captures 52 % of global income in 2021; similarly, share of global middle 40% population in total global income is 39.5 % and that of the bottom 50 % population, the income share is 8.5 % of total global income. For global wealth distribution top 10 % hold 76 % global wealth, the middle 40% holds 22 % and the bottom 50 % population only 2% of total global wealth. In case of India the report finds share of top 10 % Indians in national income to be 57.1 %, of middle 40 % to be 29.7 % and of the bottom 50 % at 13.2 % whereas in case of wealth distribution in India top 10 % hold 64.4 %, middle 40 % hold 29.5 % and the bottom 50 % shares about 5.9 % of the total national wealth. The report claims that India is among the world's most unequal countries.

Reducing Inequality is one of the goals (the goal number 10) of the Sustainable Development Goals (SDGs) declared by the United Nations to be achieved by 2030. In this regard the United Nations University has come up with a global inequality database known as the World Income Inequality Database (WIID) in order to maintain and share data on various empirical and theoretical aspects relating to income inequality. As per the WIID data, share of top 10 % population in India was reported at 40.1 % of total national income while that of the middle 50 % population the income share stood at 48.4 % and of bottom 40 %, income share was reported at 11.6 % in the year 2020. WIID classification of income classes differs from WID and Oxfam reports WIID present data on middle 50 % and bottom 40 % however WID and Oxfam present estimates on middle 40 % and bottom 50 % of population. The State of Inequality in India Report (2021) commissioned by Prime Minister's Economic Advisory Council (PMEAC)[1] and prepared by the Institute for Competiveness[2], provides insights into various aspects of economic inequality in addition to income inequality. The report estimates inequality based on PLFS (Periodic Labour Force Survey) wage and income data. For other indicators of inequality, the report relies on NFHS-5 (National Family Health Survey-5) for estimation of health deprivation and malnutrition. The report concludes that significant inequalities exist on many socio-economic aspects and appropriate strategies are essential for overcoming these.

As there are numerous phases in history with high economic inequality and distress across the nations, there are also numerous efforts noted in the history from the rulers and the leaders of academia and society to effectively fight against poverty and inequality and carve out strategies for reducing economic disparities. Such efforts were made in every phase of human history whether ancient, medieval or modern. We shall however focus here on some of the most noted and recent accounts of such efforts particularly related to Indian economy and society.

Even before India got independent, India's freedom movement kept on putting efforts to strengthen the discourse on poverty eradication and eventually moving towards a more equitable society. In this regard, Naoroji[3] (1899) found that India suffered a great deal of economic distress during the 19th century British India in form of acute poverty among the masses. He termed the colonial rule as 'Un-British' and went on to title his research on Indian economy as '*Poverty and Un-British Rule in India'* which was intended to remind the British Crown and the British Parliament that their rule in India is in contravention to the liberal legacies of the British people and society and is detrimental to the most human aspects of the people in India. He lamented on the process of

'Economic Drain' from India to England during much of the 19th century which resulted in widespread poverty and inequality in India.
During the decisive phases of India's freedom struggle under Gandhi's[4] leadership, creating an environment of economic emancipation of the deprived was an integral part of the movement for the nation's independence. In case of both the political and economic emancipation of Indian people, Gandhi remained at the forefront and his ideas found expression in the principles of *Antyodaya*[5] and later *Sarvodaya*[6] which were coined by Gandhi and popularized by his followers during the late British rule in India, and even in independent India. These concepts inspired the leaders of social and political life and turned into movements such as the '*Bhoodan Andolan*[7]' which originated within the conceptual realm of the *Sarvodaya*.

The 'National Planning Committee' in 1938 in its report mentioned that the objectives of planning shall be to improve the wellbeing of the community by intensifying the process of economic development so as to increase the economic output and its equitable distribution among the members of the community (National Planning Committee Report, 1938, p.15). Similarly, *A Plan of Economic Development for India* (1944) popularly known as the '*Bombay Plan*[8]' dealt in detail with the issue of distribution of income. The part one of the plan emphasised on the production strategies however the part two of the Plan specifically dedicated a whole chapter on distribution of income by expressing the rational that the emphasis on distribution before production sound impractical as the primary issue to be addressed for economic development. The Plan mentioned that extreme inequalities impede a vast majority of population to take part in economic activities at any influential level which leads to increase in social cleavage and disharmony. To overcome such imbalances, the Plan must include an implied strategy for distribution as part of a production plan and this can be achieved by fulfilling two objectives; i) to secure every person a minimum level of income for a reasonable standard of living and ii) to prevent gross income inequalities between various classes of individuals. The Plan also noted that income inequalities primarily emanate from unequal wealth and property endowments among individuals and opined that existing inequalities of wealth and property should be reduced and means of production be decentralized (Bombay Plan, 1944, pp. 65-68).

The constitution of India through the Directive Principles of State Policy lays down an institutional foundation for a formal endorsement of the view concerning maintenance of socio-economic equality among the citizen of India through appropriate policy efforts. Articles 38 (1) of Indian Constitution reads: "The state shall strive to promote the welfare of people by securing and protecting as effectively as it may a social order in which justice, social, economic and political, shall inform all the institutions of national life." And similarly, Article 39 (b) & (c) reads as: "That the ownership and control of the material resources of the community are so distributed as best to sub-serve the common good" and "The State shall, in particular, direct its policy towards ensuring that the operation of the economic system does not result in the concentration of wealth and means of production to the common detriment" (Constitution of India, 2022, p. 21).

