Social Stratification in India and Brazil Since the 1990s: A Comparative Analysis

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Abstract

India and Brazil, two members of the BRICS group of countries, are prominent and emerging economies in the world today. This paper presents a comparative analysis of inequality and poverty in these countries in roughly the past two and half decades. During this period, India has been one of the fastest growing countries in the world. However, inequality has increased and progress on the front of poverty reduction has been disappointing. While growth in Brazil has been less impressive, inequality and poverty have reduced substantially. After documenting these trends, the paper discusses the explanations for these phenomena arguing that a crucial difference between the two countries has been in the implementation of social policies.

Very Preliminary. Please do not cite.

1. Introduction

This paper deals with inequality and poverty among individuals and groups in India and Brazil in roughly the past two and half decades. Apart from being members of the BRICS group that is playing an important role in the world today, there are two other similarities between these countries that make their comparison interesting.[1] First, both Brazil and India underwent cataclysmic changes during the past two to three decades – changes that have radically restructured their economies and societies, in particular, the roles of markets and the state.

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[1] BRICS stands for Brazil, Russia, India, China and South Africa, with South Africa being added later. The acronym BRIC was coined by Jim O'Neill, economist at Goldman Sachs in a report published in 2001 (Bloomberg 2015).

Second, both Brazil and India are complex and diverse societies which are characterized by several cleavages. Interpersonal and class-based inequalities are important in both countries. In addition, race-based and caste-based inequalities are important in Brazil and India, respectively. Following Stewart (2001), it has become customary to distinguish between vertical (interpersonal) inequality and horizontal (group-based) inequality. Studies on interpersonal inequality have mostly focused on income or consumption, whereas those on horizontal inequality (which is essentially multidimensional), have focused on both income and non-income dimensions (Stewart 2001, 2010). Despite its importance, horizontal inequality has been relatively under-researched, although the situation has been rectified to a certain extent in recent times. This paper is motivated by the idea that a comparative analysis of vertical and horizontal inequalities in Brazil and India can provide insights into the interrelationship between inequalities and development and also shed light on appropriate policies.

In light of the above, I first (in Section 2) examine the Indian case, drawing upon secondary literature (including several of my own contributions) and analysis of secondary statistical data – mainly the National Sample Surveys on consumption expenditure. I then (Section 3) examine the Brazilian case, primarily drawing upon secondary literature. In Section 4, I provide an explanation for the trends documented and present a comparison of the Indian and Brazilian cases. The final section concludes.

2. Indian Inequality Since the Onset of Economic Reforms

After following a model of planned development for almost four and half decades, in the wake of a serious balance of payments crisis, India embarked upon a set of economic reforms in the early nineties.[2] These reforms aimed to radically restructure the Indian economy, particularly

[2] India attained independence from British colonial rule in 1947. For an overview of India's planned development, see Chakravarty (1987).

the roles of the state and markets. By now, a substantial body of literature – both scholarly and non-academic – has built up on this issue.[3] India has been growing rapidly since the early 1990s after these reforms were initiated. Nagaraj (2013) has argued that the best growth phase for India was during the period 2003-08, when the average annual growth rate of real Gross Domestic Product (GDP) was 8.9%. During the period 1991-2008, the corresponding figure was 6.5%. There is considerable debate on the reasons for this growth and when Indian growth really took off.[4] There is also a recent controversy on the new estimates put forward by the Central Statistical Organization (CSO).[5] However, these debates and controversies do not distract from the broad idea that Indian economy has displayed unprecedented growth by its own historical standards and has been one of the fastest growing economies in the world in recent decades. Also, what is relevant for us is the distributional changes associated with this growth process. We will first focus on changes in the interpersonal distribution.

Many scholars and policy makers have used the National Sample Surveys (NSS) on consumption expenditure to understand Indian interpersonal distribution. These are large, nationally representative surveys that are cross-sectional in nature (i.e. not panels) and usually conducted every five years, in various rounds – the relevant rounds for us are 50th (1993-94), 55th (1999-00), 61st (2004-05), 66th (2009-10) and 68th (2011-12).[6] The limitations of these surveys are well-known and have been discussed in the literature (e.g. Jayadev et al. 2007; Motiram and Vakulabharanam 2012) – underrepresentation of the rich, undervaluation of their consumption and income – these limitations are likely to result in underestimation of the level of inequality

[3] For example, see Bhadhuri and Nayyar (1996), Joshi and Little (1996), Srinivasan (2000), Dreze and Sen (1995, 2013).
[4] For an analysis of Indian growth since independence, see Balakrishnan (2010).
[5] See Nagaraj (2015) and the ensuing debate in the pages of the *Economic and Political Weekly*.
[6] In a departure from past practice, a large survey was conducted in 2011-12, just two years after the previous one.

and its increase over time. In addition to these limitations, it is worth pointing out that the 1999-00 survey (55th round) differed in its methodology from previous surveys and therefore many studies ignore it.[7]

Most studies of inequality in India have used relative measures of inequality (e.g. the relative Gini or Theil). These measures facilitate comparisons by incorporating the principle of scale invariance - if the consumption expenditure of every one is scaled up or down by the same factor (e.g. doubled or halved), inequality is unaffected. An important insight provided by Kolm (1973 a, b) is that while relative measures have the virtue of convenience, they come with their own ethical baggage. He termed these as "rightist" measures and compared them with "leftist" (Absolute) measures and illustrated his point by considering the case of strikes by workers in France in the late sixties. An analogous hypothetical example can be given from the Indian context: suppose the daily wages of workers and managers, which stand at Rs. 100 and Rs. 1000, respectively are doubled. Inequality, as measured by a relative measure remains unchanged, but since the managers are earning much more than the workers now, some could argue that inequality has actually increased.[8] Although still sparse, a recent literature has emerged in the Indian context that draws upon these insights and goes beyond relative measures. I will provide a brief and somewhat non-technical description of the relevant concepts and ideas (also see Motiram (2013)) – a more elaborate and technical description is presented in Kolm's work cited above and Subramanian and Jayaraj (2013). Let c_i denote the consumption expenditure of an individual i ($=1,2,...,N$) and μ denote the mean consumption. The Relative Gini is:

[7] Before data from the 61st round was released, several studies attempted to make the data from the 55th round comparable to data from previous rounds.
[8] The difference has increased from Rs. 900 to Rs. 1800.

$$RG = \frac{1}{2\mu N^2}\sum_{i=1}^{N}\sum_{j=1}^{N}\left|c_i - c_j\right| \qquad (1)$$

Note that the Relative Gini is unit-less. Absolute inequality measures embody the principle of translation invariance – they are unaffected if all incomes increase or decrease by the same amount. Examples of absolute inequality measures are the Absolute Gini and Standard Deviation. The Absolute Gini is:

$$AG = \frac{1}{2N^2}\sum_{i=1}^{N}\sum_{j=1}^{N}\left|c_i - c_j\right| \qquad (2)$$

For the above hypothetical example, it is quite easy to see that the Absolute Gini increases when the incomes of the workers and managers double. However, the Absolute Gini is not unit-less. Can we preserve the convenience of relative inequality measures, while accounting for the ethical issues raised by scale invariance? Intermediate measures try to achieve this trade-off by incorporating the principle of *unit consistency* – inequality ranking between two distributions is unaffected if both are scaled by the same factor – inequality comparisons do not depend upon the units in which distributions are expressed. Examples of intermediate measures are the Intermediate Gini and the product of Standard Deviation and Coefficient of Variation. The Intermediate Gini is:

$$IG = RG * AG = \frac{1}{\mu}\left(\frac{1}{2N^2}\sum_{i=1}^{N}\sum_{j=1}^{N}\left|c_i - c_j\right|\right)^2 \qquad (3)$$

Note that *IG* satisfies unit consistency since *RG* is unaffected by scaling and if distributions are scaled by a factor, *AG* simply gets multiplied by this factor.

In my opinion, it is useful to examine inequality using different measures, and I therefore present the relevant figures in Tables 1 and 2. As we can observe (from column (1)), Relative

Gini for nominal consumption expenditure has increased in both rural and urban areas, although the increase in urban areas is more pronounced. Column (2) presents the Relative Gini for real consumption expenditure, and the trends are roughly similar. Both the Absolute Gini and Intermediate Gini show increases, in both rural and urban areas. India is a large country with substantial variation in prices – sometimes even in the same region, individuals and households could face different prices. Mishra and Ray (2011) correct for this and reveal that inequality has increased.

A growing body of research has emerged recently that argues that we should move beyond traditional notions and measures of inequality, particularly if we want to understand conflict. This literature on "polarization" is discussed in greater detail in Chakravarty (2009) and Motiram and Sarma (2013). One important concept in this literature is "bipolarization," which is based upon the understanding that a decline in the share of the middle could have negative implications for stability and could accentuate the possibility of conflict. Measures of bipolarization are derived by conceptualizing the middle in terms of the median and replacing the Dalton-Pigou principle used in traditional measures of inequality (e.g. Relative Gini) with two other principles: Increasing Spread and Increased Bipolarity. The Dalton-Pigou principle holds that a regressive transfer (from a poorer to a richer person) should increase inequality and a progressive transfer should decrease inequality. The principle of Increasing Spread holds that bipolarization increases under the following circumstances: a rich person becomes richer or a poor person becomes poorer with the median being unaffected; or a transfer occurs from a poor person to a rich person across the middle (median). On the contrary, Increased Bipolarity holds that bipolarization increases if a richer and poorer person on the same side of the median are brought together due to a transfer from the former to the latter – this is linked to the formation of

poles on either side of the median. One popular index that has been proposed in the literature is the Wolfson Index. Let *m* and *L(0.5)* denote the median and the share of consumption held by the bottom half of the population, respectively.[9] The Wolfson's index is:

$$W = \frac{4\mu}{m}\left(\frac{1}{2} - L(0.5) - \frac{RG}{2}\right) \qquad (4)$$

From tables 1 and 2, we can observe that bipolarization has been stable in rural areas, but increased in urban areas since the 1990s.

Insert Tables 1 and 2 Here

While the above measures are based upon consumption expenditure, the NSSO also conducts an All-India Debt and Investment Survey, which can be used to estimate inequality in wealth. This survey is conducted at less frequent intervals, and for the period that I am interested in, three years are relevant: 1991, 2002, and 2012. Despite the availability of this data, wealth inequality in India has been underexplored (particularly compared to consumption expenditure inequality) - Jayadev et al. (2007), Subramanian and Jayaraj (2013) and Anand and Thampi (2016) are some exceptions. Anand and Thampi, who present the most up-to-date analysis, show that the Relative Gini of wealth as measured by total assets has increased from 0.65 to 0.74. If wealth is measured in terms of net worth, the Relative Gini increased from 0.66 to 0.75.

Overall, it is safe to say that during the high-growth period since early 1990s, India has witnessed an increase in interpersonal inequality in consumption and wealth. This is robust to the way we conceptualize and measure inequality (traditional - relative, absolute and intermediate; polarization) although the results look much stronger with absolute and intermediate measures. We should also appreciate the (highly likely) possibility that the real increase in inequality is

[9] *L(0.5)* is nothing but the ordinate of the Lorenz curve at 50% (or 0.5).

starker than what the data reveals, given the limitations that we discussed above. Having examined interpersonal inequality, we will now move to group-based inequality.

