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India: Democracy, Growth and Development 1951—2012

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Executive Summary

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This paper aims to make clear the sometimes complex relationship between the three pillars of modern development: democracy, growth, and poverty reduction. Initial discussion will focus on the adoption of democracy in India in 1947, considered by many to be a very unusual and surprising, occurrence—especially considering the levels of poverty and illiteracy in the country at the time.

However, the evidence provided in this paper shows that India's adoption of democracy was not entirely unexpected, and identifies two important factors that contributed to this outcome. First, and most important, India was a British colony; being a British colony proved to be a key determinant of democracy, at least in the early post-independence years from 1950 to 1970. The second reason, and one not conventionally discussed, is the extremely heterogeneous nature of the Indian population. Both conceptually and empirically, being heterogeneous is a positive determiner to the probability of becoming a democratic nation. The main reason for this is that only in a democracy do various small ethnic groups have a say in governance. Also, ethnic diversity creates multiple minority groups wanting a say in the governing of the country.

The question of whether democracy has hampered India's growth has taken on a new meaning since 1980. Prior to that date, both India and China had similar levels of per capita income, and similar levels of growth. According to economic historians, this equivalence has existed since about 1500. However, since 1980, the growth paths of India and China have sharply diverged, with China achieving consistently high rates of sustained economic growth for over 30 years. India, on the other hand, has also grown at a considerable pace, but, in comparison to China, has been a growth failure. This divergence has led some to draw the somewhat facile conclusion that China's growth experience is an example of the Beijing Consensus development model and the belief that the state knows best, yet there is no historical example of any country coming near to equalling China's experience. To conclude, therefore, that authoritarianism or democracy is the sole reason for the contrast between China and India is erroneous, at best.

Statistical evidence drawn on in this paper shows that during the past 30 years of globalisation the developing country experience has favoured democracy. However, in the pre-globalisation years of 1950 to 1980, authoritarian regimes grew somewhat faster than democratic societies, yet, with the important outlier exclusion of China, democracies have grown at almost two percentage points a year faster than non-democracies.

Democracy is good for growth, but whether it is also good for poverty reduction is another matter. There are few theoretical reasons to expect democracy to be related directly to poverty alleviation, with the most obvious link being the extent democracy helps growth and thus contributes to poverty reduction. By examining some of the assumed determinants of poverty reduction for their veracity, it is shown in this paper that the common assumption that the level of initial inequality has an effect on poverty reduction is false, and that, empirically, what has mattered the most for poverty reduction has been economic growth. Unlike initial inequality, change in inequality does have an effect on poverty reduction, however, this effect is found to be very small. At most, improvement in inequality accounts for no more than 10 percent of total poverty reduction. From a poverty level of around 60 percent in the 1950s and the same in the late 1970s (according to India's official Tendulkar poverty line, which is equal to the World Bank poverty line of PPP$1.25 per capita per day), the latest estimates are that poverty was down to only 22 percent in 2011/12.

This low inequality effect is attributed to two factors. First, inequality has broadly stayed constant in India for the last 30 years. In China, and several developed economies, inequality has increased. The second reason has to do with the fact that inequality changes in developing economies (including in large inequality change in China) are swamped by changes in real growth.

What matters the most for poverty reduction, by definition, is growth in incomes of the poor—and the definition of the poverty line. The influence of growth on absolute poverty is not independent of the poverty line—indeed; it is crucially dependent on the placement of this line with respect to the zone of incomes where most of the poor are clustered. The response of poverty decline (measured as the difference in head count ratios) to weighted mean growth is termed the "shape of the distribution elasticity" or SDE (Bhalla, 2002).

Empirically, examination of poverty data for India since 1983 reveals that mean consumption growth weighted by (lagged) SDE accounts for over 90 percent of the variation in poverty decline. The method of aggregation had no impact: Rural, urban, or state, the definition of the poverty line did not matter. The empirical magnitude was approximately one percentage point of poverty reduction for each one percentage point of growth with the Tendulkar poverty line.

The division of growth experience into two halves—1950 to 1980 and 1980 to present—reveals that in the first period there was no poverty reduction and in the second period, especially post 2000, poverty reduction has accelerated to over two percentage points a year. Further, substantiating the point that growth matters above all else, this poverty reduction has accelerated with increases in GDP growth. That growth has been inclusive is revealed by significant changes in education inequality (reduced by more than 30 percent since 1983) and by evidence showing that all groups have shared equally in growth. One striking observation is that in 2009/10, young urban women had the same educational level as young urban men (young defined as ages 15—24 years old) and earned wages that were around three percent higher.

Direct methods of poverty alleviation were examined with respect to two popular government administered poverty programmes—the system of public distribution of grains, and the guaranteed employment programme. Both schemes have been in existence in India in one form or another since the mid-1970s. Unfortunately, there has been extensive governance failure in the implementation of these schemes. Those living in poverty receive, at best, no more than 25 percent of the expenditure allocated to alleviate the problem. Such plans, schemes, and policies have been far from inclusive.

Discussion about poverty reduction in India inevitably leads to comparison with poverty reduction in China. It is frequently observed that India has a much higher poverty level than China because the Indian economy has experienced slower growth than that of China, however, this judgement fails to take into account that household surveys in China account for a much larger proportion of national accounts consumption (75 percent) than in India (50 percent). This means that when comparing Chinese and Indian poverty levels, for the same poverty line, India's poverty levels will be noticeably higher. In addition,

applying the most logical recall method of expenditures (seven days for food, 365 days for consumer durables and 30 days for all other items) yields a poverty level about ten percentage points lower than the conventional, and official, measure of poverty in India (30 days recall for all items). This means that absolute poverty in India in 2011/12 was equal to the level of poverty observed in China in 2009 (poverty line of PPP $1.25 per capita per day).

Introduction

This paper looks at democracy, growth, development, and poverty alleviation in India. Development and poverty alleviation are intimately related, but cover different aspects of welfare. Poverty (based on the headcount ratio) deals with changes in income (or consumption) in the poor groups in society. Development encompasses non-income aspects of welfare, for example, infant mortality and access to public goods such as water and sanitation. Growth can occur irrespective of improvements in distribution and with or without damage to the environment. In addition, as democracy systems are infinitely varied—presidential system, first-past-the-post system, voter turnout rates etc. So there are many moving parts to consider, making it difficult to come up with definitive answers to complex questions about poverty levels.

This paper attempts to reach a set of stylised facts about democracy, growth, and poverty (DGP). As a gauge of India's performance, reference is made to stylised facts pertaining to the performance of China: another large and comparable country. China's record on growth and poverty is deeply impressive, and it is highly relevant that China has achieved exceptional status without democracy. How China has been able to do so is a subject often discussed. Some researchers (for example Ramo, Lin) have reached the conclusion that China's achievement is sui generis and not replicable. Ramo coined the term 'Beijing Consensus': a set of policies that he argues is different to the prevailing Washington Consensus. Lin, a development economist and former chief-economist at the World Bank, argues that state control and direction are the essential features of the China model.

Perhaps the most stylised fact of economic development over the last 30 years is the remarkable development that has taken place in China. Volumes have been written, and will be written, on this miracle. Considerably less miraculous has been development in India. The comparison of the tiger with the elephant may not be entirely inappropriate. Add to it the fact that the tiger is authoritarian in nature and the elephant a bumbling democrat at best. The two countries had near equal status for the four hundred years prior to, and including, 1980. Since then, authoritarian China has grown at a much faster rate than democratic India. However, it is important to note that China has grown much faster than any other nation in recorded history. Whether democratic Japan, semi-democratic Singapore, or authoritarian Korea prior to its move towards democracy, not one country has come even close to matching the growth record of China. Hence, the search for what happened in China. Either its development record is replicable (as suggested by Ramos and Lin), or its record is a singular occurrence which cannot be repeated in other economies.

The story of poverty alleviation in India is really about economic growth. When growth occurred, poverty declined. When growth was faster, poverty declined at a faster pace. Somewhat surprisingly, the record shows that there has been very little of the anticipated increase in inequality in India, according to the National Sample Survey (NSS) household survey data, the main source of data analysis. A constant inequality scenario is especially apparent in estimates of real inequality; estimates of inequality in nominal prices yield an upward trend.

Broadly speaking, there are two distinct approaches to poverty alleviation: a direct approach in which government implements policies meant exclusively to reduce poverty (for example, food subsidies, cash transfers, and employment guarantee schemes), and an indirect approach, so called because this method relies on the indirect growth process to reduce poverty. In democracies, since the people can vote the government in and out, the direct method may have greater political resonance. In India, the direct method is likely to be more central to policies and in authoritarian economies, such as China, the indirect method would have greater appeal—that this is actually the case is not coincidental. However, democratic India's record with direct methods is not particularly good; only a quarter of the funds meant for the poor reaches the poor. However, there has been a distinct improvement in service delivery during the last decade. It is a reasonable conjecture to associate this improvement with the rise of a democratic middle class demanding greater accountability.

India and Democracy—an Outlier?

In order to understand and appreciate the consequences of democracy in India, the first matter to look at is how India became a democracy in the first place. It was deemed unlikely that India would succeed as a democracy; that it did may be more than just luck, or foresight on the part of its founding fathers. It has been argued that it was because of the liberalism and humane nature of India's leaders, especially its first prime minister, Jawaharlal Nehru, that India embarked upon its (possibly premature) experiment with democracy. During the period from the end of colonialism in 1947 to Nehru's death in 1964, there were precious few other poor societies that dabbled in democracy—or so it was believed.

A significant middle class presence is a common characteristic of societies which adopt a democratic form of government. As American historian Barrington Moore famously postulated "no bourgeoisie, no democracy". In 1947, India had, according to most definitions, no middle class. So India's adoption of democracy in 1947 is a genuine puzzle, and one that has been frequently commented on.