In continuance to the discourse, already established by various formal efforts, for a fair distribution the First Five Year Plan (1950-51 to 1955-56) categorically mentioned among its objectives, to bring rapid improvements in the living standards and reducing income and wealth inequalities by providing employment opportunities with adequate wages (The Cambridge Economic History of India, Volume-II, p.952). The first Plan stated that correcting only the inequalities of income may not be sufficient but inequalities of wealth which are at the foundation of income inequalities. The Plan noted that progressive income taxation can prevent further concentration of wealth however this cannot reduce existing inequalities (The First five Year Plan, A Draft Outline, p. 23). In conformity to what was declared and envisioned with regards to redistribution a decade after the initiation of planned economic development in India in 1950-51, a '*Committee on Distribution of Income and Levels of Living*' under the chairmanship of Prof. Mahalanobis[9] was constituted in 1960 to look into the distribution effects of I^st^ and II^nd^ Five Year Plans. The committee used data from various NSS rounds on consumption expenditure for calculating fractile wise distribution of consumption surveyed in terms of amount of cereals consumed which included rice, wheat and coarse cereals and their monetary values. The study found that bottom 10 percent of population shared about 3 percent of total national consumption and for the top 10 percent population consumption was recorded in the range of 25-30 percent. The report explicitly recognized that the survey had its serious limitations as the very high-income class and the very poor (usually homeless

moving communities) were not well represented in the survey. Despite these limitations, the committee noted that the study could bring useful results. The study also revealed that the share of top 10 % income tax assesses in total assessed income was 40.7 % in 1950-51 that declined to 35.4 % in 1958-59 whereas the pre-tax income of the bottom 70 % assesses increased from 35.9 in 1950-51 to 39.8 % in 1958-59. In case of middle 20 %, the share increased from 23.4 % to 24.8 % during the same period. The report also found that the share of top 1 % declined from 13 % in 1953-54 to 10 % in 1959-60 and the share of top 5 % declined from 28 % in 1953-54 to 24 % in 1959-60 (Report of the Committee on Distribution of Income and Levels of Living, 1964, p.27, 75). Thus, in terms of pre-tax assessed national income first and second Five Year Plans presented a positive redistribution trends and showed decline in income inequality.
It was during the early 1980s that the government at the centre began to prioritise growth over redistribution and slowly began to take measures to promote private businesses to invest in a growth intensive manner; selective opening of market segments to international trade was also part of the growth strategy in the 1980s (Kohli, 2006). The pro-growth process that began with caution and some degree of reluctance in 1980s got more paced and structured after the 1991 economic reforms, partly due to a need for easing the state control in economic affairs as a measure to promote market instruments for better allocation of resources and partly due to unfolding of an economic crisis in 1990.

In continuation to the central theme of economic development philosophy in India which is growth with redistribution, the 10th Five Year Plan (2002-07) reiterated that the plan must be formulated in a manner that it ensures development with equity and social justice (Approach Paper to 10th Five Year Plan 2002-07, p. 5). In similar lines, 11th Five Year Plan stated that the Plan shall focus to pave ways to restructure policy priorities in order to make growth and development process more inclusive that aims to bring strategies for faster reduction of poverty and remove various disparities that has always been capturing the attention of policy experts as well as the political class from time to time.

With this backdrop, we summarize that there have been numerous attempts to provide philosophical basis, theoretical as well as empirical explanations to the phenomenon of income inequality in India and a number of institutional efforts have also appeared in form of policy and legal provisions from time to time, intending to check explicit or implicit effects of rising income inequality. We now move on to the vast literature that is available at our disposal for an extended understanding of the problem.

2. Review of Literature

Kuznets (1955) mentioned that the inequality in distribution of savings is greater than that in the distribution of property incomes, and hence of assets. He identifies legislative interference and political decisions as the factors counteracting the cumulative process of concentration of savings. These factors limit the process of accumulation of property through inheritance taxes and capital levies. He hypothesised that in the long run market forces increase income inequality during initial stages of growth and later decrease it; thus, an inverted U-shape curve is formed. There have been many studies in the later years that contended the hypothesis and have shown that in most of the cases the reverse has happened. Sundrum (1974) noted that growth of developing economies during 1960s were impressive enough to surpass the targets envisaged under the 'The First Development Decade'[10] and to a great extent countered the pessimism towards growth in the wake of World War II; the growth was primarily attributed to the expansion of world trade. He also noted that governments in these developing economies have majorly focused upon the sectors which were already modernized; than modernizing the traditional sectors, such leaning towards the modern sectors contributed to the already existing high levels of economic inequality. He pointed out that as part of the policy of equalization, minimizing inequality of opportunities is essential however inequalities of opportunities emanate from inequalities of income and wealth. As a prescription to reducing wealth inequality, in particular, he suggested land distribution as a key policy solution and for reducing inequality of opportunities, public provision of such opportunities and during the situation of resource constraints to such provisions deprived sections should be given preferential treatment.

Ahluwalia (1976) conducted a cross country analysis of income inequality along a range of development indicators for 60 selected countries consisting of 40 developing, 14 developed economies and, 6 countries with

socialist economic system. He found that there is a strong support for the hypothesis that relative inequality increases during the initial phase of development and later reverses in subsequent phases. He noted that such tendency holds true in case of developed, developing and underdeveloped economies however the process usually is much longer in case of underdeveloped economies.
Nagraj (2000) pointed out to a number of aspects considering redistribution of income including the issue of non availability of income-based data on distribution; thus, consumption-based analysis of distribution is what is widely done in developing countries in general and India in particular. He endorsed that decline in absolute poverty implicitly indicates for an improvement in the distribution and noted that from 1977-78 to 1993-94 average consumption at all India level increased annually by 0.9 % and that of the bottom 50 % rural population by 1.5 %; he further opined that albeit these moderate changes, growth with distribution is somewhat evident. He went on to point to the distribution of value added between wages and profits in private corporate sector and concluded that although share of private corporate sector in the total value added is about 10 % of the GDP in 1990s however it utilizes a greater proportion of domestic savings and attracts disproportionate attention of the policy makers. He found that proportion of wage in value added in the sector decreased from 35 % in 1985-86 to 20 % in 1996-97 while share of profits increased by 15 %; he remarked that this shows that distribution of income is distinctly in favour of capital owners amidst the analytical limitations of such simplified comparisons. Banerjee & Piketty (2005) found that during the post liberalization period, the top income groups gained, unlike in 1980s when every section shared the fruits of growth. They concluded that ultra rich (top 1 % and top 0.1%) individuals cornered most of the rise in national income during this phase. Bardhan (2007) cautioned against the usual generalization with regard to the impact of globalization on poverty and inequality in developing economies particularly on India and China. He opined that the section of both media and academia that look to generalize the proposition that reduction in poverty and rise in inequality in both India and China is to be attributed to the openness of these economies are based on hasty statistical judgements and lack a comprehensive analysis that focuses on causal aspects of such inter-relationships. Pal & Ghosh (2007) examined inequality by analysing NSS consumption expenditure of NSS 50th round (1993-94) and 55th (1999-00) round data and concluded that claims of a reduction in inequality in the mainstream are unsubstantiated rather there has been a rise in inequality in terms of consumption and it has increased both in rural and urban India. They opined that such inequality in consumption is due to rise in income inequality caused by stagnancy of employment creation in the post-reform period.