Caste is one of the important forms of social stratification in the Indian context. The "caste system" is an incredibly complex system that defies easy understanding and generalization, and continues to be the subject of considerable debate and controversy today. In the interests of space, it is not possible to go into these debates, but readers can refer to the following references: Chatterjee (1998), Gupta (2000), Dirks (2001), Rawat and Satyanarayana (2016) (and the references therein). We will look at the broad caste groupings that secondary statistical data like the NSS allow us to analyze: Scheduled Castes (SC), Scheduled Tribes (ST), Other Backward Classes (OBC), and Others. The first three groups are historically disadvantaged groups – in fact, the scheduled groups are referred to in this manner because they are given a special place (schedule) in the Indian constitution. In Figures 1 and 2, I draw upon Motiram and Naraparaju (2015) to present the Cumulative Distribution Functions (CDFs) for these groups in 2011-12 in rural and urban areas, respectively. As we can observe, both in rural and urban areas, the CDFs of the disadvantaged caste groups lie above that of Others. The CDFs of the scheduled groups lie above those of OBCs and Others. From this, it is obvious that the average consumptions are lower for the scheduled groups compared to OBCs, who themselves have lower average consumption compared to Others.

Insert Figures 1 and 2 Here.

A serious controversy has erupted in recent times on poverty measurement in India. The official poverty lines recommended by two committees (Tendulkar and Rangarajan committees) have been deemed to be artificially low and based upon methodologies that are indefensible.[10]

[10] For a discussion of this, see Subramanian (2012, 2014), Vakulabharanam and Motiram (2012) and the references therein.

However, as the CDFs reveal (and as noted by Motiram and Naraparaju (2015)), irrespective of the poverty line one uses, there is an unambiguous ranking of poverty rates in both rural and urban areas in 2011-12.[11] The Head Count Ratio (HCR) of poverty for the scheduled groups is the highest, followed by the same for OBCs, and then for the Others. Studies that have examined poverty in previous years using official poverty lines (e.g. Motiram and Vakulabharanam (2011)) have come to a similar conclusion.

What about poverty of the entire population? In Table 3, I present (from Motiram and Naraparaju (2015)) the various quantiles of real consumption and their growth in the period 2004-05 to 2011-12. As we can observe, all the quantiles, including the poorest have experienced growth. This implies that poverty has fallen, irrespective of the poverty line used. However, the poorer groups have grown at slower rates compared to the middle and richer groups – this is particularly pronounced in the urban areas. Motiram and Naraparaju (2015) also show that the poor among disadvantaged caste groups have grown at slower rates compared to the overall average person (median). Motiram and Vakulabharanam (2012) (also see Motiram and Sarma (2014)) carry out a decomposition exercise to understand whether caste-based inequality (between scheduled and non-scheduled groups) has increased since 1993-94.[12] In this exercise, an inequality measure that belongs to the single-parameter entropy family of inequality indices (e.g. Log-Mean Deviation or Theil) is decomposed into two components – inequality between groups and inequality within groups – the former, and its contribution to overall inequality can be used to understand whether group-based inequality has increased. After rising during the

[11] Technically, this is an instance of first order stochastic dominance.
[12] Prior to 1999-2000 (55th Round), the NSS surveys did not enumerate OBCs separately, but combined them with the Others. So, it is only possible to examine the inequality between scheduled and non-scheduled groups.

period 1993-94 to 2004-05, inequality between scheduled and non-scheduled groups has fallen since then.

Insert Table 3 Here

Class is another important cleavage in the Indian context. Motiram and Naraparaju (2015) use the NSS data on consumption expenditure to divide rural India into seven classes based upon their "household type"[13] and land possessed: Large farmers (greater than 10 hectares), Medium farmers (between 2 and 10 hectares), Small farmers (between 1 and 2 hectares), Marginal farmers (between 0 and 1 hectare), Self-employed in non-agriculture, Agricultural and other laborers, and Others. Figure 3 presents the CDF for these classes – we can observe that rankings of poverty rates and average consumption are as expected – the lower classes are poorer and have lower average consumption compared to the others. In urban areas, Motiram and Naraparaju (2015) use the household type (Self-employed, Regular wage, Casual labor and Others) to divide the population. Figures 3 and 4 present the CDFs for these groups, and we can observe that the poverty rates show a clear ranking from highest to lowest: Casual Labor, Self-employed and Regular Wage. The average consumptions show the reverse ranking. Motiram and Naraparaju (2015) also show that consumption of the poor among Casual laborers has grown at a slower pace compared to the overall average (median).

Insert Figures 3 and 4 Here

Vakulabharanam (2010, 2014) has developed a rigorous class-schema based upon landownership and occupations to classify the Indian population into various classes. He uses

[13] Rural households are divided into five types based upon their main source of livelihood, Self-employed in agriculture, Self-employed in Non-agriculture, Agricultural Laborers, Other Laborers, and Others (a residual category).

NSS consumption data and performs a decomposition exercise based upon the Gini index to show that class-based inequality has been rising since the 1990s.[14] Having examined the Indian context, we now move to the Brazilian context.

3. Brazil in the Age of a Second Democratization

In the discussion below, I will draw upon secondary literature to examine inequality and poverty in Brazil in recent decades. Before doing so, it would be worthwhile to provide some background.[15] The period since the mid-1980s has been described as a phase of "modernization" within a democratic framework (Fausto and Fausto 2014) or "redemocratization" (Skidmore 1999) – a transition was made from a military regime.[16] Despite the end of military rule and the emergence of a constitution (in 1988), the 1980s and early 1990s saw enormous political and economic turmoil. Fernando Collor de Mello, the elected president resigned in 1992; the rate of inflation kept increasing throughout the 1980s (Baer (1995) as cited in Skidmore (1996, p. 194)) and was as high as 2500% in 1993 (Ferreira de Souza 2012); five different plans were implemented during the period 1986-91. The Real Plan (Plano Real) implemented in 1994 tried to control inflation through a new currency, tighter monetary policy, trade liberalization, and privatization. Although this plan was successful in controlling inflation, the Brazilian economy came under stress due to the two crises that hit the world in the late nineties (East Asian and Russian) which led the Central Bank to adopt inflation targeting. In the 2000s, Brazil benefited from Chinese growth, which fueled a rise in prices of Brazilian exports (commodities) and from increased foreign direct investment. The Brazilian government took advantage of better