There is a different interpretation of India's adoption of democracy and an alternative hypothesis as to why it has stayed that way. This explanation, one that provides a solution to Barrington Moore's puzzle, is that there is no puzzle; India adopted a democracy because that was its heritage. This 'inheritance' consisted of two aspects: India was both a British colony and it was ethnically and culturally diverse. The former status guaranteed the presence of democratic institutions; the latter hinted at very few alternatives. Democracy is not just the only form of government that guarantees minority rights, but also the one that guarantees an important role for different ethnic and cultural groups.

There is considerable empirical support for the democratic heritage hypothesis. Table 1 shows the averages of British and non-British colonies for three different indicators of political freedom in 1970: two indicators are from the Polity IV data set average index of executive constraints[1] and democracy and the average index of political and civil liberties in 1972, the first year for which this data are available. No matter what the index, British colonies obtain a higher value.[2] Part of the heritage of British colonialism was this political institution fallout.[3]

TABLE 1: COLONISATION AND POLITICAL FREEDOM

SOURCE: POLITY IV DATASET; FREEDOM HOUSE.

	POLITICAL LIBERTY (1973)	EXECUTIVE CONSTRAINT (1960)	DEMOCRACY (1960)
British colonies	3.2	3.5	2.8
Non British colonies	2.3	1.8	0.2

NOTES:

1. Political liberty index is from Freedom in the World.
2. Executive constraint and Democracy indices are from Polity IV data.
3. For all indices, higher value means greater political freedom.

This data suggests that, at the time of independence, there was a strong tendency in South Asia towards democracy. This is also supported by the fact that the four major South Asian economies (India, Pakistan, Bangladesh, and Sri Lanka) all adopted democracy as their first form of government, though they did not all stay that way, most notably Pakistan. This indicates that other factors may have been important in sustaining democracy in India, for example the extreme nature of heterogeneity in the Indian body politic.

Regression analysis also confirms this tendency, showing that being a former UK colony contributes significantly and positively to political freedom and democracy. The dependent variable is a binary construct, which takes on a value of 1 if the Polity IV democracy index is greater than 5 (scale is 0 to 10) and 0 otherwise. The ethnic diversity index is taken from Fearon (2003). The simple probit regression for developing countries in 1960 yields the following result:

Democracy = - 2.58 + 1.31*ethnic + 2.14*UK colony, nobs=76, pseudo-R2 = 0.4205
(4.8) (1.5) (4.8)

What the above equation tests, and asserts, is that the most important explanatory variable of whether a country is democratic or not is whether it was colonised by the British. Perhaps it is not a coincidence that both the world's richest democracy, the United States, and the world's largest democracy, Canada, were colonised by the British. In striking contrast, very few of the French, German, Portuguese, or Spanish colonies have performed well on the democracy front, at least in the first few decades after their independence. Even after controlling for this important influence, the ethnic diversity index still retains importance and indicates, ***ceteris paribus***, that an additional factor contributing to the adoption of democracy is ethnic diversity, and the larger the diversity, the greater the probability of adopting a democratic form of government.

For 1960, the predicted probability of India being a democracy was 73 percent, a high percentage, given that the highest probability of democracy for South Africa was 76 percent. Indeed, India has the fourth highest predicted probability. The results suggest that Indian democracy is not such a great surprise, and, most significantly, that the Indian democracy experiment, believed by many to be sui generis, was just not so.

India may have succeeded as a democracy because it was the only political system compatible with a heterogeneous population. Most analysts have focused on India's poverty and illiteracy in 1950 as a reason not to expect India to adopt democracy, not fully appreciating that only democracy can address the needs of the poorest. A democratic process gives, at least in theory, every group and each individual a chance to participate in decision-making—a small chance, perhaps, but an infinitely higher chance than if the system was non-democratic, such as an absolutist monarchy or communist system. It is important to appreciate the existence of these small probabilities: their existence is what solidifies expectations, and perpetuates democracy.

The logic of Indian democracy can therefore be summarised as follows. The inheritance of British institutions meant a strong, positive, initial proclivity towards democracy. The empowerment of different social, cultural, and religious groups meant that each group, especially the small groups, had a strong stake in democracy. A correlate of this empowerment was the desire among all groups for a united India, for only in a united India would each non-majority group have a stake. Thus, democracy was most likely the preferred choice among most sections of society.

Growth—do democratic countries grow faster?

Since India has been a democracy for all of its independent existence, the effect of democracy on either growth or development is difficult to estimate in India's case. This is akin to examining the role of exchange rates on differential growth in the different states of India. Exchange rates obviously matter a lot for economic growth and the valuation of the currency (over or under valued) is one of the most important variables affecting growth.[4] However, since the same exchange rate applies to all the states in India, it is not possible to isolate the effect of exchange rates on differences in state growth. To be sure, you can evaluate the effect of different determinants on growth, such as interest rates and exchange rates, but this is only possible because such factors change.

Democracy, however, has been a constant in India (except for the two-year Emergency of June 1975 to March 1977). Therefore, to evaluate the relationship between democracy and growth it is necessary to evaluate the experiences of different countries.

In Bhalla (1997), the separate roles of economic freedom (markets) and political freedom (democracy) in generating growth are analysed. One conclusion reached was about the confusing nature of the Confucian hypothesis. In the mid-1990s, and much before Beijing Consensus became a household term, it was argued that the East Asian success story was an example of the success that can be achieved in non-democratic societies. A complement to this conclusion was the assumption that democracies, by seeking consensus, hinder decision-making and hence hamper growth.

Table 2 documents the growth experience for developing countries for two periods, 1950 to 1979 and 1979 to present. The same Polity IV democratic classification variable as used previously is used to classify the countries. Prior to 1980, non-democracies grew faster, post 1980, the opposite is true. Further, average democratic growth is almost 2 percentage points higher than average non-democratic growth rates, 3.8 percent per annum compared to only 2 percent for the non-democrats. These broad averages confirm that there is little substance to the hypothesis that democracy is a hindrance to economic growth.

TABLE 2: DOES DEMOCRACY HURT GROWTH?

SOURCE: WORLD BANK, WORLD DEVELOPMENT INDICATORS, IMF, WORLD ECONOMIC OUTLOOK, AND POLITY IV.

	PRE GLOBALISATION (1950-1979) IN % PER YEAR			PRE GLOBALISATION (1950-1979) IN % PER YEAR		
	Democracy			Democracy		
REGION	No	Yes	Average	No	Yes	Average
East Asia	3.2	2.9	3.2	3.2	2.9	3.2
Russia & EE	4.2	2.7	4	4.2	2.7	4
Latin America	3.1	2.9	3.1	3.1	2.9	3.1
MENA	2.6	1.5	2.6	2.6	1.5	2.6
South Asia	2.4	1.3	1.4	2.4	1.3	1.4
Sub-Saharan Africa	0.8	2	1.1	0.8	2	1.1
Average	2.9	1.4	2.2	2.9	1.4	2.2

NOTES:

1. MENA contains the countries of the Middle East and North Africa. EE stands for the countries of Eastern Europe.
2. Democracy as measured in Polity IV data. The value ranges from 0 to 10; a country is defined as democratic if it obtains a value greater than 5.
3. Cells contain weighted averages of per capita income growth.
4. The data above does not include China.

Ideology, Growth, and Economic Freedom

There are two distinct and, at this time, equal year phases of India's democratic tryst with growth and poverty alleviation. There is the initial 33-year phase extending from 1947 to 1979, and there is the post-1980 development. As shown below, growth during the first period was low, and poverty alleviation non-existent. Surprisingly, absolute poverty in India, according to the Indian poverty line, was not much different in 1951 than in 1983—indeed, the absolute poverty numbers are near identical. Growth during the second period was high, and as the latest 2011/12 data confirm, poverty alleviation is bordering on exceptional. This begs the question of why such a difference exists.

Political freedom has not changed in India since independence. Indeed, there are arguments to suggest that political freedom has expanded, particularly since the second post-1980 period. While undoubtedly greater political freedom and an expanding middle class has helped accelerate growth, by far the most important change in India has been the significant expansion of economic freedom. This change can best be appreciated by understanding the role of democracy, and that of elites, in the first 33-year period.

Post-independence India—born to be socialist

India was a controlled economy prior to the early 1990s. The memory, and vestiges, of those decades still resonate in Indian policy today. There was little that was not state-controlled in India in the pre-reform era.[5] Economic freedom was not part of the post-independence Indian psyche, though it had been very much part of the India (Bharat's) psyche for thousands of years before.

Though the ideology was of freedom, India did not look to extend this to the economic realm. A possible reason for this is the ideology of the elite. The Indian elite followed British manners, British beliefs, and the British language. However, they also believed that had it not been for British colonialism, India would be rich with spices, tea, and technology—a clear perversity existed. This is possibly because of developments in Russia and China. Russia had ostensibly defied Western imperialism and grown quickly, Russia's economic totalitarianism was its weapon of success. China had led a 'poor-people's' revolution. The ideologues, led by the liberal Indian prime minister, Jawaharlal Nehru, were impressed by Russia, and saw no contradiction between the simultaneous practice of heightened political freedom and submerged economic freedom. Support for economic liberties was intensely frowned upon by the elite, and was considered heartless and unpatriotic.[6] Only the state could efficiently 'force' economic development.