Atkinson et al. (2011) argued that studies and analysis of top incomes is important for understanding broad aspects of income inequality by assessing and envisioning the direction of public policy in this regard. They admitted that the tax-data used for these long run estimates may have serious limitations, however by far these are the only credible sources available at our disposal for analysing income inequality in the long run. Zagha (2013) remarked that growth in the post reform period in India has unleashed economic disparities and there is an ongoing policy discourse that is of the view that growth should come with opportunities to all sections of society. Engberg-Pedersen (2015) noted that Gini-coefficient as a measure of inequality is though widely used however it may indicate to ambiguous and misleading conclusions. For instance, if the share of the middle-income groups in national income increases, the value of the coefficient decreases and hence it indicates to reduction in inequality even if the relative inequality between the top income groups and bottom groups remains unchanged. To overcome such ambiguity a new measure termed as Palma Ratio (see methodology section and, Palma, 2011) is becoming increasingly popular and useful in drawing more accurate conclusions with regard to relative income inequality between top and bottom income groups. Alvaredo et al. (2016) assessed income concentration during the 1885 to 1946 period and found that the pattern of income concentration shows a U-shape trajectory during this phase of British India. Anand and Thampi (2016) examined trends of wealth inequality in recent years (1992-93 to 2011-12) and found that wealth inequality increased during the period and concentration of wealth towards the top 10 % increased at even greater pace. Alvaredo et al. (2017) assessed the WID project and opined that determinants of global inequality dynamics involve in its ambit some very strong and contradictory forces. They observed that income and wealth are concentrating towards top income groups in all countries in general, however the magnitude varies across countries; thus, the assessment of factors governing such rise in top incomes and wealth as well as the policy remedies to it should be viewed and envisaged as per country specific circumstances.

Roy (2018) astonishingly rejected a number of already established and popular hypotheses regarding economic inequality in colonial India. He rejected that inequality between the propertied class and the non-propertied increased during this period to which the capitalist exploitation and adverse government intervention is often held accountable. He concluded that colonial policies particularly relating to openness of economy were favouring the business class and were adversely affecting agriculture sector including the landowners. He mentioned that large landowners were tiny portion of the population and thus held a small share of the national income. Similarly, he admitted that European personals working with government earned high income in comparison to ordinary Indians; thus, there was a huge difference between these two classes however this gap was not increasing and the numbers of the officials was again quite insignificant to the country's population. The study concluded that a sizable middle class emerged and gained prominence during this period. Dixon (2018) concludes that growing concentration of wealth and income in the hands of a tiny population of rich individuals and compression of the middle class poses a threat to liberal democracy and the constitutional system; rising inequalities at such alarming pace in the advanced democracies are common and there appears an erosion of trust of the common people in the governments and the public institutions due to the meagre response from the constitutional framework in this regard.

Chancel & Piketty (2019) documented that the estimates for the pre-tax income share of top 1 % in India are at its peak at 22 % of total pre-tax national income since the British created an Indian Income Tax statistics system in 1922. Top incomes decreased during the 1950s and 1970s while they again showed signs of reversal in the 1990s are continued to rise. They refrained from generalizing their findings to become any final say to various debates articulated around the impact of reforms on inequality and poverty in India by stating about their contribution as moderate and better suited for a democratic conversation on these issues. Banerjee et al. (2019) found that there is strong political divide in India to which they called a 'strong political cleavage'. They showed that this divide is mostly caused by elements of social fragmentations such as caste and religion whereas inequality in education, income levels or occupation shows very limited effect on such cleavage. They cautioned that the most challenging aspect for Indian state would be to design policy instruments that can allow the lower and middle class individuals to get access to high quality public services. Himanshu (2019) used NSS consumption survey data for assessing economic disparities among top and bottom population groups and found that there has been rise in economic disparity in form of average consumption of various groups in post 1991 period however there is some moderation after 2004-05. He also utilized WID income distribution data and concluded that income inequality in the recent years have risen sharply. Kumar (2019) analysed the trends and patterns of wealth-income ratios in India for the period 1860 to 2012 and found that prior to 1939 the wealth income ratio steadily increased except during a twenty year period between 1895 to 1914 when the ratio showed stagnancy however in the post 1939 period the ratio continuously declined till 1960 before a reversal with a slower pace till about 1990 and thereafter a decade of marginal decline till 2002 and again a sharp rise which continued till 2012. He inferred that the U-shaped trajectory of wealth-income ratio curve is due to an asset price slowdown during the middle of the twentieth century and the reversal of the high compositional share of land-based assets in the national wealth.

3. Research Gap and Objectives

There are a number of studies on income as well as wealth inequality in India including the ones reviewed in the above section, analysing the long run empirical trends. However theses are mostly for either the colonial period or post-independent period with some rare exceptions which in one way or another relates to projects taken up by World Inequality Lab at Paris School of Economics. This study may be called unique in a way that it incorporates evidences of both structured quantitative data suitable for empirical analysis and unstructured set of data and information which are more suited in the sense of the analysis and interpretations done in historiography. The other aspect is the time period of the study for which well- structured data ranges from 1820 to 2020 and from 1750 to 2020 if we combine the unstructured or slightly crude estimates of data. The study argues for active use of non-quantitative aspects of information to be read simultaneously with quantitative estimates so as to get better inferences particularly for the period before 1922. The objective of this paper is to analyse and understand the changing patterns of income distribution in distinct phases of broad socio-economic and political similarities.