[14] This decomposition is similar to the decomposition of single-parameter entropy family of indices discussed above, but there is an overlapping component in this case.
[15] I will draw upon Ferreira de Souza (2012) and (to a lesser extent) Fausto and Fausto (2014, Chapter 10).
[16] Fausto and Fausto (2014) divide Brazilian history prior to 1985 into the following historical phases: 1500-1822, 1822-89, 1889-1930, 1930-45, 1945-64 and 1964-84. On the contrary, Skidmore (1996) divides it into eight phases: 1500-1750, 1750-1830, 1830-70, 1870-1910, 1910-45, 1945-64, and 1964-85.

economic conditions to increase spending on social programs (more on this below). During the period 1998-2007, Brazilian real GDP grew at the average annual rate of 3.0%. In the subsequent years, it displayed high growth rates in 2008 (5.1%) and 2009 (7.5%).[17]

Given this background, we now turn to an examination of inequality in Brazil. Latin America has historically been characterized by very high levels of inequality. In a comparison of various regions of the world in 2004, Lopez-Calva and Lustig (2010, Figure 1-1) show Latin America to be characterized by the highest level of inequality – Latin America has a Relative Gini of about 55%, whereas the corresponding figure for South Asia and East Asia are about 40%. Brazil is no exception to this Latin American feature, and has typically been characterized by high levels of inequality. To understand Brazilian inequality, scholars have used various household surveys, but the Pesquisa Nacional por Amostra de Domicílios (PNAD) is quite popular (Ferreira de Souza 2012). Like the surveys conducted by NSS in India, these are large and cross-sectional. However, unlike the NSS, they are conducted at much more frequent intervals – almost annually.

To the best of my knowledge, the literature on Brazilian inequality has focused upon relative measures (e.g. Relative Gini) and ratios of income shares of rich and poor quantiles (e.g. richest 20% to poorest 20%) to estimate inequality. I will therefore (and unlike in the discussion on India in Section 2) only discuss relative measures for Brazil. Barros et al. (2010) present the Relative Gini of income inequality using the PNAD surveys for the thirty-year period, 1977-2007. Inequality reaches its peak level (about 63%) in 1989 and its lowest level (about 55%) in 2007. In table 4, I present inequality estimates for the period since 1990s from Barros et al. (2010) and Ferreira de Souza (2012). From this table, it is clear that inequality has been falling at

[17] These figures are from the Statistical Appendix (Table A4) of the latest World Economic Outlook of the International Monetary Fund (IMF 2016).

a steadily since the 1990s, although it continues to be high compared to international standards. Brazil is not unique in this regard (i.e. high, but falling inequality) – Lopez-Calvo and Lustig (2010, Figure 1-2) consider seventeen countries in the Latin American region and show that during 2000-06, inequality fell in twelve of them – the sharpest fall being in Ecuador.

Insert Table 4 Here

Several scholars (e.g. Ferreira de Souza 2012, Soares et al. 2016) have pointed out that poverty has been falling in Brazil in recent times. The Brazilian government has suggested two different thresholds of household per-capita income, one for poverty (100 Real) and the other for extreme poverty (50 Real) (Soares et al. 2016). Both poverty and extreme poverty have decreased sharply – during the period 2004-13, the former fell by about 14 percentage points (22.4% to 8.9%) and the latter by about 4 percentage points (7.6% to 4%) (Soares et al. 2016). Average income has been rising in Brazil since the mid-1990s, particularly since 2003. Mean real income (household income per-capita, in US$ Purchasing Power Parity (PPP) terms) grew from $221 in 1995 to $245 in 2003 and then to $372 in 2009 (Ferreira de Souza 2012, Figure 1). What is more interesting is that the income of all the centiles, including the poor grew – in fact, the incomes of the poor grew at a much faster rate than those of the middle and richer groups – the growth incidence curve presented in Ferreira de Souza (2012, Figure 2) has a distinctly downward slope.

Moving from interpersonal to group-based considerations, Soares et al. (2016) classify Brazilian households into four groups: Agricultural, Pluriactive, Non-agricultural rural, and Non-agricultural urban, based upon source of income and official designation (of rural or urban).[18] In

[18] "1. Agricultural households are defined as any household in which at least one member is employed in the agricultural sector, and 67 per cent or more of the household income comes from agricultural activities. 2. Pluriactive households are defined as those in which at least one member is employed in the agricultural sector, but less than 67 percent of the household income is derived from agriculture. 3. Non-agricultural rural households are

early 2000's, the ranking of deprivation of these groups (highest to lowest) is as follows: Agricultural, Pluriactive, Non-agricultural rural, and Non-agricultural urban. Soares et al. (2016, Figure 1A) show that poverty has fallen steeply during 2004-13 for all the groups; except for Pluriactive households, extreme poverty has also fallen for all groups (Figure 1B). The performance for the most deprived group, Agricultural Households, is particularly impressive – poverty has fallen from almost 50% to about 25%, and extreme poverty has fallen from about 20% to about 5%. The share of agricultural households has been falling, whereas the share of non-agricultural urban households has been rising (as is expected from the perspective of structural transformation). On the contrary, the shares of Pluriactive and Non-agricultural rural households has been stable (at about 8% and 4%, respectively). Soares et al. (2016) argue that the stability of the share of Pluriactive households, combined with the lack of progress in eradicating extreme poverty among them, is a cause for concern and that these households should be the target of specific policies.