It is difficult to over-estimate the influence of the 'get industrialised quick' (substituting 'industrialised' for 'rich') model of the Soviet Union on Indian leaders. As early as 1948, the Congress party of India, the ruling and founding political party and led by Prime Minister Jawaharlal Nehru, adopted The Industrial Policy Resolution, a policy document that was to become a formal part of the Indian Planning Commission. In 1950, the Constitution of India came into being, and it contained an important section on directive principles. These principles did not have the force of law—for example, the state could not be sued if the promise of universal primary education was not met (one of the directive principles)—but the state was directed to adopt policies that would enhance the direction of these principles, and the formation of the Planning Commission was an explicit deference to the directive principles. It was believed that government involvement in the production system was necessary to steer the economy towards a higher growth path. It was argued in India that, whether it was the operation of hotels, or the making of bread, and later the making of computers, government ownership and production was vital. This long-standing position began as an innocent claim by the original planners—the country needed investment, and the private sector was just not available, let alone willing, to do the job.

This view has continued for a very long time and, even today, many political leaders swear by it. This view was present at the time of discussions of the Indian Constitution, and in the Constitution itself. Indeed, the much reviled bank nationalisation by Prime Minister Indira Gandhi in 1969 was recommended in the Industrial Disputes Act of 1947, an Act which contained a list of industries that could be declared public utilities, in the interests of the state or development, and therefore subject to nationalisation. First on the list was transport, other than

railways; second on the list was banking; third was cement; fourth was coal; fifth was cotton textiles; sixth was foodstuffs; and seventh was iron and steel. The fact that even foodstuffs and textiles were recommended to be nationalised makes a mockery of the claim that the public sector was 'forced' to step in because the private sector was unwilling.

The lack of any thought towards the concept of economic freedom has been systemic in modern India, and credit, or blame, lies squarely with the leadership, specifically the Congress party and the Nehru-Gandhi political dynasty. So pervasive was this Nehruvian leadership that Indian intellectuals were to recognise economic freedom only in the late 1990s, and only after a non-Nehru-Gandhi Congress leader had taken office in the early 1990s. One of the world's leading philosophers and champions of liberty, Nobel Prize winner Amartya Sen, was to recognise economic freedom somewhat belatedly in his 1997 book, Development as Freedom.

The sequence of events and rationale that led to India becoming a socialist state, in word and deed, was most likely as follows. First, as cited in Austin (1999), was the ideology of the supreme leader in the 1930s:

> …the content of the [Congress] party's socialism became clear in its 1931 Karachi Resolution. Among other things, it said that 'key industries and services, mineral resources, railways, waterways [and] shipping' were to be government-controlled, and the government was to safeguard the interests of 'industrial workers' and women and children … The Congress Socialist Party—formed in 1934—of which Nehru was a supportive non-member, supported a policy of 'elimination of princes and landlords and all other classes of exploiters without compensation' and 'redistribution of land to peasants'. (Emphasis added).

Second, was the view in the late 1950s:

> Socialism to some people means two things: distribution, which means cutting off the pockets of the people who have too much money, and nationalisation. Both these are desirable objectives. (Jawaharlal Nehru, Hindustan Standard, Delhi, May 17, 1958; emphasis added).

That Nehru was a Fabian socialist is well known, but the general impression remains that he did not let these sentiments affect economic policy. However, they did indeed have influence, starting with the Constitution of India. It has Nehru's personal stamp, and it did not provide for much economic freedom. Economic intervention is writ large in a document ostensibly about fundamental rights.[7] Both in ideology, and deed, Nehru was more than an arm-chair socialist.

One defence of the deep socialist experiment in India is that Nehru was not at fault in choosing this path, because the path was the 'environment' of the times. However, this defence is only partially valid. There were important dissenters to the socialist view among those advising the Indian government, for example, B. R. Shenoy and Milton Friedman. Shenoy was involved with all of the official organs of government and was a strong, and sole, dissenter to the economic-freedom-breaking Second Five Year Plan.[8] He seems to have waged a lonely battle in the 1950s and 1960s, but was prominently joined by Jagdish Bhagwati and Padma Desai in the late 1960s (Bhagwati and Desai, 1971).

Shenoy consistently opposed the extreme socialist and/or communist leanings of Nehru and his daughter, Indira Gandhi. Shenoy realised early that economic freedom was not on the list of freedoms desired by India's populist leaders. He objected to the fact that, for Indian politicians, economic freedom was equated with discrimination in favour of the rich, and hence immoral. For Indian socialist leaders, including prominently Nehru, until the poor became rich, one could not, and should not, even conceive of freedom for the rich. In the name of the poor, and for Indian leaders and intellectuals, the state was required to play a heavy role in order to ensure wealth for all and growth for the poor.[9] Shenoy objected at several points to state monopoly capitalism. For example, in the late 1960s, he noted the lack of progress for the Indian workers, the targeted beneficiaries of Indian socialism:

> In India…the productivity of industrial workers in 1964—65 was 2.3 times the productivity in 1951—52, wages, met by the rise in cost of living, rose only by about 20 percent. The bulk of the benefit of the higher productivity of workers was retained by the Management. This was but a manifestation in the industrial sector of the overall phenomenon of the perverse income transfers through inflation and monopolies. (Shenoy, p.4)

Planning As a Panacea

Given the direction from the political leaders, and the Constitution, Indian planners proceeded to assume draconian controls over economic activity within an essentially free political system.[10] The main architect of Indian planning and controls was P. C. Mahalanobis, a statistician who had the full support, and confidence, of Prime Minister Nehru. Some scholars maintain that Nehru was essentially a liberal and a reformer, and if India went astray under his watch it was due to his advisers, in whom Nehru placed perhaps slightly too much confidence. As usual, there is a problem of identification or self-selection. It could just as easily, and plausibly, be that Nehru chose his advisers on the basis of his own ideology. It is more than conventional wisdom that Nehru, as a leader, made sure that alternative leaders did not arise to give him competition. The above quotes about Nehru pre-1947 leave no doubt as to where his own ideology and predilections lay.

Mahalanobis had the controls and Nehru's ideology. Milton Friedman, one of several advisers[11] to India on economic policy (evidence that alternative voices were heard about the direction of India's, and developing world's economic policies) had an interesting comment about planning and Mahalanobis. In a memo on his advisory visit to India, Friedman wrote:

> Mahalanobis began as a mathematician and is a very able one. Able mathematicians are usually recognised for their ability at a relatively early age. Realising their own ability as they do and working in a field of absolutes, tends, in my opinion, to make them dangerous when they

> apply themselves to economic planning. They produce specific and detailed plans in which they have confidence, without perhaps realising that economic planning is not the absolute science that mathematics is.
>
> ...Mahalanobis was unquestionably extremely influential in drafting the Indian five-year plan ...The scheme of the Five Year Plan attributed to Mahalanobis faces two problems; one, that India needs heavy industry for economic development; and two, that development of heavy industry uses up large amounts of capital while providing only small employment. Based on these facts, Mahalanobis proposed to concentrate on heavy industry development on the one hand and to subsidise the hand production cottage industries on the other. The latter course would discriminate against the smaller manufacturers. In my opinion, the plan wastes both capital and labour and the Indians get only the worst of both efforts. (Milton Friedman, "Mahalanobis Plan", 1955).

What happened in India: 1980—2013

The change started slowly. Indira Gandhi, who had violated the Constitution by assuming dictatorial powers in 1975, was back in power in 1980. In a space of five years, the Constitution was amended making India a socialist state, another amendment granted the socialist leader Indira Gandhi dictatorial powers, Gandhi lost elections in 1977 and, three years later, was reinstated via elections.[12] Indians were justifiably proud to have the political system they did. There had been a short 21 month violation of their political freedom, but now they had regained it. It could even be said that political freedom was enriched in India following the Emergency. However, what was severely lacking in Indian democracy was the other freedom: economic liberties. Yet, unbeknown to most, if not all, in the early 1980s, subtly but surely, India's economic fortunes were to change forever.

In the late 1970s, China had moved towards economic reforms. India and China had made it almost a habit, sometimes forced by circumstance, other times by a parallel ideology, to broadly mimic each other's policies. So it was entirely predictable, once Chinese economic reforms started in 1978, that India would also open itself internally and externally. In June 1991, a new government was installed, and the Indian Prime Minister, Narasimha Rao, chose economist technocrat Manmohan Singh to run the most important ministry: finance.[13] This established a 13-year gap between India's and China's change in economic policy and fortunes.

While a gap has remained with China's growth, India's growth has accelerated quite sharply post 1980. Per capita GDP growth in the first 30 years, 1950—1979, was only 1.3 percent per annum; post 1980, per capita growth accelerated to 4.2 percent per annum; and post 1993, has been at 5.1 percent per annum. This clearly has had an effect on poverty alleviation, the subject of the following section.

Democracy, Growth, and Poverty Reduction

The study of poverty, and its determinants, requires clear definitions of three important variables: poverty, distribution of consumption (inequality), and growth in per capita consumption. It is fair to state that in the context of poverty reduction, the most talked about variable or determinant in the world, and especially in India, is inequality and change in inequality. Democracy per se comes very low in the pecking order of poverty alleviation, though it is relatively high as a determinant of governance and, therefore, as a determinant of the effectiveness of government programmes aimed at poverty reduction. There is an indirect association of democracy with the success or failure of government administered programmes, a subject matter considered in the next section. First, this section examines the importance of various factors other than growth and democracy affecting poverty reduction.

The discussion of poverty reduction and its determinants is technical in scope, thus, it can be complex. However, this technical discussion helps to establish that inequality change per se has not been an important determinant of poverty reduction in India. Further, the effect of growth on poverty is paramount, and can effectively be considered as the sole determinant of poverty change. This controversial conclusion is established below.

There are several definitions of poverty; the one most commonly used, and used here, is the headcount ratio, i.e., the fraction of the population whose per capita expenditures (or income) are less than, or equal to, a pre-defined level of expenditures given by a poverty line. Inequality can be measured by several indices (for example, share of expenditures of the bottom 20 percent, the ratio of mean expenditures of the bottom 20 percent relative to the top 20 percent, and the Gini index).