4. Data and Methodology

The data with regard to income distribution is taken from World Inequality Database (WID) which is prepared by a renowned team of experts at the World Inequality Lab under the aegis of the Paris School of Economics. These data sets are termed as Distributional National Accounts (DINA) and are based on pre-tax income data from historical tax records. WID has collated and presented such data for 123 countries as of June 2023. Amidst many usual and specific limitations of these data-sets, based on pre-tax income, which are widely used and claimed by many that, by far these are the only prominent source of long run data on distribution of income.

Distributional National Accounts with respect to India are available from 1820 to 2021 in a discontinuous manner wherein after 1820 the next data points in the nineteenth century correspond to the years 1850, 1880 and 1900 for the top 1 % population, top 10 % population and bottom 50 % population. After 1900, for the same three income categories, data is available for 1910 and 1920 however from 1922 till 2021 the data for top 1 % are available on an annual basis and for the top 10 % and bottom 50 % at decadal intervals corresponding to the ending year of the decade e.g., 1930, 1940 and 1950. It is after 1950 that we have continuous data sets which are organized both deciles-wise as well as percentile-wise. The WID has estimated Gini-Coefficients (Gini, 1912) for the period 1951 to 2021, we have used these estimates in study; thus, we do not mention specifically the method of estimation in this section. We have used the data on income series covering all the years for both pre-tax income distribution and wealth distribution for four distributional categories that are top 1 %, top 10 %, middle 40 % and bottom 50 % as well as Gini coefficients of pre-tax income from 1951 to 2020 for our analysis. The data for middle 40 % population in the WID series are obtained by simply subtracting the share coefficients of top 10 % and bottom 50 % from 1 (for the fractional data at unit wise) for the years prior to 1950. We have used data, corresponding to ending years of decades, as per availability and suitability of our analysis and thus we do not include in our analysis the data pertaining to 2021 although these are available and part of the composite data sets.

The analysis and the discussion in the subsequent sections shall follow from two distinct perspectives, one from the analysis of economic inequality from the standpoint of various historical studies mentioned in the previous sections which is based on unstructured data for various occupations and economic activities; however, these aspects provide an indication to what direction the economic status of various classes of society moved during a particular phase. The other perspectives to be discussed are based on structured data wherein we use statistical and graphical methods for elaborate understanding on income inequality in India albeit limitations of data regarding incomes as mentioned earlier.

Our focus shall be on the second perspective wherein we have more structured information with regards to income inequality in form of distributional national income accounts based on pre-tax income data. Within the structured analysis based on these data sets, the Gini coefficients are taken directly from WID, however the values of distributional accounts are converted to percentage terms from unit fractions for constructing Lorenz curves. Lorenz curves for pre-reform period (1950-51 to 1990-91) and post-reform period (1990-91 to 2019-20) are constructed, using WID figures, where we have used deciles-wise distribution of income. An illustrative Lorenz curve is presented through figure-1.

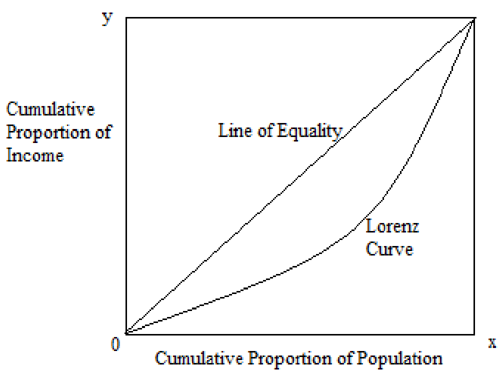

Figure 1: Graphical representation of a Cumulative Distribution Function
Source: Author's construction based on theoretical function

In addition to the Gini coefficient and Lorenz curve, Palma Ratio is also calculated for the years covered using following formula:

$$\text{Palma Ratio} = \frac{\text{Income share of the top 10 \% Population}}{\text{Income Share of the bottom 40 \% Population}}$$

Our approach to analysis is empirically comparative for data levels with decadal intervals in case of distributional national accounts for population categories specified as top 10 %, middle 40 % and bottom 50 %. For additional analysis we resorted to Lorenz curves for a comparative analysis between pre-reform and post-reform periods. For the period 1820 to 2020 Palma Ratios at decadal intervals are calculated for additional inferences. The Gini coefficient, Lorenz curves and Palma Ratios are all calculated using pre-tax income distribution data from WID.

5. Analysis and Discussion

An economic phenomenon as integral and vital as income inequality is not limited to any particular phase in history in any pre-identified pattern rather it is an inherently perpetuating one, albeit involving compositional changes taking place in the long run. The elements causing and perpetuating income inequality are both natural and institutional. The natural causes are closely related to state of technology and the ones that are institutional are concerned with the moral and governing systems in the society. The pattern of income distribution in the pre-colonial India was in congruence to the social stratification with relatively lower sensitivity to technological state whereas the colonial phase was more sensitive to technological effects on both the social stratification and the resultant patterns of income distribution. The role of institutional factors in determining the levels of income distribution are always significant in every phase of history and colonial period in India was no exception to this. Our enquiry during the colonial phase shall primarily be based on some of the most noted and endorsed researches pertaining to those times whereas the analysis relating to post-independent era are based on more concrete evidences that are backed by comparatively more reliable sources of data than the colonial phase as mentioned in the previous section. Apart from this, central presentation pertaining to colonial and post-independent India, we shall, in brief, discuss the basic idea as to how income inequality or economic affluence among the individuals and groups of individuals took shape over the course of history. In this context, we shall attribute a brief discussion on ancient and medieval India through various quantitative and non-quantitative estimates and evidences presented by experts of socio-economic accounts for these periods in history in the subsequent section.

5.1 A brief View of Income Inequality in Pre-colonial India

In every civilization across the world, the first stage of evolution of human society characterises a primitive nomadic groups of hunter gatherers, the second as settled-life due to discovery of agricultural practices and in later stages the consolidation of society by small chieftains and eventually organization of society by large feudal lords which later becomes the basis for large kingdoms and empires. There is clear consensus among the experts of ancient human society and life that inequality was least in the primitive phase and gradually started increasing due to a number of organisational and technological factors evolved over time. In this study analysing inequality in context to the nature and scope of the analysis for ancient period would be of distant significance thus we shall restrict our analysis mainly to later Moghul period, the colonial phase and the post-independent India. The next section throws light on a broader view of income inequality in late-medieval and early colonial India.