4. Explanations and Comparison

Over the past two and half decades or so, India has grown rapidly, but disparities have also grown. Interpersonal inequality has increased, in whatever way we conceptualize and measure it – this is particularly the case in urban areas. Class-based disparities have also increased. One idea that has captured the imagination of both scholars and policy makers in India is "inclusion" or "inclusive growth". In fact, inclusive growth was made an objective by the erstwhile Planning Commission, although its conceptualization was too broad and not operationalized. Several scholars have tried to operationalize the idea of inclusion and examine

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defined as households located in areas officially designated as rural, but without any household members working in agriculture. 4. Non-agricultural urban households are defined as those located in official urban areas, without any household members working in agriculture." (Soares et al. 2006, p. 3).

whether Indian growth has been inclusive. Motiram and Naraparaju (2015) use a framework developed in the literature on pro-poor growth to argue that Indian growth in the 2000s has not been inclusive. They do so by examining whether the growth of quantiles of the poor is adequate or not (in comparison to the growth of the average person). They find that poverty has declined, but the poor have grown at slower rates compared to the middle and richer groups. The shortfall in growth of the poor is particularly severe in urban areas. They also extend this framework to examine subgroups of the population, and find that growth of the poor belonging to disadvantaged groups (castes and classes) has been inadequate. Other scholars (e.g. Jayaraj and Subramanian (2012 a, 2012 b); Suryanarayana and Das 2014) have used other methodologies to assess inclusion, and come to the same conclusion. I have discussed the details of these studies in Motiram (2015), so I will provide only a brief summary here. Subramanian and Jayaraj (2012 a, b) draw upon the literatures on the "Talmudic Estate Problem" (that concerns the division of an estate among heirs) and the allocation of a poverty alleviation budget. They employ various fairness criteria and use NSS data on consumption expenditure to examine how the pie of Indian growth has been divided among various quantiles of the population and among socioeconomic groups. They conclude that that the actual allocation among these sections of the population falls short of even the minimally fair criterion. Suryanarayana and Das (2014) examine two different elasticities (mean consumption with respect to mean income, median consumption with respect to mean consumption) and an "inclusive coefficient," which depends upon the share of the population that has less than 60% of the median consumption. The above elasticities have to be greater than unity and the inclusive coefficient needs to be high for growth to be considered broad-based. They consider the entire population and disadvantaged caste groups and use NSS

data on consumption expenditure to conclude that this is not the case – in fact, they find that the inclusive coefficient has fallen during the period 1993-94 to 2011-12.

Why has high growth in India not translated into inclusion? Why has Indian inequality increased? First, policies followed since the early 1990s (of course, in conjunction with other factors) have benefitted the richer groups disproportionately. In particular, remunerative jobs that can absorb the rural or urban poor have not been created adequately. Manufacturing has been very sluggish - creation of jobs in labor intensive manufacturing would have gone a long way towards alleviating poverty and increasing the incomes of the poor – this has not occurred. Instead, jobs have been created in sectors like construction - in particular, rural construction - these jobs are not remunerative.[19] To explain this, some have focused on labor regulations as the culprit, but this is in my opinion, a red herring.[20] Paradoxically, the nature of the growth process itself, and increasing inequality is likely to be responsible for this. The growth process has disproportionately benefitted the rich and created a demand for certain goods (e.g. foreign vacations, IPhones) – these do not give a fillip to investment and job-creation in labor-intensive sectors.[21] Second, policies towards the social sector and social welfare have been inadequate. The Mahatma Gandhi National Rural Employment Guarantee Act (MNREGA) (an employment guarantee scheme in rural India) put in place by the United Progressive Alliance government that came to power in 2004 elections has undoubtedly contributed to improvement in rural areas, but its implementation has varied across states. No comparable scheme exists in urban areas, where the fight against poverty has seen serious setbacks.[22] Moreover, some of the welfare schemes suffer from poor implementation - e.g. Construction Worker Welfare Boards have been put in

[19] For details of jobs created since 1993-94 in various sectors, see Thomas (2014)
[20] See Papola and Pais (2007) and Papola (2013) for an extensive discussion of labor regulations and their reform.
[21] See Kotwal et al. (2011) for a detailed discussion.
[22] See Mishra and Ray (2011) and Vakulabharanam and Motiram (2012) for a discussion of this issue.

place, and money has also been allotted to them, but many construction workers are not even aware of their existence (e.g. see Naraparaju (2015) for an example from Navi Mumbai).

Coming to Brazil, inequality continues to be high, but has fallen substantially. Both poverty and extreme poverty have fallen. Some studies that have rigorously examined whether Brazilian growth has been pro-poor or not have concluded in the affirmative, e.g. Kakwani et al. (2010) for the period 2001-04. Why has inequality fallen and growth been pro-poor? Several studies shed light on this question. Barros et al. (2010) use a decomposition analysis to understand the various proximate factors that have contributed to the reduction in inequality. A major contribution has been made by change in the distribution of labor income per adult, which has in turn been driven by a reduction in skill premium and decrease in educational inequality. A second important component is the change in the distribution of non-labor income per adult. Non-labor incomes have increased considerably due to public transfers – pensions, social security benefits, and conditional cash transfers (Bolsa Escola and Bolsa Familia). Ferreira et al. (2009) provide evidence from several studies to show that social policies and their effective targeting have played a major role in reducing inequality and poverty.[23] They also document expenditures on the social sector since the 1980s (Figure 1) showing that there is a sharp increase after 1988, when the constitution came into effect, e.g. during the period 1991-1998, the monthly benefit bill increased by more than four times ($180 million to $750 million). Ferreira de Souza (2012) points out that social security and pensions comprised of about 11% of the GDP in 2006. He also highlights the crucial role played in the reduction of inequality and poverty by the minimum wage, which is also linked to government benefits. Since the constitution came into

[23] Kakwani et al. (2010) have also highlighted the crucial role that social policies have played in protecting the poor from adverse shocks and delivering pro-poor growth.

effect, the minimum wage has increased considerably – in real terms it more than trebled (US $PPP 83 to US$ 295) during the period 1995-2011 (Figure 6).