The generally accepted poverty line for developing countries is the World Bank poverty line of PPP of $1.25 per capita per day for the low to middle-income countries, and double that level for high-income developing countries. In India, poverty lines have undergone revision and the official poverty line is the Tendulkar poverty line, which is defined separately for rural and urban areas for each of the major states of the country. In 2004/5, this line was set equal to Rs.485 per capita per month. Extending this poverty line for 2011/12, a national average of Rs.855.2 is obtained. Given a PPP consumption exchange rate of approximately 23.1 in 2011/12 (the NSS year runs from July to June), PPP $1.25 translates into Rs.867 at 2011/12 prices. In other words, the two lines—PPP $1.25 and the Tendulkar poverty line—are virtually identical.[14] This equivalence makes straightforward the task of comparing calculations using the official Indian poverty line with the World Bank estimates for other countries.

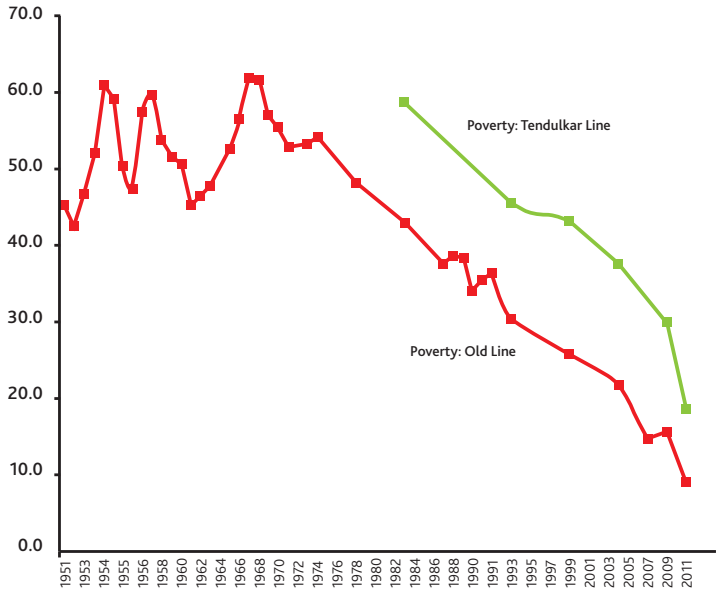
What happened to inequality, poverty, and growth in India: 1950—2012?

There are two phases of poverty reduction in India—from 1951 to 1982 and from 1983 to 2012 (the last year of available data on poverty). These phases are demarcated by availability of household level data and it is important to keep these two equal-year phases in mind in order to understand the role that various factors may have played in poverty alleviation.

Phase I: Low growth, zero poverty reduction: 1951—1982

There is limited information available for poverty reduction during Phase I. Datt and Ravallion (1998) have estimated the poverty rates for each NSS survey between 1951 and 1994 according to the old poverty line of Rs.49 per capita per month in October 1973 to January 1974 rural prices. (The Tendulkar poverty line, and the one used throughout this paper, is more than 20 percent higher than this old line). The headcount poverty ratio for the two years 1951 and 1983 using the old line is 45.3 percent and 43 percent respectively (see Figure 1). According to the Tendulkar line, the headcount ratio of poverty in 1983 was 60 percent and, given no poverty change from 1951, one can assume that 60 percent poor was the level in 1951.

FIG. 1 : POVERTY DECLINE IN INDIA 1951—2011: OLD AND NEW POVERTY LINES



Phase II: High growth, large poverty reduction, 1983—2012

In contrast to Phase I, there is a considerable amount of unit-level data available for Phase II. Starting in the late 1990s, changes in government policy made NSS survey data available to individuals and organisations other than the World Bank. This availability has made in-depth research possible into the large poverty decline observed—from 60 percent in 1983 to 22 percent in 2012.

Statistical determinants of poverty reduction

As the varied Indian experience is discussed, it is useful to keep the several moving parts in mind. By definition, the most important statistic is economic growth. Of equal importance is how this growth is distributed, as well as the distinction, and divergence, between consumption levels and growth as measured by the national accounts (NA) and by household surveys (S). It is the latter that directly enters into the determination of poverty levels.

Some questions arise due to the divergence between NA and S estimates. Per capita GDP or NA growth during Phase I grew at a 1.5 percent per annum for a cumulative increase of 61 percent in incomes. Yet there was a zero change in the S definition of poverty. Two explanations for this are possible. Either inequality changed by an enormous amount, such that the bottom 60 percent saw no increase in consumption at all, or the NSS surveys continually captured less of the NA consumption.

The NSS surveys ask a series of questions on household income or consumption. The aggregate of these numbers reveals the magnitude of per capita consumption at any point in time. These numbers are comparable to the corresponding NA estimates. Indeed, in the first few decades after independence, household consumption estimates, as obtained from the NSS, were the basis for the NA estimates of consumption. The two estimates obviously matched to a very large degree and many debates on poverty in the mid-1960s were centred on small differences in the two estimates.

By the mid-1970s, large divergences between the two estimates began to appear. The last three important NSS surveys (2004/5, 2009/10, and 2011/12) have each missed out on more than 50 percent of consumption as measured by the NA (see Table 10).

There are natural differences between the two sources because of differences in definition: coverage (for example, institutions) are part of NA but not of NSS, measurement (survey consumption is measured directly while NA consumption is often a residual), and prices. These differences fail to account for more than a small fraction of the two means, about 5 percent. The differences in growth of NSS or NA consumption are even smaller (since the differences in levels are likely to persist).

A declining S/NA trend means that the mean survey consumption level declines (relative to a constant S/NA) by 1 percentage point for each 1 percentage point decline in the S/NA ratio. This provides a perspective on what happened in Phase I. It

was not a period of huge inequality change, and it was a period of some per capita income growth. Hence, the constancy of poverty levels for 30 years is a mirror image of a declining S/NA ratio, as demonstrated by that fact that poverty in 1983 was considerably lower than the 60 percent reported in 1983. Also, poverty in 2011/12 was considerably lower than the 22 percent reported.

How much the headcount ratio of poverty declines with each 1 percentage point decline in consumption growth is a function of the clustering of the poor around a poverty line, a subject explored below.

The irrelevance of initial inequality for poverty reduction

Poverty reduction strategies are often couched in terms of income redistribution. It is hypothesised that income inequality change plays an important role in helping to reduce poverty. The logic is straightforward—if the poor's share in the available income increases, that means they will obtain a larger than average increase in incomes, and this will obviously diminish the poverty ratio. Unfortunately, analysts have moved from this straightforward proposition to contending that if a country starts from a position of greater inequality, then this more equal distribution helps towards a faster decline in poverty, *ceteris paribus*, or greater pro-poor growth. This conclusion is false.

Several documents have offered this logic to advocate a more equal distribution of consumption as a desirable starting point in discussions of poverty reduction, for example, the World Bank World Development Report (WDR) 1990, the WDR 2000/01, Ravallion (2001), Klasen (2001), Datt and Ravallion (2002), and Klasen (2008). Some excerpts from the WDR 1990 and Datt and Ravallion (2002) illustrate this belief.

> A 10 percent increase in the incomes of the poor in Bangladesh and India would reduce the incidence of poverty by about 7 percentage points. Where the distribution of income is more unequal, as in Venezuela and Brazil, the corresponding figure would be only 3 percentage points. (WDR, 1990, p.47, Emphasis added)

> Household survey data for developing countries suggest that initial distribution does matter to how much the poor share in rising average incomes; higher initial inequality tends to reduce the impact of growth on absolute poverty. By the same token, higher inequality diminishes the adverse impact on the poor of overall contraction. (Datt and Ravallion, 2002)

That such reasoning is false was pointed out as early as 1964 by American economist Locke Anderson. He showed that initial inequality was irrelevant for poverty reduction. Using data on US poverty, he made the (graphical) point that the rather small decline observed in US poverty in the early 1960s, despite rapid growth in per capita incomes and not much change in the distribution of incomes, was not at all surprising and had a lot to do with 'congestion' of the poor near the poverty line.[15]

> For any of these groups, an increase in median income of about 2.5 per cent would reduce the incidence of poverty by 1 percentage point, judging from the slope of the central portion of Figure IV…This analysis suggests that movements along the poverty curve corresponding to the existing income distribution will imply a declining rate of reduction of poverty. (Anderson, 1964,Emphasis added)

In Imagine (Bhalla, 2002), this movement along the poverty curve is summarised as the shape of the distribution elasticity (SDE), a quasi-elasticity that yields the total arithmetic change in the headcount ratio of poverty that can be expected with a 1 percent change in mean expenditures of individuals clustered around the poverty line. Though Anderson does not offer any empirical values for this congestion, my estimated value for SDE for the US in the early 1960s was around 0.15, meaning a 10 percent change in average incomes of the poor in the US would affect the headcount ratio by only 1.5 percentage points.

Anderson's important work was ignored by development practitioners (perhaps because it was focused on the US, a developed economy). Thus, discussion of the impact of the congestion at the poverty line on future poverty reductions remained absent until 1990 when the World Bank report on Malaysia was published (see Bhalla and Kharas, 1991); the WDR 1990 also highlighted its importance. However, these two reports did not offer any theoretical or empirical estimates of SDE.

What the SDE-growth relationship suggests (as in the US example) is that there can be robust growth in incomes of the poor (and/or the economy) and yet very little poverty reduction. The following (admittedly unrealistic, but heuristic) example is illustrative. Assume the poverty line is 100 and that most of the poor (the centre of gravity) are clustered around a mean income of 50, and that the standard deviation of the incomes of the poor is 20. An increase in mean consumption of 10 percent will have a near-zero impact on the headcount ratio. Now assume that the mean shifts to 95 and the standard deviation is only 10; a 10 percent increase in mean consumption will lead to a very large decline in the headcount ratio. If the poor are now congested at a level close to the poverty line, around 99, the elasticity will be close to infinity (i.e., with an increase in mean incomes of 10 percent, all individuals will move out of poverty). So with the same growth in mean consumption of the poor, varying elasticity is obtained.