Unlike ancient India, we have relatively greater information and some limited but useful quantitative estimates to give us broad understanding of the patterns of income distribution. The political power in the medieval India was fundamentally vested in crude military force, although this crudeness is limited by the religious value-systems prevalent in those times to some extent, the dominating factor remains to be military power or what we call in other words the crude physical force. The state, thus, was expressing its sovereignty in most of the public functions through means of power and the economic aspects were not among the exceptions. For instance, the way the distribution of agricultural produce was governed was that the state was extracting about 40 to 45 percent of gross agricultural production of which most of the share was held by a few military nobles called '*Mansabdars*'. Stein (1999) depicts that such pressure by the state resulted in subversion of superior or gainful agriculture and also created increased disparities between the rich and poor, particularly in the countryside. Gini Coefficient in Moghul India in 1750 were estimated to be 0.489 (48.9 %) and the income share of top 1 % population was estimated at 15 % of total national income for the same year (See Appendix-3, Table-1, Milanovic et al. 2007).

Table 1: Social Structure wise Share of Income and Labour Force in Moghul India (1750)

Broad Generalization on Location of Socio-economic Group	Socio-economic/Occupational Group	Group Code*	% Share in Total Income	% of Labour Force
Non-village Economy	Moghul Emperor and Court, Mansabdars, Jagirdars, Native Princes, Appointed Zamindars, Hereditary Zamindars	A	15	1
	Merchants and Bankers, Traditional Professions, Petty Traders & Entrepreneurs, Soldiers & Petty Bureaucracy, Urban Artisans & Construction Workers, Servants, Sweepers, Scavengers	B	37	17
Village Economy	Dominant Castes, Cultivators and Rural Artisans, Landless Labourers, Servants, Sweepers, Scavengers	C	45	72
Tribal Economy	Native Tribes and Forest Dwellers	D	3	10

Source: Table constructed by authors based on data from Maddison (2001), p.110, originally based on Maddison (1971), p. 33.
*The codes are purely for analytical convenience and not signifying any hierarchy of income classes.

The socio-economic structure towards the end of the Moghul Empire largely presents the structure and pattern of much of the medieval period. Table-1 presents the broad segregation of labour force and their corresponding income as per estimates of Maddison (1971). We see that income is necessarily concentrated towards the elite occupations which suggest that top income groups held a disproportionately large chunk of income. However, while drawing conclusions on the basis of the data contained in table-1, a great deal of caution must be exercised for the reason that the division between Non-village economy and Village economy include all strata of labour force while the corresponding income are mixed for the rich, the seemingly middle class occupations and low paying jobs such as that of the scavengers. What we suggest is that a fraction of the dominant land owning castes from the village economy must be earning higher income than most occupations in middle class and lower class occupations in the urban areas which correspond to 37 % of income against a workforce of 17 % in Group-B, however this does not necessarily mean that every occupation in this 17 % is earning equally or for that matter largely sharing the 37 % income rather within this 17 % labour force the income share must be skewed towards a small section of Merchants, Bankers, and other top professional occupations whereas the vast urban labour force consisting of small traders, soldiers, lower bureaucracy, artisans, construction workers servants and sweepers would only be sharing a small portion of this 37 % income. What is apparent that 18 % of urban labour force (shown as Group A & B) share 52 % of national income whereas 82 % of rural and tribal people share 48 % national income; this suggest that deprivations and disparities were more stark in rural areas than in urban centres.

5.2 Income Inequality in the Colonial Period

The distribution pattern evident in table-2 and the one in table-3 is distinct in great manner as the data in table-2 include overlapping occupational and income classes. Thus, generalizing the patterns of both the data sets together would be incorrect. One of the basic differences between these two data sets is that the first one is location sensitive and the second one from table two is location neutral. Despite these key technical distinctions, we can broadly infer that both data sets reflect a high skew in income distribution towards elite occupational classes or top income groups. Like table-1 which presented social and occupational structure pertaining to late medieval India (1750), table -2 presents almost on similar lines with more elaboration; towards the end of the British rule such as occupations listed in group A & B in table-1 are segregated with some variations among Groups A, B, C, D and E in table-2; thus, caution must be exercised as in case of table-1, explained earlier while drawing inferences.

Table 2: Social Structure wise Share of Income and Labour Force in British India (1947)

<table>
<tr><th>Broad Generalization on Location of Socio-economic Group</th><th>Socio-economic/Occupational Group</th><th>Group Code*</th><th>% of Labour Force</th><th>% Share in Total Income</th></tr>
<tr><td rowspan="5">Non-village Economy</td><td>British Officials and Military, British Capitalists, Plantation Owners, Traders, Bankers & Managers</td><td>A</td><td>0.05</td><td>5</td></tr>
<tr><td>Native Princes, Big Zamindars and Jagirdars</td><td>B</td><td rowspan="3">0.95</td><td>3</td></tr>
<tr><td>Indian Capitalists, Merchants, Managers</td><td>C</td><td>3</td></tr>
<tr><td>The new Indian Professional Class</td><td>D</td><td>3</td></tr>
<tr><td>Petty Traders, Small Entrepreneurs, Traditional Professions, Clerical and Manual Workers in Government, Soldiers, Railway Workers, Industrial Workers, Urban Artisans, Servants, Sweepers and Scavengers</td><td>E</td><td>17</td><td>30</td></tr>
<tr><td rowspan="4">Village Economy</td><td>Village Rentiers, Rural Moneylenders, Small Zamindars, Tenants–in–Chief</td><td>F</td><td>9</td><td>20</td></tr>
<tr><td>Working proprietors, protected tenants</td><td>G</td><td>20</td><td>18</td></tr>
<tr><td>Tenants–at–Will, Sharecroppers, Village Artisans and Servants</td><td>H</td><td>29</td><td>12</td></tr>
<tr><td>Landless labourers, scavengers</td><td>I</td><td>17</td><td>4</td></tr>
<tr><td>Tribal Economy</td><td>Native Tribes and Forest Dwellers</td><td>J</td><td>7</td><td>2</td></tr>
</table>

Source: Table constructed by authors based on data from Maddison (2001), p.111, originally based on Maddison (1971), p. 69.