The comparison of India and Brazil illustrates the key role of social policy in the reduction of inequality and poverty – the success of Brazil despite much lower growth can be attributed largely to this. It is also worth commenting briefly about the role of ideology and the different varieties of capitalism that India and Brazil have witnessed. Indian state and elites have displayed only a lukewarm commitment towards the social sector and poverty alleviation. By the standards of even developing countries, Indian public expenditure on the social sector is abysmally low. A good illustration of this can be provided by examining public expenditure on health, which in 2013 stood at 1.2 % of GDP, much lower than the same for Brazil (4.2%), Mexico (2.9%) and China (2.7%).[24] On the contrary, the Brazilian state (at least in some phases) has shown a more social democratic character – in this regard, Brazil has not been an exception, and many Latin American governments, which have been left-wing have shown a more serious commitment towards redressing inequality and alleviation of poverty.

5. Discussion and Conclusions

In the analysis above, I have provided an overview of changes in inequality and poverty in India and Brazil in roughly the past two and half decades. In India, inequality has increased, and although poverty has decreased, the reduction has been disappointing given the high growth. In Brazil, on the contrary, inequality and poverty have both reduced substantially, although inequality still continues to be quite high. The paper highlights the crucial role played by social policies in these differential outcomes.

[24] The comparison with developed countries is even more stark: US - 8.5%, UK - 8.0%, and Norway - 8.1%. These figures are taken from the Economic Survey of India, Government of India (2013). Also see Kohli (2002) and Dreze and Sen (2013).

Before concluding, it is important to make two caveats. First, racial inequality continues to be high and important in Brazil (e.g. Economist 2012) – this is an issue that has been ignored in the present analysis, but can be considered in future research. Second, scholars have argued that some of the Brazilian policies have reached their limits – e.g. see Ferreira de Souza's (2012) discussion on the minimum wage – this issue and the fiscal concerns involved in sustaining the social programs currently in place, require further discussion.

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Tables and Figures

Table 1: Inequality in Monthly Per-Capita Expenditure (MPCE), Rural India

Year	RG (Nominal)	RG (Real)	AG	IG	W
1993-94	0.286	0.2844	6.998	1.998	0.222
2004-05	0.305	0.2997	8.629	2.630	0.227
2009-10	0.300	0.3059	9.353	2.798	0.223
2011-12	0.311				

Table 2: Inequality in Monthly Per-Capita Expenditure (MPCE), Urban India

Year	RG (Nominal)	RG (Real)	AG	IG	W
1993-94	0.344	0.3448	13.551	4.664	0.284
2004-05	0.376	0.3757	16.870	6.342	0.317
2009-10	0.393	0.4015	21.504	8.455	0.326
2011-12	0.390				

Notes: 1. RG – Relative Gini, AG – Absolute Gini, IG – Intermediate Gini, W – Wolfson Index

2. Estimates for RG (Nominal) are author's computations from NSS data.

3. Estimates for RG (Real) are from Dubey and Thorat (2012).

4. Absolute and Intermediate Gini are from Subramanian and Jayaraj (2013). These are for real MPCE computed by using Consumer Price Index for Agricultural Laborers (CPIAL) in rural areas and Consumer Price Index for Industrial Workers (CPIIW) in urban areas.

5. Estimates for Wolfson Index are for nominal MPCE and from Motiram and Sarma (2014).

Table 3: Growth of Rural and Urban Quantiles between 2004-5 and 2011-12, India

	Rural (Real)			Urban (Real)		
Percentile	Rural 2004-5 (Rs.)	Rural 2011-12 (Rs.)	Growth of the quantile	Urban 2004-5 (Rs.)	Urban 2011-12 (Rs.)	Growth of the quantile
5	432.53	525.80	21.56%	586.92	726.50	23.78%
10	497.70	598.80	20.31%	691.62	861.00	24.49%
15	549.05	665.30	21.17%	774.68	983.50	26.96%
20	591.58	721.63	21.98%	854.60	1089.00	27.43%
25	632.44	772.25	22.11%	935.56	1191.50	27.36%
30	675.18	826.00	22.34%	1015.25	1296.00	27.65%
35	714.80	877.17	22.72%	1093.67	1397.89	27.82%
40	757.16	923.25	21.94%	1184.75	1510.25	27.47%
45	802.36	976.00	21.64%	1285.65	1633.33	27.04%
50	849.49	1035.50	21.90%	1389.92	1758.00	26.48%
55	898.71	1099.63	22.36%	1505.73	1905.40	26.54%
60	952.26	1167.20	22.57%	1626.67	2070.00	27.25%
65	1013.08	1248.50	23.24%	1783.85	2236.00	25.35%
70	1083.05	1335.86	23.34%	1936.06	2459.33	27.03%
75	1170.16	1447.60	23.71%	2145.05	2717.25	26.68%
80	1281.28	1582.70	23.52%	2415.98	3068.00	26.99%
85	1431.20	1771.75	23.79%	2762.24	3510.50	27.09%
90	1668.92	2053.67	23.05%	3313.48	4280.60	29.19%
95	2174.28	2626.25	20.79%	4446.99	6014.40	35.25%

Source: Motiram and Naraparaju (2015). Data is expressed in 2011-12 prices. Real values are computed using price indices implicit in official poverty lines.

Table 4: Income Inequality in Household Per-Capita Income, Brazil, 1993-2009

Year	Relative Gini
1993	0.60
1995	0.60
1997	0.60
1999	0.59
2001	0.59
2003	0.58
2005	0.57
2007	0.55
2009	0.54

Source: 1993-2007 estimates are from Barros et al. (2010). 2009 estimate is from Ferreira de Souza (2012).