Yet another example, this time perhaps more realistic, explains the workings of the SDE on poverty. Growth in expenditures of the poor is the sum of growth from two sources: the mean growth in expenditures of the entire population (this is the popular headline growth variable) and the growth in the share of expenditures of the poor (change in inequality but only for those close to the poverty line). Thus, if mean expenditures increase by (log) 10 percent, and inequality, measured as the share in total expenditures of the population close to the poverty line, worsens by (log) 10 percent, then there will be no change in net consumption of the poor, and therefore little change in the headcount ratio of poverty. In this instance, there will be a lot of growth but its effect on poverty would be negated by the change in inequality.

These examples substantiate the argument that initial inequality is irrelevant for future poverty reduction. This is because the change in poverty is a function of the change in consumption at or near the poverty line. If inequality does not change, then growth cannot have a differential impact. When inequality stays constant, the same amount of growth will result in the same proportionate increase in the consumption of the bottom 20 percent, bottom 40 percent or the top 1 percent. So if a person was poor in 1987 in unequal Brazil or equal India and consuming $1 a day, and if both societies experienced a 10 percent change in average consumption, and in both societies inequality did not change, then in both societies the poor person would be consuming $1.10 in 1998, and in both societies the person would be non-poor in 1998. This shows that initial inequality is irrelevant for poverty reduction, as far as a direct (independent of the effect on growth) impact is concerned.

Mathematically, and in an identity fashion, the arithmetic change in the headcount ratio can be expressed as follows:

(1) $dXt = a + b*SDEt-1* YPt$

Where dX is the annual average arithmetic change in the headcount ratio, SDE is an estimate of the congestion of incomes around the poverty line in the previous period, and YP is the annual average log change in incomes of the poor. The SDE for each unit is obtained in a non-linear fashion by subjecting the actual distribution to shocks in the form of log change in incomes of 1 percent, 2 percent, 5 percent, and so on. The average change in simulated poverty to these shocks represents the estimate of the SDE for that year.

Thus, growth in incomes of the poor is a non-linear function of the growth in mean incomes (the non-linearity provided by SDE), and the change in inequality. An approximate form of the above equation can be expressed as

(2) $dXt = a + b*SDEt-1* Yt + c*It$

Where Y represents the annual average log change in mean incomes and I the annual average mean change in consumption inequality. The inequality changes can be represented by several variables, such as the Gini coefficient, the share of the bottom 20 or 40 percent, or the share of the top 20 percent.

Note that equation (2) is essentially an identity. If consumption poverty is what is concerned with, then the only manner in which consumption poverty can change is if consumption changes: consumption change is a function of the mean change in consumption and the change in inequality, and the consumption change has a greater effect the more congested is the distribution around the poverty line.

Estimation of equation (2) is based on unit-level NSS consumption data for the years, 1983, 1993/94, 1999/00, 2004/5, 2009/10, and the recently released 2011/12 data. These are all large sample surveys with each survey interviewing close to 125,000 households. Data for two sequential years for each state[16] of the country forms one data point. In addition, data for India is aggregated into three units: all India, urban, and rural.

Table 3 reports the regression results for different estimates of the change in poverty, weighted (log) change in mean consumption (weighted by lagged value of SDE) and estimates of changes in consumption inequality. The results are striking in their affirmation of the importance of accounting for SDE in discussions about the determinants of poverty change. Eight models are presented for each grouping of data—Panel A reports estimates for all India data (urban, rural, and aggregate) and Panel B for data aggregated by Indian states. For each model, two regressions are estimated—the first (noted as 2a, 3a and 4a) is for the conventional consumption growth variable and the second (noted as 2b, 3b and 4b) is for consumption growth weighted by lagged SDE. The 'pure' (un-weighted by SDE consumption) change variable is significant and has a magnitude around –0.7 (i.e., for each 1 percent increase in average consumption, the headcount ratio is expected to decline by 0.7 percentage points).

TABLE 3: ESTIMATING THE IMPACT OF GROWTH AND INCOME DISTRIBUTION ON POVERTY

	COEFFICIENTS OF GROWTH FOR:						
Model Number	Consumption	Adjusted Consumption	Share of bottom 40%	Share of top 40%	Gini	R-Squared	Number of Observations
PANEL A: INDIA-RURAL, URBAN AND ALL INDIA							
1 a)	-0.74***					0.9329	33
1 b)		-1.23***				0.9609	33
2 a)	-0.74***		0.12			0.9340	33
2 b)		-1.23***	-0.56***			0.9848	33
3 a)	-0.74***			0.32		0.9344	33
3 b)		-1.25***	1.28***			0.9858	33
4 a)	0.74***				0.19	0.9371	33
4 b)		1.25***			0.48***	0.9860	33
PANEL B: INDIA—33 STATES							
1 a)	-0.53***					0.6209	220
1 b)		-0.99***				0.7826	220
2 a)	-0.57***		-0.44***			0.7289	218
2 b)		-1.07***	-0.56***			0.9059	218
3 a)	-0.56***			0.79***		0.7207	218
3 b)		-1.06***	1.28***	0.97***		0.7207	218
4 a)	-0.53***				0.16	0.6581	220
4 b)		-1.04***			0.24***	0.8585	220

It is interesting to note that none of the distribution change variables are statistically significant when included in a regression with just conventional growth. However, as noted above, this is a mis-specified equation. Consumption change per se is not the relevant variable for poverty decline—it is consumption change around the poverty line that really matters. Regressions reported in alternate rows also confirm this specification. In just the consumption growth regression, the R-squared increases to 0.96, and the coefficient jumps in magnitude from –0.74 to –1.23 (Panel A, row 2). This means that each 1 percent increase in average consumption around the poverty line reduces the headcount ratio of poverty by 1.23 percentage points.

With the correct specification, the distribution variables are all significant and with the right sign, so if the share of the bottom 40 percent increases by 1 percent there is a 0.56 percent decline in poverty. However, and this is a consistent result across all the regressions, inequality change accounts for very little of the change in poverty. (The average change values of the independent variables are reported in Table 4.) The share of the bottom 40 percent has decreased around 0.1 percent per year on an annual basis. According to Table 3, each 10 percentage points increase in inequality would increase poverty by 1 percentage point, ceteris paribus. It appears that, for average values of change, inequality variables generally account for a trivial amount of the average poverty reduction of 2 percentage points a year.[17] Even for large changes in inequality, the impact is little more than 10 percent of total poverty reduction. Consumption growth per se accounts for, and can explain, almost the entire variation in poverty change.

TABLE 4: POVERTY REDUCTION AND ITS DETERMINANTS

VARIABLES	URBAN, RURAL, ALL INDIA	INDIA STATES
Annual average change (%) in		
Poverty	-2.2	-2
Consumption	3.1	3.2
Consumption, weighted by SDE	2	2
Inequality indices		
Share of bottom 20%	-0.7	-0.16
Share of bottom 40%	-0.9	-0.12
Share of top 20%	0.08	0.08
Gini	0.25	0.2

For quite some time now, both in the world in general and India in particular, an accepted belief is that redistribution has been, and is, an important contributor to the decline in poverty. There is a multitude of research slogans to this effect: government must stress basic needs, pursue pro-poor growth, and try to achieve inclusive growth. As the next section shows, a lot of expenditure has been wasted on these 'direct' policies of poverty alleviation. By most available estimates, less

than a quarter of money spent on direct poverty reduction in India actually reaches the poor. These expenditures are undertaken both for political benefit and for the theoretical economic benefit of the poor. Unfortunately, a lot of growth has been forsaken to achieve very little; it appears the poor in India would have been considerably better off if, instead of inclusive growth policies, growth-inclusive policies had been followed.

Democracy, Accountability, and Performance—Delivery of Social Services

The results of Section 2 broadly support the conclusion that democracies generally grow faster, at least in the post-1980 globalisation period. However, the question remains whether democracies also provide greater efficiency of growth redistribution. This is where democracy is expected to play a role. Ashutosh Varshney states:

> Due to electoral and mass pressures, democracies tend to have an elective affinity with direct methods of poverty alleviation. Not given to electoral renewal of mandates, this problem is avoidable in authoritarian polities. If indirect methods are better at eradicating poverty, it follows that authoritarian countries—some, not all, as argued later—would have greater success with poverty eradication. (Varshney, 2002, p. 3)

The efficiency of delivery of public services is probably one of the best indicators of the 'goodness' of an institution, and of its importance in making a difference to outcomes. Public policy, particularly policies which involve redistribution, involves a large amount of expenditure. Especially, but not exclusively, in developing countries, the pursuit of redistribution is often preceded by the battle cry "I begin this in the name of the poor". No policy announcement is made without recourse to the laudable goal of redressing poverty. The Indian Prime Minister Indira Gandhi had a whole political campaign oriented around the populist theme Garibi Hatao, or 'Remove Poverty', in 1971. This was hugely successful politically. Gandhi won by a large mandate in the 1971 national elections, a victory also helped by India's 'victory' in the break-up of Pakistan into two countries—Pakistan and Bangladesh. However, poverty was not affected by this, let alone removed.

In 1985, Rajiv Gandhi, the young Prime Minister of India (and son of Indira Gandhi) announced, after a day-long meeting with several young bureaucrats from the Indian Administrative Service,[18] that he felt Indian institutions had failed miserably in reaching the poor. In particular, he concluded, based on estimates given to him in the field, that only about 15 percent of every rupee spent for the poor actually reached the poor, though he did not offer any evidence of the sort that economists would require. The evidence on two major public delivery programmes is offered below.