*The codes are purely for analytical convenience and not signifying any hierarchy of income classes.

We observe that this pattern existed during most of the 19th century with top 1 % population sharing about 16-18 % income and the bottom 50 % at about same level, sharing 15-17 % income. We observe that during much of the 19th century these categories showed similar trends with marginal variations.

Table 3: Pre-tax income share of various population groups (1820 to 1950)

<table>
<tr><th rowspan="2">Year</th><th>Pre-tax National Income share of Top 1% population</th><th>Pre-tax National Income share of Top 10% population</th><th>Pre-tax National Income share of Middle 40% population</th><th>Pre-tax National Income share of Bottom 50% population</th></tr>
<tr><th colspan="4">Distributional Trends in the 19th Century Colonial India (1820-1900)</th></tr>
<tr><td>1820</td><td>16.0</td><td>48.0</td><td>34.4</td><td>17.6</td></tr>
<tr><td>1850</td><td>18.0</td><td>50.0</td><td>33.1</td><td>16.9</td></tr>
<tr><td>1880</td><td>18.2</td><td>54.6</td><td>30.1</td><td>15.3</td></tr>
<tr><td>1900</td><td>16.8</td><td>53.8</td><td>30.6</td><td>15.6</td></tr>
</table>

	Distributional Trends in the 20th Century Colonial India (1900-1950)			
1900	16.8	53.8	30.6	15.6
1910	14.0	44.8	36.6	18.6
1920	16.7	53.3	30.9	15.8
1930	13.7	47.8	34.6	17.6
1940	19.5	50.7	32.7	16.7
1950	11.7	35.2	42.9	21.9

Source: Author's calculation based on data from World Inequality Database (WID), World Inequality Lab, Paris School of Economics

*Note: Data before 1947 was excluding of the individuals residing in the princely states. These adjustments must have taken time and thus till about 1949-50 when India adopted and implemented constitution, her functioning largely resonated with the final years of British Rule, thus including three years from 1947 to 1950 of independent India with the colonial period is reasonable from the standpoint of structural economic alignments and shift in the economy in general and distribution of income in particular. In addition India established Planning Commission in 1950 to oversee the issue of economic planning thus the period between 1947 and 1950 is better suited as pre-planning regime within post-independent India with largely colonial traits.

We observe that share of all the population categories in national income shows variation over the decades with a fluctuating trend. There is rise in the income share of the bottom 50 % and middle 40 % during the first decade of the 20th century whereas the top income categories show decline in their respective shares. In the second decade, we see the reversal of this trend and repetition of the case observed in the first decade in the 1920s, however, this time the decline in the share of top 1 % is relatively more in comparison to the share of top 10 % population and this decline resulted in the rise of income of both the bottom 50 % and the middle 40%. During 1930s the case of 1910s gets repeated; the income share of the top groups increases again and that of the bottom and middle groups decrease, however, in this decade it is the top 1 % that shows higher increase in its share from 13.7 % in 1930 to 19.5 % in 1940. Interestingly, in the next decade the trend again reverses and the top groups show a decline in their shares and the bottom groups are seen to be gaining during the period. The share of top 10 % population declines from 50.7 % in 1940 to 35.2 % in 1950, this massive decline in the share reflects in the gains of the middle 40 % as their share increases from 32.7 % in 1940 to 42.9 in 1950; similarly, the share of bottom 50 % increases from 16.7 % in 1940 to 21.9 % in 1950. This fluctuating trend of income distribution during the first half of the 20th century raises many questions as to why every alternate decade shows positive redistribution. As we are aware that economic scenarios are closely linked with other aspects of human life whether these are climate, internal political stability and global geo-politics, thus, these outcomes must be interpreted with care. In view of the above quantitative analysis, it would be appropriate to understand and examine the factors responsible for such quantitative outcomes with regards to redistribution of income. These results should then be viewed in light of the various non-quantitative materials of information which can have vital impact on our assessment and understanding of the phenomenon.

5.3 Inequality during Post-independence India

Policy initiatives were taken at many fronts to ensure that economic development in independent India is equitable. As measure to achieve socio-economic equity in society, one of the first such step was Land Reforms introduced during the early 1950s. However, the policy of land reforms could only very moderately succeeded as the number of cultivators not owning any land increased about three times between 1954 and 1971 and cultivators owning land below 2.5 hectare land increased by 40 % (The Cambridge Economic History of India, Volume-II, p. 978). The Mahalanobis *Committee Report on Distribution of Income and Levels of Living* found that income inequality during the 1950s, while the 1st and 2nd Five Year Plans were operational, did not increase as per their analysis of NSS consumption data and pre-tax income of income tax filing individuals. However, here we intend to discuss the trends and pattern of income distribution during the plan period from the data points organized at decadal intervals in the next section.

Table 4: Pre-tax income share of various population groups (1950-2020)

Year	Pre-tax National Income share of Top 1% population	Pre-tax National Income share of Top 10% population	Pre-tax National Income share of Middle 40% population	Pre-tax National Income share of Bottom 50% population
	Distributional Trends during the Plan Period (1950-1990)			
1950	11.7	35.2	42.9	21.9
1960	13.5	38.0	42.9	19.1
1970	13.3	37.5	42.6	19.9
1980	7.5	32.4	46.4	21.2
1990	10.7	34.4	45.3	20.3
	Distributional Trends during Post-reform Period (1990-2020)			
1990	10.7	34.4	45.3	20.3
2000	15.5	40.9	40.6	18.5
2010	21.6	53.2	32.5	14.3
2020	21.7	57.1	29.7	13.1

Source: Author's calculation based on data from World Inequality Database (WID), World Inequality Lab, Paris School of Economics

Note: The data from 2014-15 to 2019-20 are same over a period of seven years to which WID has provided clear declaration that data during this is based on growth neutral extrapolation. However in the declaration the WID has informed that the processing of the pre-tax data for the assessment years 2014-15 to 2017-18 is underway thus users are cautioned against drawing inferences from these uniform figures of DINA for any post 2015 economic policy stand (see Technical Note[11])