Figure 1: CDFs of Various Caste Groups, 2011-12 (Rural India)

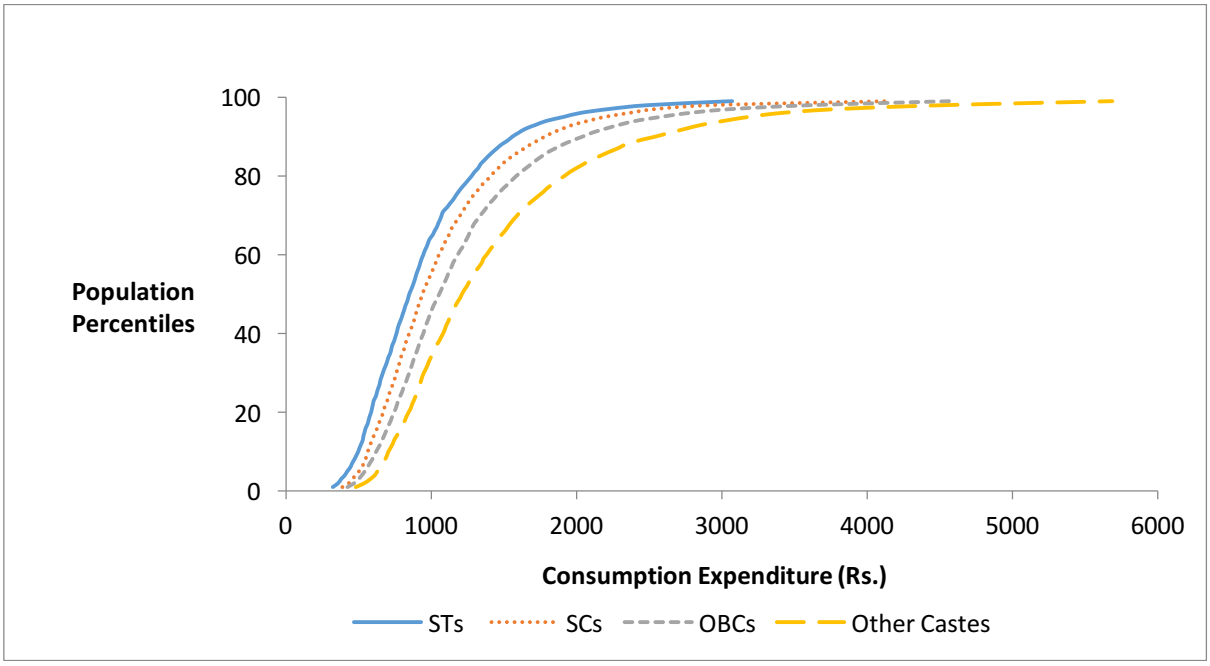
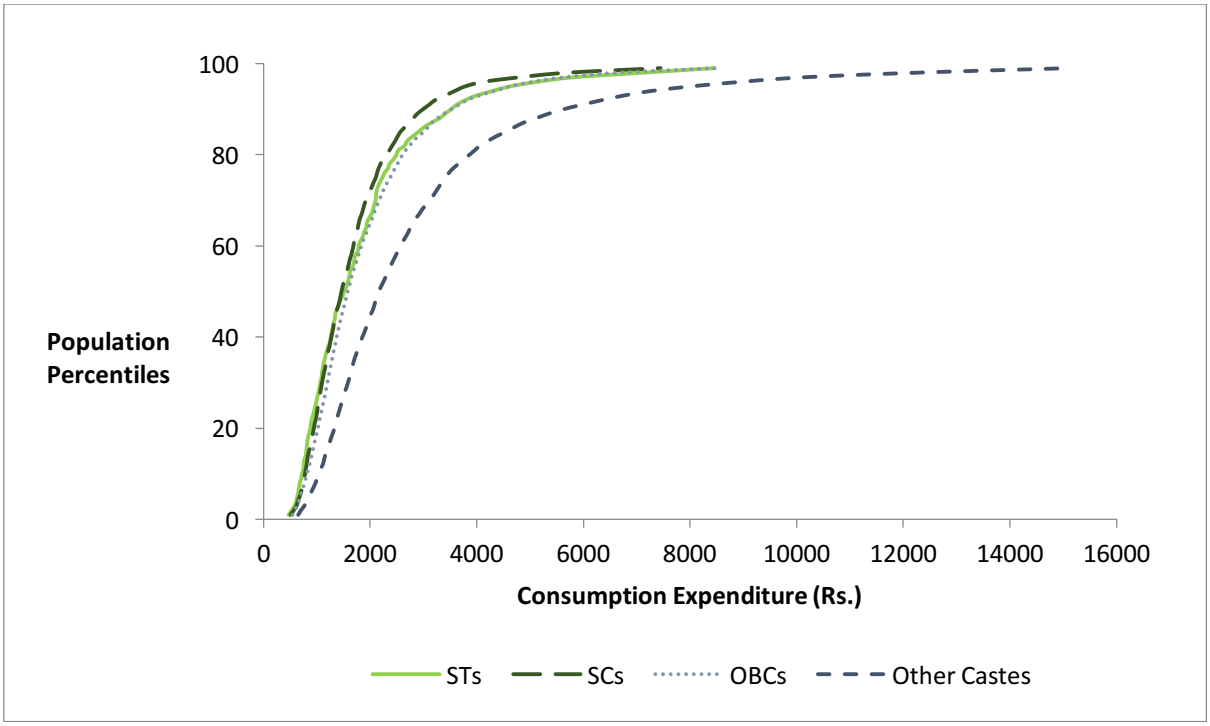


Figure 2: CDFs of Various Caste Groups, 2011-12 (Urban India)



Source: Motiram and Naraparaju (2015), based upon NSS consumption expenditure data.