One of the first studies on the middle class and its evolution, *Second Among Equals—The Middle Class Kingdoms of India and China* (Bhalla, 2007), documents the truly extraordinary nature of the expansion of the middle class in the last 20 years. The middle class line used is the poverty line for developed economies, roughly equal to PPP $10 per person per day in 2005 PPP prices (see Bhalla, 2007 for details regarding the methodology). According to this measure, only 8.7 percent of Indians (and 10.7 percent of Chinese) were middle class in 1990; the figures for 2006 were reported as 40 percent (India) and 70 percent (China). Some part of the change in the demand for governance in India (discussed below) is explained by this expansion of the middle class.

At the time Prime Minister Gandhi made his statement, the middle class in India was only about 3 percent of the population. The assessment of the effects of democracy on government performance and accountability needs to be assessed in conjunction with the size of the middle class. As previously discussed, India developed as a democracy very early, and primarily because of its history as a colony of the British. The reason the middle class has an effect on democracy as well as governance is that, since the time of Aristotle, the middle class has been associated with a liberal value system that emphasises good governance.

One prediction of the middle class democracy model is that targeting will become more efficient. The process is likely to be as follows. In the early stages of middle class development, targeting is unlikely to be an important consideration—the voices are few. Yet, it is the middle class that pay taxes; much has been made of the fact that only around 35 million Indians pay taxes. As discussed in Bhalla (2010), this number is not so small, as only 70 million are eligible to pay taxes. The important fact is that it is mostly the middle class that pay taxes, and once its size is not small, this class is likely to flex its muscles and demand a better payout for its contributions. In a non-democratic economy, this outlet is not possible. It is in this regard that democracies are likely to perform better than the alternatives.

Table 5a documents some evidence on governance in India. For a poor country, food distribution is a very important part of government policy to alleviate poverty. The institutional mechanism set up by the government is the public distribution system (PDS). This system requires elaborate government machinery to first procure grain and rice from the farmers (it cannot rely on individual agents or the market to procure food, since the market is a 'bad' institution), then more government machinery to provide this food to government fair-price shops, from which poor people buy food at a discounted price. These people must possess an identity card to be eligible to receive subsidised food. An elaborate and, by all accounts, meaningful institutional structure. It is not obvious why this policy should be preferred to a policy that provides cash, or food stamps, to the poor. When asked, the Indian authorities claim that giving cash to the poor would mean supplying liquor to the poor.[19]

TABLE 5A: FOOD SUBSIDY PROGRAMMES: HOW EFFECTIVE?

PUBLIC DISTRIBUTION SYSTEM	1993/94	1999/00	2004/05	2009/10
Middle Class (% of population)	10.3	19.7	28.4	42.5
% People accessing PDS	27.3	31.3	22.9	38.7
% Share of PDS consumption for People	8.8	9.4	10	18.2
% Poor Accessing PDS	28.3	36.8	31.8	52.8
% Share of PDS consumption for poor	8.7	9.6	13.6	24.7
% Non-poor accessing PDS	26.5	27.9	18.9	34.4
% share of PDS consumption for non-poor	8.9	9.4	8.2	15.7

Perhaps the authorities are right—the elaborate system most likely has a minimum of leakage: most likely the rich do not obtain this subsidised food, and the poor cannot purchase extra liquor from the savings made possible by all the food purchased at a discounted price. There is a method available to test the efficacy of the food distribution programme, as well as test other government delivery programmes: the large sample NSS data can be used to test the above propositions. According to these data, the proportion of poor households that actually accessed food from the PDS system was only 28.3 percent in 1993/94, and this consumption accounted for 9 percent of their total consumption. In 1993/94, the share of the middle class was only 10 percent of the population.

Between 1993/94 and 2004/5, there was little change in consumption of PDS and performance. The middle class share continued to increase, reaching more than a quarter of the population in 2004/5. According to the 2009/10 data, there has been a distinct improvement in performance of the PDS system. In that year, 53 percent of the poor were able to access the PDS system, and this accounted for a quarter of their food consumption. In parallel with the share of the middle class increasing, there was a shift upwards in the performance of the public delivery system.

In terms of overall performance, even in 2009/10, a 'good' performance year, the transmission of food funds to the poor comes out close to Rajiv Gandhi's estimate of efficiency. Budget data states that India spent Rs.58,500 crores on PDS food subsidies. Out of this amount, food subsidy consumption of all individuals amounted to Rs.36,000 crores of which the poor received Rs.14,000 crores. This shows that the Tendulkar/World Bank poor received 24 percent of expenditure in 2009/10; in 1993/94, this share was 14 percent.

Yet another government programme is to provide jobs to the poor. This has recently been institutionalised in the form of an Employment Guarantee Scheme, a programme with annual expenditures that will eventually surpass 1 percent of GDP. The job programme has been introduced via an Act of Parliament. This new job scheme was launched in 2006 and by 2009 it covered the entire country. What is clear in the language and intent of the Act is that the jobs programme is

an income supplement scheme for the poorest of the poor, so those individuals that are in desperate need of incomes and are willing to do unskilled manual work will be able to obtain work for a maximum of 100 days. Job programmes are not new in India; the first such employment guarantee scheme was started in the state of Maharashtra in 1973, so states and governments in India have considerable experience and expertise with this government programme, or 'institution'.

The NSS Employment and Unemployment household survey for 2009/10 asked a special set of questions on participation in the jobs programme (now called MGNREGA, or the Mahatma Gandhi National Rural Employment Guarantee Act) and the NSS results broadly match the numbers published by the Ministry of Rural Development. It is, therefore, of considerable interest to examine the efficiency of this job programme, particularly in its delivery to the poor. Table 5(b) documents the consumption, income, and wealth levels of MGNREGA beneficiaries in 2009/10.

TABLE 5B: EMPLOYMENT PROGRAMMES: HOW EFFECTIVE ARE THEY?

	POOR	NON-POOR
No. of households worked in NREGA, Mn	17	25.8
NREGA workdays per household	34	40
NREGA workdays, Mn	577	1020
Total expenditure per household	33128	48817
Expenditure percentile	18	64
Wage income from NREGA per household, Rs	3116	3556
Total wage income from NREGA, Rs Cr	5090	8830
Expenditure on jewellery per household, Rs	62	487
Total expenditure on jewellery, Rs Cr	105	1260
% Expenditure on jewellery/NREGA wage income	2.1	14.3

NOTES: Estimates calculated from household-level questionnaire NSS 2009/10 Employment and Unemployment Survey. All estimates are yearly.

Five facts suggest that, far from being for the poorest of the poor, the MGNREGA programme is not even for the poor or the near poor.

1. Sixty percent of the beneficiaries are non-poor (MGNREGA 2009/10).
2. The non-poor receive 17 percent more workdays than the poor (MGNREGA 2009/10).
3. The average MNREGA non-poor is in the top third of the consumption distribution of rural Indians—at the 66th percentile, with the average poor residing in the 14th percentile. Thus, the poor who do participate are right in the middle of the poverty distribution, so at least this aspect of the programme is working well. Presumably, they are also doing whatever work is being done. However, it is unlikely that someone belonging to the top third of the distribution is carrying out very labour intensive work for low wages (MGNREGA 2009/10).
4. The expenditure patterns of the poor and non-poor beneficiaries are revealing. The poor spend Rs.62 per household per year on jewellery. The non-poor MNREGA beneficiaries spend close to eight times that amount or Rs.487 a year. Also, of MNREGA payments, 14 percent goes to jewellery for the non-poor, compared to only 2 percent for the poor (MGNREGA 2009/10).
5. In 2009/10, some Rs.8830 crores went towards MNREGA wage payments to the non-poor and Rs.1260 crores of this went towards jewellery purchases (MGNREGA 2009/10).

Overall, the poor received around a third of funding allocated by MGNREGA (36.5 percent expressed as a ratio of Rs.5090 crores of wages received by the poor as a ratio of the total, Rs.5090 plus Rs.8830 crores). However, wage expenditure is only 60 percent of total MGNREGA expenditure. Thus, it appears that the inefficiency in public delivery has not changed significantly since Rajiv Gandhi's pronouncement in 1985—in 2009/10, the poor received only 22 percent of total job employment programme expenditures meant for them.

How Inclusive Has India's Growth Been?

There are other aspects to economic development besides growth and reduction in absolute poverty. A country's performance needs to be assessed in terms of growth, poverty reduction, delivery of social services to the poor, and gains in welfare. This section examines India's record in terms of inclusion, where inclusion is measured via gains for the disadvantaged groups in terms of education and wages.

The finding that inequality has not changed greatly in India over the last 30 years was documented in Section 4. There is one important reason for this finding—education inequality. This area of inequality has radically improved over this period. No matter what the classification—rural, urban, male, or female—the result is the same: there has been at least a 30 percent decline in education inequality (Table 6).

TABLE 6: EDUCATION INEQUALITY (GINI) IN INDIA: 1983—2009

SOURCE: NSSO EMPLOYMENT-UNEMPLOYMENT DATA, DIFFERENT YEARS.

YEAR	INDIA	RURAL	URBAN	FEMALE	MALE
1983	0.71	0.76	0.56	0.79	0.63
1993/94	0.66	0.69	0.53	0.73	0.59
2004/05	0.58	0.62	0.47	0.64	0.52
2007/08	0.52	0.54	0.42	0.58	0.46
2009/10	0.49	0.52	0.41	0.55	0.43
% change 1983/09	-31	-31.6	-26.8	-30.4	-31.7

Table 7 documents the improvement in youth education, where youth is defined as those between the ages of 8 and 24 years old. Youth education is the preferred indicator, ahead of more conventional education indicators such as literacy or average years of education of the population. The latter two variables are affected by policy only in the very long term, at least two to three generations. Youth education, on the other hand, gives a reasonable perspective on how policies have affected growth, and how inclusive the growth has been.