5.3.1 Income Inequality during the Planned Economy Period

It is observed from the following table-4 that during pre-reform period within post-independent India or otherwise also referred as the phase of planned economic development, the distribution of income has remained fairly stable, with some fluctuations experienced in 1980s. The income of the top 1 % and top 10 % population declined marginally in 1990 over the levels in 1950. The income share of bottom 50 % also declined slightly between 1950 and 1990; however, the income of the middle 40 % increased from 42.9 % of total national income in 1950 to 45.3 % in 1990. Thus, during this phase, it is the middle income group that gained while the top income and bottom income earners were the ones that lost the share, though marginally. The Lorenz curves corresponding to income distribution in 1950 and 1990 show an almost similar curvature as both the curves are nearly juxtaposed on each other; thus, we infer that income inequality was almost stable during the period or showed marginal decline. This decline, even if marginal during the planned economy period, is significant from the standpoint of the fact that inequality did not rise as envisaged through various policy proposals and specially mentioned in the '*Approach Paper Documents'* pertaining to various Five Year Plans. This also resonated with the trends shown by many socialist economies which opted for a Soviet Union style planning. We found, in particular, the case of Soviet Russia where we observe that all along the planning phase from early 1920s till 1990 the distribution of income remained largely stable, while there is rise in income inequality in the post 1990 period which also correspond to most of the economies that initiated economic reforms under the Structural Adjustment Programme[12] which we shall show in the subsequent section relating to Indian economy.

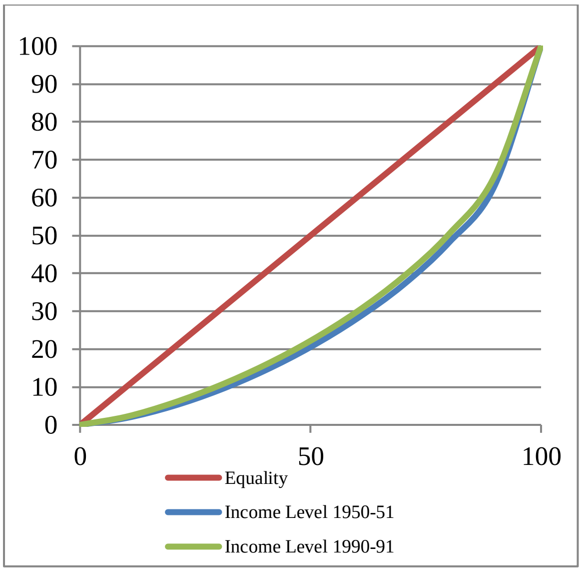

Figure 2: The Lorenz Curves for the Pre-reform (Planned Economy) Period (1950-51 to 1990-91)

Source: Author's Construction based on data from World Inequality Database (WID)

5.3.2 Income Inequality during Post-reform Period

What we observe in the post-reform period is the reversal of the situation experienced in pre-reform period with greater intensity. The share of the top 1 % population in national income doubled during the 30-year post-reform period and similarly the share of top 10 % increased by about 66 % in 2020 over the 1990 level. On the contrary, the share of bottom 50 % declined from 20.3 % in 1990 to 13.1 % in 2020 and the share of middle 40 % declined from 45.3 % to 29.7 % during the same period. This shows that income share of bottom 90 % got reduced from 65.6 % in 1990 to 42.8 % in 2020. If we compare the Lorenz curves of the pre-reform independent India and the post reform India, the curves in the post reform period shows an altogether different curvature and the curve corresponding to 2020 income level shows a greater deviation from the line of equality in comparison to curve corresponding to 1990-91 which suggest that post reform period is characterised by rising income inequality.

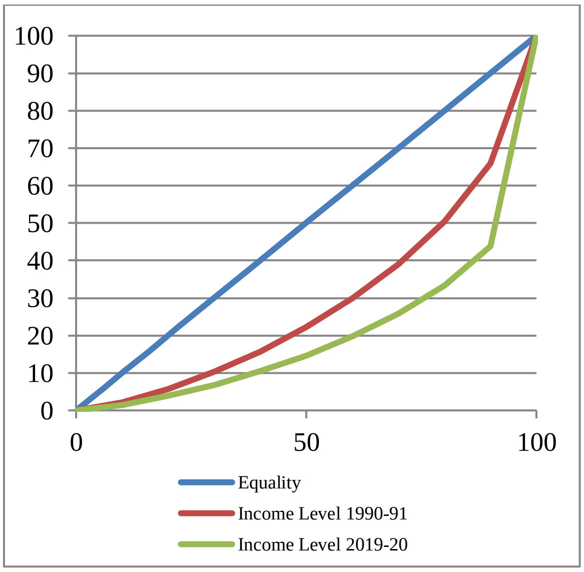

Figure 3: The Lorenz Curves for the Post-reform Period (1990-91 to 2019-20)

Source: Author's Construction based on data from World Inequality Database (WID)

5.4 Gini Coefficient and Palma Ratio

The description and analysis in the above sections was based on the empirical trends of the distribution of pre-tax national income across various population categories e.g., top 1 %, top 10 %, middle 40 % and bottom 50 %. In this section, we approach to discuss as to how certain indexes and ratios —Gini Coefficient and Palma Ratio have fared corresponding to ending years of various decades. We have used Gini values directly from WID database from 19950/51 to 2020, whereas Palma Ratios are calculated on the basis of distributional national accounts for data levels corresponding to mentioned year from 1820 to 2020. We observe that Gini coefficient declined from 0.49 in 1950 to 0.46 in 1990, signifying a decline in income inequality during the period 1950 to 1990 whereas the coefficient increased from 0.46 in 1990 to 0.63 in 2020, indicating a rise in income inequality at a high level.

Table-5: Pre-tax Income Gini, Wealth Gini and Palma Ratio

Year	Pre-tax Income Gini	Palma Ratio
1820	#	3.66
1850		3.99
1880		5.47
1900		5.29
1910		3.26
1920		5.19
1930		4.16
1940		4.08
1950/1951*	0.49	2.46
1960	0.49	3.09
1970	0.48	2.91
1980	0.44	2.38
1990	0.46	2.65
2000	0.51	3.44
2010	0.61	5.79
2020	0.63	6.79

Source: World Inequality Database (WID) for Pre-tax Income Gini values and Palma Ratio's are calculated by authors based on Distributional National Accounts (DINA), WID.