Figure 3: CDFs of Various Classes, 2011-12 (Rural India)

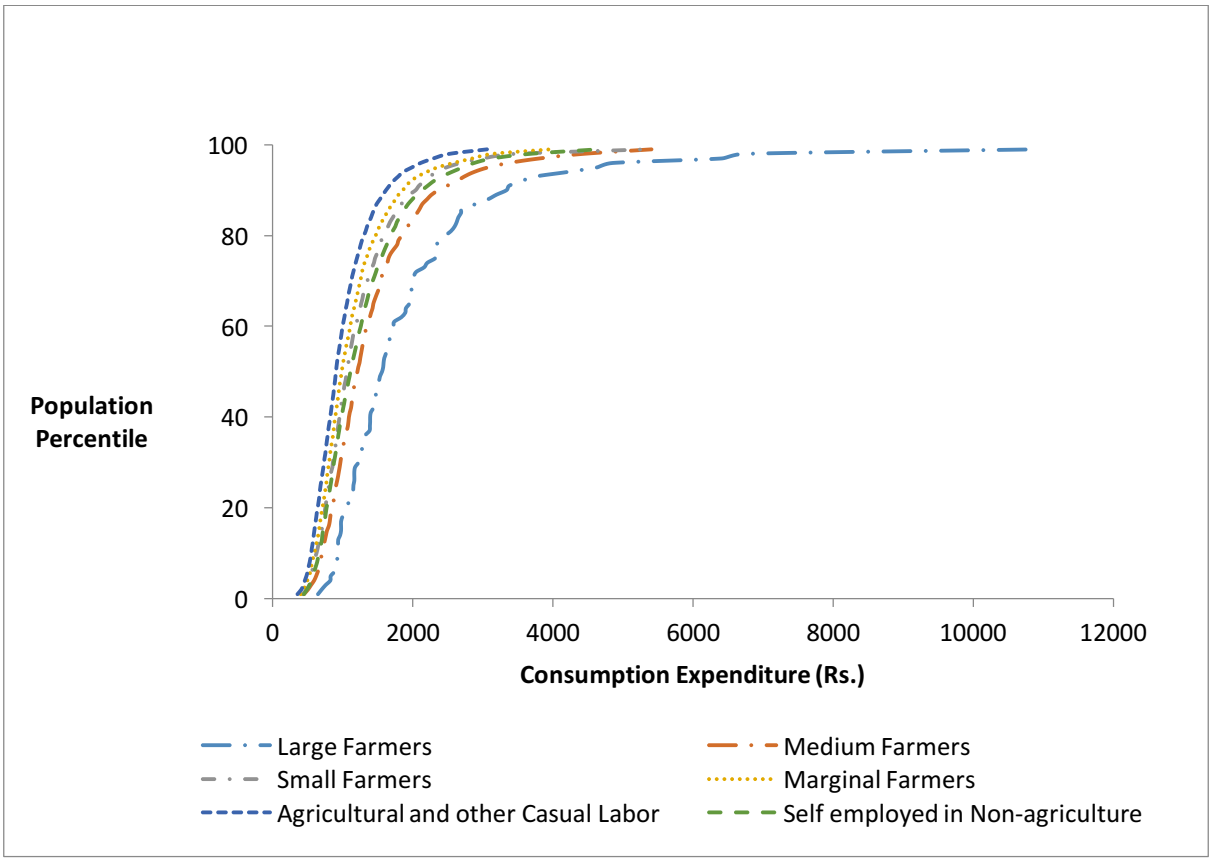
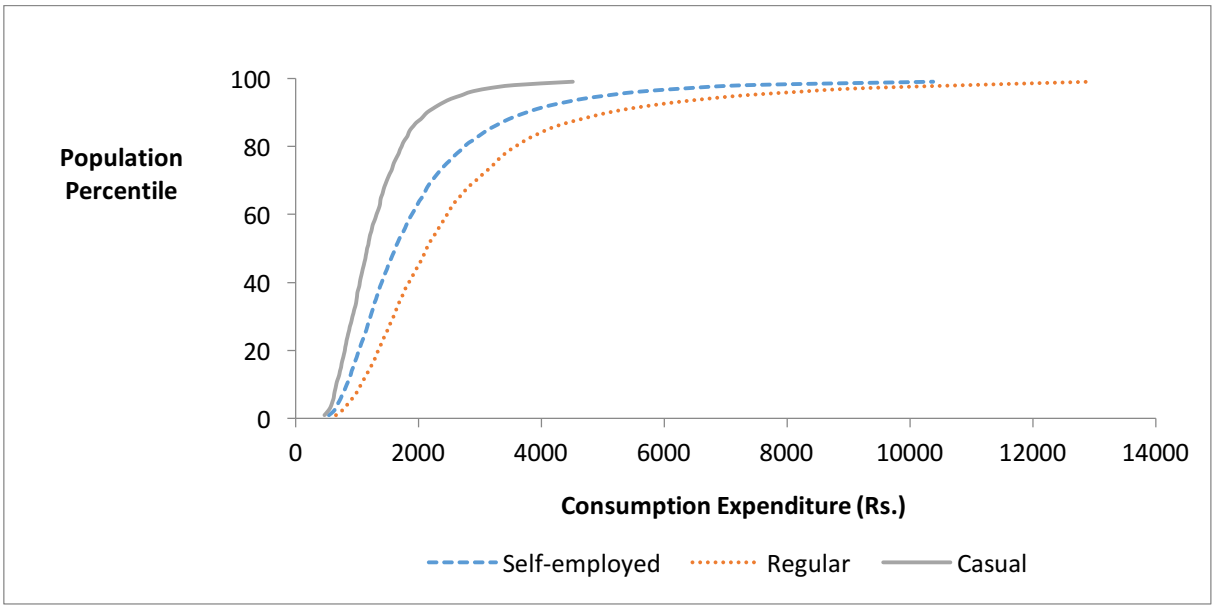


Figure 4: CDFs of Various Classes, 2011-12 (Urban India)



Source: Motiram and Naraparaju (2015), based upon NSS consumption expenditure data.