TABLE 7: YOUTH EDUCATIONAL ATTAINMENT: 1983—2010

	AVERAGE YEARS OF SCHOOLING				
Social category	1983	1993/94	2004/05	2007/08	2009/10
- In-privileged	2.5	3.4	5.4	5.5	6
- SC	2.5	3.4	5.5	5.7	6.1
- ST	2	3	4.9	5.3	5.8
- SCST	2.3	3.3	5.3	5.6	6
- Muslims	2.9	3.7	5.4	5.4	5.9
- Privileged	4.3	5.2	6.9	6.8	7.2
All groups	**3.6**	**4.5**	**6.3**	**6.3**	**6.7**
	RELATIVE FEMALE/MALE EDUCATION (IN %)				
Social category	1983	1993/94	2004/05	2007/08	2009/10
- In-privileged	51.9	64.7	82.8	88.1	90.3
- SC	46.5	60.4	80.8	88.3	89
- ST	43.6	57.5	79	80.8	84.1
- SCST	45.4	59.4	80.2	86	88.9
- Muslims	64.4	75.8	88.9	92.2	91.8
- Privileged	66.8	77.2	87.6	92.7	94.6
All groups	**62.8**	**73.4**	**85.8**	**90.8**	**92.7**

NOTES: Youth defined as those between 8 and 24 years old.

All socially disadvantaged groups have gained, relative to the privileged group. This group consists of all individuals who are not Scheduled Caste (SC), Scheduled Tribe (ST), or Muslims. In 2009/10, the privileged group had a higher level of educational attainment, 7.2 years, compared to 6 years for the unprivileged group. However, the gap has narrowed sharply since 1983 and it is expected to be near zero in the next several years. The final five columns of Table 7 report the relative rate of educational attainment of females to males. For the unprivileged group, this ratio was only 52 percent in 1983; in 2009/10, the ratio had crossed 90 percent, about equal to that of the privileged group at 95 percent.

Table 8 reveals a surprising, perhaps even radical, finding. It documents real wages in urban areas, for both men and women, young (15 to 24 years old) and not-young (25 to 59 years old). The female to male wage ratio for the youth shows the following trajectory: 71 percent in 1983, 95 percent in 2004/5, and 103 percent in 2009/10. In other words, female youth in urban areas were earning on average 3 percent more than male youth.

In education, income growth, consumption growth, and poverty alleviation, the Indian record appears to be exceptional, at least since 1983.

TABLE 8: REAL WAGES IN URBAN AREAS, MALE AND FEMALE: 1983—2010

	15-24				25-59			
Year	Total	Female	Male	female/male	Total	Female	Male	female/male
1983	45.5	34.2	48	0.71	88.9	53.6	95.9	0.56
1993/94	46.3	40.4	47.8	0.85	102.8	69.8	110.2	0.63
1999/00	55.4	49.7	56.7	0.88	139.2	105.3	146.5	0.72
2004/05	55.8	53.5	56.3	0.95	142.7	102.9	152.8	0.67
2009/10	80.2	82.1	79.8	1.03	172.3	135.3	180.6	0.75
Growth * 1983-93	0.17%	1.59%	-0.04%		1.38%	2.52%	1.32%	
Growth * 1993-09	3.40%	4.40%	3.20%		3.20%	4.10%	3.10%	

NOTES: Growth is Annual Log growth rates. The deflator used in the calculation of real wages is the 2004/05 rural price index.

HUNGER, MALNUTRITION, AND POVERTY ALLEVIATION IN INDIA

In 2013 the Government of India passed the Food Security Bill (FSB). This bill means that two-thirds of the population in India will have the right to demand, and obtain, five kilograms a month of rice or wheat. The policymakers maintain that this ambitious food security programme is much needed because, as Dreze and Sen and many others have argued, India has a major problem with hunger, and India has high rates of malnutrition. Indeed, on several child nutrition indicators (e.g., height for age) India performs worse than even the poorest countries in sub-Saharan Africa. This very poor performance does not appear to align with the conclusion above that India's growth has been inclusive.

The first proposition that there is a lot of hunger in India is, regrettably, not supported by any data. Since the 2009/10 survey, the NSS has even stopped asking the question, "Do all members of your household get enough food every day?" The explanation for this is that the number of households responding positively to this question was less than 2 percent. While the assertion about hunger can easily be rejected, the evidence is quite robust on child malnutrition.

Many, including Dreze and Sen, believe that low food intake is responsible for the comparatively low child nutrition in India. Until recently, this was a popular opinion. However, recent research by Spears (2013) and Hammer and Spears (2013) shows that it is not food intake which causes Indian children to be stunted, but severe deficiencies in the public provision of water and sanitation. Differences in open defecation are sufficient to statistically explain much or all of the difference in average height between Indian and African children (Spears, 2013, p.3).

Thus, given the overall record of growth and inclusion in India, it is surprising that in a recent article, Nobel laureate Amartya Sen, along with his colleague Jean Dreze (2011), had this to say regarding India's performance:

> **"There is probably no other example in the history of world development of an economy growing so fast for so long with such limited results in terms of broad-based social progress."**

The debate about direct vs. indirect policy is a very old one and no doubt it will continue. However, the results of this paper, (as well as Bhalla, 2002)[20] , strongly support the contention of those, like Bhagwati and Panagariya (2013), who argue that indirect policies, such as growth, lexicographically dominate direct policies (government redistributive programmes).

India and China: Are Poverty Levels, and Their Reduction Comparable?

One of the major reasons for discussion about democracy and its effects on growth and poverty alleviation is the spectacular success of a non-democratic country, China, effectively reducing the absolute poverty rate (PPP $1.25 a day)

from 69 percent in 1983 to 12 percent in 2009, and likely around seven percent in 2011 (Table 9). This poverty reduction has, not surprisingly, been accompanied by strong per capita growth—close to an average of nine percent per annum for the last 30 years (Table 10). Both factors have been instrumental in generating belief in the Beijing Consensus model of development and growth. Nobel laureate Amartya Sen has for decades been emphasising that China has delivered both growth and quality of life, an important aspect of which is poverty reduction. "But there is little cause for taking the growth of GNP to be an end in itself, rather than seeing it as an important means for achieving things we value" (Sen, 2011).

The validity of this comparison is questionable. There is no doubt that China's growth has been astonishing, and in Bhalla (2012) I argue that China's macro policy of deep currency undervaluation[21] helped it to grow at an approximate rate of two percentage points faster than India. However, it remains to be seen whether poverty decline in India has really been as bad as the data suggest.

Table 9 presents three different estimates of absolute poverty in India based on NSS data for the different years.[22] The different estimates are based on different recall periods for items of consumption. The uniform recall method has a 30 day reference period, and all items of consumption are accounted for by the question, "how much of X did you consume over the last 30 days?" The mixed method differentiates items of consumption. Durables are measured on the basis of 365 day recall, and other items on the basis of 30 days. There is a third method as well, listed as 'preferred' in the table. This method uses the format and logic of the mixed method and asks for questions on food purchases over a seven day recall period.

TABLE 9: ABSOLUTE POVERTY (PPP $1.25 A DAY) IN CHINA AND INDIA: 1983—2011 (PERCENTAGE OF POPULATION)

SOURCE: NSS FOR THE REPUBLIC OF INDIA; WORLD BANK FOR THE PEOPLE'S REPUBLIC OF CHINA.

	CHINA	53.7			
		recall			
Year	World Bank	Uniform	Mixed	Preferred	World Bank
1983	69.4	60.4	58.9		55.5
1993	53.7				49.4
1999	35.6		43.2	39.9	
2004	16.2	43.8	37.7		41.6
2009	11.8	34.3	29.9	21.7	32.7
2011		22	18.6	12.3	

NOTES:

1. For China, 1983 is 1984 and 2004 is 2005. 2) The uniform survey records the consumption for all categories of goods (food, durables, non-durables, and non-food) over the past 30 days. The mixed survey records the consumption of food for the past 30 days, durables for 365 days, and non-durables and non-food for 30 days. The preferred survey records the consumption of food over the past seven days, durables for 365 days and non-food and non-durables for the past 30 days.

TABLE 10: CHINA AND INDIA GROWTH: 1983—2011

SOURCE: WORLD BANK, WORLD DEVELOPMENT INDICATORS AND WIDER.

	CHINA			
Growth (%)	1983-99	1999-04	2004-11	Average
Per capita income (NA)	8.5	8.1	9.8	8.7
Per capita consumption (NA)	7.9	5.7	7.6	7.4
Per capita consumption (survey)	5.6	6.1	7.9	6.3
Survey/NA ratio (in %)	92.1	70.5	74.1	83.7
	INDIA			
Growth (%)	1983-99	1999-04	2004-11	Average
Per capita income (NA)	3.4	4	6.6	4.3
Per capita consumption (NA)	2.6	2.6	6.3	3.5
Per capita consumption (survey)	1.5	0.4	5.9	2.4
Survey/NA ratio (in %)	62.8	52.8	50.5	58

The preferred method was experimented with in several NSS small sample surveys starting with the 1994/95 survey. The 1999/00 was the first NSS large sample survey to collect food data on a seven day basis. This practice was then discontinued but reappeared with the 2009/10 survey, and has been repeated with the 2011/12 survey. The seven day recall period, especially for food, has been highly recommended by experts. In their 1998 study, Deaton and Grosh state:

> First, the recall period should be shortened to the shortest period that is reasonable for the type of item in question. Thus, the recall period on food might change from the previous two weeks to the previous week. The 'usual month' questions on food might be dropped altogether, since it would be unclear to which time period they referred, which would make it impossible to deflate the expenditures appropriately. The recall period on non-food items might be shortened from a year to three or six months. Shortening the recall periods may increase the variance of the estimates, but in any case, it would be impossible to interpret any means for data collected when prices were very different. Moreover, inflation itself will cause people to make more frequent purchases (so that the real value of their money does not diminish), so the trade-off between biases in the mean and variance may be less than in those places where inflation is low. (Deaton and Grosh, 1998, p.45)