*Year corresponds to Pre-tax Income Gini as WID Pre-tax Income Gini series is available from the 1951,
#-Signifies non availability of data for these periods.

We finally turn to the Palma Ratio and observe that during most of the colonial period except 1940s the ratio remained much higher; the average value during the period between 1820 to 1950 was 4.17 (average taken on decadal data points) which denote that share of top 10 % population in national income was more than 4 time larger in comparison to the income shared by bottom 40 % population. A Palma ratio of value 1 is widely accepted as a reference level, a ratio above one indicates movement towards higher income inequality whereas a ratio equal to or below one indicates lower income inequality and higher living standards. Along the reference ratio of 1, we note that colonial India experienced a very high income disparity between the top and bottom income groups. Table-5.3 shows that the ratio declined significantly in the 1940s and increased in 1950s. The average value of the ratio during the planned economic development between 1950 and 1990 was noted to be relatively lower on average at about 2.86 (averaged for annual data points); however, it began to rise sharply after 1990. The ratio increased to 3.44 in 2000 which further increased to 5.79 in 2010 before increasing to alarming level at 6.79 in the year 2020. As argued in support of the Palma Ratio as a better indicator of the relative inequality between top and bottom income groups than Gini-coefficient, it would be appropriate to conclude that the proportional income gap between top incomes and the bottom incomes in India has increased sharply in last three decades.

6. Concluding Remarks

In view of the above, we conclude that much of the colonial India shows high income inequality and largely corresponds to what was observed towards the end of the Moghul Rule in India in the mid eighteenth century, except some changes during the late British Rule in the twentieth century, that a sizable urban middle class emerged which more or less continued to the date; however, showing some decline in the recent decades. One of the most noteworthy findings has to be the fact that during the planned economic development in India, income inequality remained under control with marginal rise in favour of the middle 40 % population. The post reform period shows growing income inequalities with a slow rise in 1990s and later intensifying in 2000s and 2010s, as shown by the distributional proportions as well as the Gini coefficients and the Palma Ratios over the years. We note that disparity between top and bottom income groups continue to widen at an alarming rate in recent decades. The common arguments that are raised for such phenomenon are capital intensity of production, low employment creation, low public expenditure towards key social services as major factors. The institutional response from the side of the government and the business sector for either to check or moderate this rise in income inequality in the recent decades has hardly been evident.

We also note that during the initial decades after the independence; the issue of income distribution attracted substantial policy space amidst pressing situations of increasing output and developing basic economic infrastructure for the country, however in the last three decades when sufficient economic infrastructure is in place and the economy is experiencing rise in income inequality at a faster pace, a proportionate policy response, both at investigative and curative level, is not visible.

The results of the above analysis are conditioned upon the usual and specific limitations of the data as discussed in the literature review part and the methodology section. These broad findings in particular the long run trends are in one way or the other give rise to a policy debate on the issue of income distribution. The broad conclusions in this study confirm the findings of the most of the studies done using the WID data-sets on pre-tax distributional national accounts, some of the most prominent studies are mentioned in the literature review section.

Notes:

1. Prime Minister's Economic Advisory Council (PMEAC) is a non-constitutional, non-permanent Advisory Body entrusted with the task of advising the Prime Minister of India on Economic Policy Matters
2. Institute for Competitiveness is an India centered International Initiative for research on Strategy and Competitiveness.
3. Naoroji (Dada Bhai Naoroji) also known as the "Grand Old Man of India' was a pioneer in early India studies on estimating National Income of India. His famous work 'Poverty and Un-British Rule in India' disclosed the systematic exploitation of Indian Economy by imperial Britain and identified and popularised phenomena causing this exploitation as 'De-industrialisation of Indian Economy' and the 'Drain of Wealth' from Indian to England particularly during the 19th century.
4. Mohan Das Karamchand Gandhi (1869-1948), was a freedom fighter and political leader of global repute, commonly referred to as Mahatma Gandhi and lovingly called as 'Bapu' by his followers and disciples.
5. The welfare of 'The Last Man' or the poorest and weakest in the society.
6. Sarvodaya was also part of the Gandhian Political Philosophy which translates into 'the welfare of all in the society whether rich or poor, elite or commoner, literate or illiterate'.
7. A Voluntary Land Distribution movement in form of charity or gift was initiated by Vinoba Bhave, A follower of Gandhi in 1951.
8. A Plan of Economic Development for India (1944), Volume-I & II prepared and authored by renowned industrialists and business leaders of those times whom included were, Sir Purshotamdas Thakurdas,

JRD Tata, A D Shroff, G D Birla, Sir Shri Ram and Kasturbhai Lalbhai along with economists and civil administrators whom Sir John Matthai and Sir Ardeshir Dalal were included.

9. Prasanta Chandra Mahalanobis was a well known scientist and statistician who had actively participated in economic planning and institutional development of India during the initial decades after independence. He founded Indian Statistical Institute and known for discovering a statistical measure named 'Mahalanobis Distance'.
10. The First Development Decade is a UN designated term to the decade of 1960s for this period to be the years laying the strong initial foundation for future development of erstwhile underdeveloped economies across the globe, particularly in the Global South.
11. A technical note on the quality of Indian data on income distribution and issues relating to disclosure of NSS Survey data on Monthly Consumption Expenditure was written to Indian Authorities by World Inequality Lab, see, Technical Note. *WID.world. (2023).* https://wid.world/document/indian-inequality-updates-2015-2019-world-inequality-lab-technical-note-2020-09/
12. An International Monetary Fund and World Bank led initiative to structurally transform the economies to adopt to more resilient market practices, reduced government spending, a prudent fiscal policy, greater openness of the economy and introducing measures for labour market flexibility. Many developing and underdeveloped economies adopted these policies in order to secure loans from the IMF and World Bank particularly during a fiscal crisis, India initiated many such policy reforms in the wake of a balance of payment (BoP) Crisis in 1990.

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