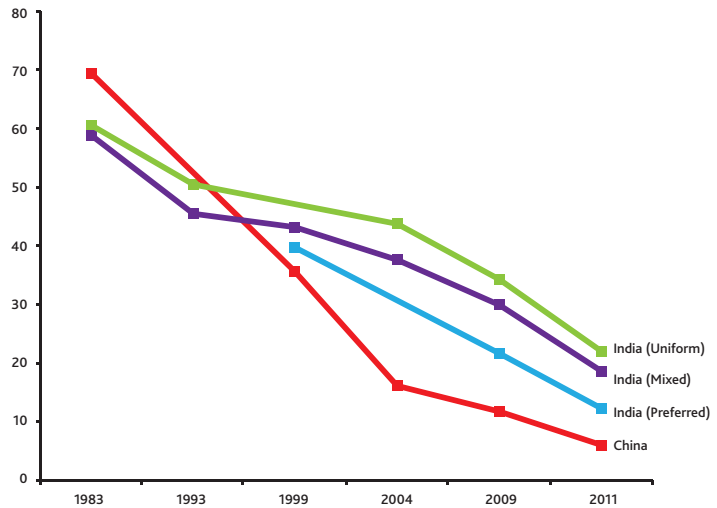
The recall period makes a considerable difference to one's estimate of poverty in India. In 2011/12, the uniform method indicates a headcount ratio of 22 percent; the preferred method indicates a poverty level of only 12 percent, a level not much different to that observed in China two years earlier. There was no preferred method estimate for 1983, but it is likely that it is not much different than the mixed method estimate of 59 percent poverty. In 2009, the gap between mixed and preferred methods was more than eight percentage points; in 1999, the gap was only three percentage points. Both at high and low levels of absolute poverty, the two estimates are likely to converge.

A closer examination of the data (Tables 3 and 4) indicates that in terms of poverty reduction, growth matters above all. Between 1999/00 and 2004/5, there was slow poverty reduction in India—only one percentage point a year, despite per capita growth of (log) 2.6 percent per annum. However, this period was accompanied by a decline in the S/NA ratio from 56 percent to 50.5 percent, or approximately 2.1 percent per annum. Hence, the recorded survey consumption growth was a paltry 0.5 percent (2.6 percent minus 2.1 percent); not surprisingly, poverty reduction was not commensurate with observed national accounts growth.

Note the sharp change in both survey and national accounts growth post 2004, and near identical values as there was imperceptible change in the S/NA ratio. During the period 2004/5 to 2011/12, consumption growth was six percent per annum, and poverty, regardless of the method used, declined by around 20 percentage points, or at a rate of 3 percentage points a year. China, on the other hand, shows much lower reduction in absolute poverty post 2004, despite a marked acceleration in GDP and survey consumption growth.

The conclusion that authoritarian China was practicing anti-poor growth during this period, while India was practicing inclusive growth would be false, as indicated by the respective SDE averages for the two countries between 2004 and 2011. The average, and steady, SDE for India during this period was 0.76; for China, a sharply declining SDE yields an average of 0.35 and a 2011 value of only 0.16. Figure 2 plots the poverty decline in China versus poverty decline in India. Note the respective slopes for the three different methods in India—it is much sharper for the more accurate preferred measure (seven days for food). Note also the flattening-out of the rate of China's poverty decline. This is not indicative of growth being low or being non-poor, it is indicative of the fact that the SDE has become very low (only 0.20 in 2010 and 0.16 in 2011). In 2000, the SDE for China was 0.6 for the very same PPP$1.25 poverty line. In other words, to achieve the same one percentage point poverty reduction, it will take three times higher consumption growth in China in 2012 or 2013 than it took in 2000.

FIG. 2 : POVERTY DECLINE IN INDIA 1983—2012: ESTIMATES BASED ON DIFFERENT RECALL PERIODS



There are two additional reasons for India's convergence to China's rate of poverty decline. First, unlike the earlier post-1980 period, survey capture in India has stabilised at around 50 percent; the level is not as important as the fact that this ratio is no longer declining. Of course, if this ratio was to increase, the rate of decline in India, and catch-up with China, the benchmark leader in terms of poverty reduction, would be that much faster. Second, somewhat surprisingly, inequality change in India has been almost non-existent compared to a rather large rate of inequality increase in China (Tables 11a and 11b). In Table 11a, inequality change is presented for each of the three different measures and for nominal and real incomes, and separately for rural, urban, and all India. The net result is virtually no change between 1983 and 2011 but a small (about five percent) improvement in inequality in 1993/94. Why there was an improvement in inequality two years after the initiation of economic reforms in 1991 is not entirely clear. The safe conclusion is that 1993/94 was an outlier year and that inequality in India has been virtually constant.

This is not so in China. Unit-level data on Chinese household surveys are difficult to obtain; the analysis available in the public domain suggests a worsening of inequality at about one percent per year. This means that, independent of the SDE, China's average growth of 6.3 percent per annum for the last 30 years is closer to 5.3 percent per annum. If the fact that China has had a significantly lower SDE than India (0.57 vs. 0.75 for India) is also taken into account this reveals a lower SDE, which translates into lower 'effective' growth of about one percent per annum. Thus, in terms of poverty reduction, effective consumption growth in China has been closer to four percent rather than 6.4 percent per annum.

The Indian record on poverty alleviation is easily comparable to that achieved in China, suggesting that it is one of the best in the world. If true, this would mean that Dreze and Sen are quite wrong in their assessment of poverty decline in India. There is another important, associated conclusion: if poverty reduction is the objective, then growth is not only the first among equal determinants, it is the only determinant. The data has been examined in many different ways, at rural, urban, and state level. The conclusion is always the same—growth had an overwhelming impact on the pace of poverty reduction in India over the last 30 years. Conclusively, inequality may be an important explanatory for some developed economies, such as the US, and some developing economies, such as China, but there is nothing in the empirical evidence in India to substantiate the claim that inequality has affected Indian growth or poverty reduction.

This conclusion is not well accepted within India. To claim that democratic India has had a successful record of poverty alleviation is considered heretical; to claim that the record is comparable to that of China will be considered madness. In China, and elsewhere, a successful record of poverty alleviation is something the government, and citizens, are proud of. This is not the case in India, most likely because of the intellectual and political leadership in India. Why this leadership has had, and continues to have, the particular attitudes it displays is beyond the scope of this study.[23] The domestic ideology in India is of a negative, defeatist, and populist kind, and may be a subject for a psychiatrist to examine. What has been attempted here is a fact based analysis of Indian (and Chinese) growth and poverty decline, the acceleration in such growth, and the determinants thereof.

TABLE 11(A): INEQUALITY IN INDIA 1983—2011: MINIMAL CHANGE

SOURCE: NSS SURVEYS, AUTHOR'S COMPUTATIONS

MONTHLY EXPENDITURE	YEAR					
	1983/84	1993/94	1999/00	2004/05	2009/10	2011/12
PREFERRED RECALL						
Nominal						
Gini Coefficient			31.9		34.8	35.1
Share of bottom 20%			8.9		8.4	8.2
Share of bottom 40%			21.5		20.2	20.0
Real						
Gini Coefficient			29.5		31.1	31.0
Share of bottom 20%			9.5		9.2	9.2
Share of bottom 40%			22.7		22.0	22.1
MIXED RECALL						
Nominal						
Gini Coefficient	30.3	30.1	31.9	34.6	35.7	35.9
Share of bottom 20%	8.9	9.2	8.9	8.5	8.2	8.1
Share of bottom 40%	22.0	22.3	21.5	20.3	19.9	19.6
Real						
Gini Coefficient	30.3	27.9	29.5	30.9	31.9	31.7
Share of bottom 20%	8.9	9.8	9.5	9.3	9.1	9.1
Share of bottom 40%	22.0	23.4	22.7	22.2	21.7	21.8
UNIFORM RECALL						
Nominal						
Gini Coefficient	32.5	32.5		36.3	36.9	37.4
Share of bottom 20%	8.4	8.7		8.1	8.0	7.8
Share of bottom 40%	20.9	21.2		19.6	19.4	19.0
Real						
Gini Coefficient	32.6	30.5		32.9	33.3	33.6
Share of bottom 20%	8.4	9.2		8.9	8.8	8.7
Share of bottom 40%	20.9	22.2		21.3	21.1	21.0

NOTES:

1. The uniform survey records the consumption for all categories of goods (food, durables and non- consumption of food over the past seven days, durables for 365 days and non-food and non-durables for the past 30 days, durables and non-food) over the past 30 days. The mixed survey records the consumption of food for the past 30 days, durables for 365 days and non-durables and non-food for 30 days. The preferred survey records the consumption of food over the past seven days, durables for 365 days, and non-food and non-durables for the past 30 days.

TABLE 11(B): CHINA: INEQUALITY INDICES FOR INCOME AND CONSUMPTION

SOURCE: WORLD BANK, 1998;* WIDER

INCOME INEQUALITY			
Year	Gini	Bottom 20%	Bottom 40%
1981	23.2	10.2	25.2
1984	24.8	9.9	24.5
1987	26.8	9	23.2
1992	29.4	8.4	21.9
1994	32.2	7.5	20.2
1995	31.9	7.7	20.4
1997	31.6	7.7	20.5
1998*	40.6	5.9	16.1
CONSUMPTION INEQUALITY			
Year	Gini	Bottom 20%	Bottom 40%
1990	28.4	9.2	22.8
1993	30.1	8.9	22.2
1996	31.6	8.4	21
1999	33.4	7.9	20
2002	35.5	7.5	19.1
2005	34.9	7.4	19.2

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