# The Relation Among Inequality, Poverty and Economic Growth (GDP) in India

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***Abstract***

*In this paper, the relationship among economic growth, inequality and poverty between the post and pre reform period is shown. To capture the impact of th-is, we will take consideration the GDP at constant prices and on the other side we will take poverty ratio of both urban and rural area, poverty head count ration and number of peoples. It is well established now that growth and poverty have on undescribed relationship. Growth is necessary but proverty is not and, alone growth cannot riddle out poverty. The study examines the question of whether economic growth tends to reduce poverty, where using the most recent data available, the paper shows that an increase in the rate of GDP growth translates into a direct one-for-one increase in the rate of growth of average income of poor's. The economic growth also indicates that economic growth is essential for poverty reduction, especially when it leads to increase in employment and improvement in opportunities for productive activities among the people that are poor. The result obtained indicates that the positive change in economic growth is prone to poverty reduction. To therefore improve and sustain the rate of economic growth in India from which poverty could be reduced measures, such as, stable macroeconomic policies, huge investment in agriculture, infrastructural development and good governance are suggested. But the main focus of the paper is to show the casual relationship between economic growth and poverty.*

*The study will cover that the initial level of economic growth will have significant impact on the reduction of poverty as per given duration. The objective in this present research paper is to check the status of relation among inequality, poverty and economic growth (in Terms of GDP) in India.*

***Keywords :*** *Poverty, Poverty head count ratio, GDP, inequality, Economic Growth.*

***JEL Classification :*** *O 16, E 24, I 32.*

## 1. INTRODUCTION

In most cases, the growth in the economy of any nation is a clear indication of an improvement in the socio-economic well-being of its people. Deterioration of growth rate in developing countries like India indicates the deterioration of standard of living. This deterioration further accumulates in poverty. And, this poverty affects all sectors of a developing economy whether it is social, regional, occupational, ethnical or industrial. The poverty reduction has become a central goal for development. It can be achieved by

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economic growth or by the distribution of income. Issues related to the benefits of growth accrued to the poor have become a priority of development policy in the 1990s. An emerging consensus has established that growth alone is a rather blunt tool for poverty reduction. In conjunction with emphasis on poverty reduction, policies as to the redistribution of income and assets have become increasingly more important. A policy agenda that addresses both distributional concerns and poverty reduction could lead to enhancing both economic growth and equity. Interestingly, the government has made changes at the policy levels to eradicate poverty. In fact up to the early 70s, The strategy of growth mediated development policies on the basis of the expectation of the operation of the "Trickle Down Hypothesis" such that the fruits of economic growth would automatically percolate amongst all sections of people irrespective of region, religion and castes etc. has been followed. But, astonishingly the proportion of people lying below the poverty line remained well above 50 per cent up to mid-70s which was followed by a declined trend thereafter albeit with some degrees of fluctuation. Because of this pessimistic experience of the failure of trickle down hypothesis, the government has taken a radical move as a policy matter to direct attack on poverty through different employment generating programs like IRDP, SJGSY (latter renamed as SGSY) and 8 other social security programmes like MNREGA etc. so that the benefits of these programmes could reach the target group. These policies were followed up to the end of 80s. Of course this has led to the deceleration of poverty not only at the national level but also at the inter-state level. In fact, the incidence of poverty declined up to 39 per cent at the national level. Majority of the states also experienced declining trends in poverty in varying degrees. Later in the early 90s i.e., since 1991 Government of India has introduced the economic reforms. This on-going process of reforms in various spheres viz, trade, Investment and finance, have indeed led to gradual withdrawal of the public sector coupled with the increasing reliance on the market fundamentalism. Interestingly, since 90s, the government has been pursuing the policy of growth cum public action led development strategy with its major focus on the participatory development process vis-a-vis the inclusive growth which has later been carried forward to the 12th five year plan (2012 to 2017) as its principal objective of faster sustainable inclusive growth. As a fall out of this policy, evolution the incidence of poverty has declined both at the national level (34.5 per cent in 2011 as per Planning Commission) and also at the inter-state level in varying degrees albeit at a lower magnitude. But, unfortunately as per estimate of the Planning Commission about 354.6 million of our total population (278.2 million in rural areas and 76.5 million in urban areas) still suffer from abject poverty as per 2011 census.

On the other hand, one cannot of course deny the fact that Indian Economy since her independence has gradually been moving towards the achievements of faster rate of growth of GDP after surpassing the long term (1950-75) persistence of Hindu Growth rate. It has indeed moved to the trajectory of high growth path by experiencing a sharp increase in our national income (i.e. about 7 per cent to 9 per cent during 2015 to 2016) which has made our country recognized as one of the fastest growing countries in the globe. Of course, most of the states have also experienced sharp increase in their SDP during the same period. But, this growth has mainly been informal service sector led growth which is basically predatory and job destroying. The usual perception is that this elite cantered as well as service sector driven growth process has led to the increase in both absolute and relative inequality in the distribution of income which in turn has led to boost the growth vis-a-vis the persistence of the inequality and poverty. The persistence of the trajectory of high growth both at the national and inter-state level and the higher incidence of poverty as well as inequality is indeed puzzling. So how can one reconcile between the persistence of high growth rate of our national income and the staggering dimensions of chronic poverty even after the pursuance of growth mediated and public action led development strategies since 80s.

In this paper, the relationship among economic growth, inequality and poverty between the post and pre reform period is shown. To capture the impact of this, we will take consideration the GDP at constant prices and on the other side we will take poverty ratio of both urban and rural area, poverty head count ration and number of peoples. It is well established now that growth and poverty have on undescribed relationship. Growth is necessary but proverty is not and, alone growth cannot riddle out poverty.

## 2. RESEARCH METHODOLOGY

Research Methodology involves an explanation of the methods used to collect the data. This may include describing, explaining, understanding, criticising and analysing. It, further, describes that a clear purpose of things one want to find out viz. an answer to a question of a solution to a problem.

**Objective :** The objective in this present research paper is to check the status of relation among inequality, poverty and economic growth (in terms of GDP) in India.

**Data :** The study is based upon the secondary data duly collected from various sources available online.

**Period :** The basic pre-reform and post-reform period is considered till 2016.

## 3. LITERATURE SURVEY

**Tendulkar and Jain (1995)** were first to evaluate the impact on economic reform on poverty as early as 1995. This paper analyzed NSS consumption expenditure data of 1993-94 and concluded that the expenditure has reduced in real terms (at constant prices) thereby suggesting that the poverty levels have not changed significantly in the period 1987-89 to 1993-94. Sen (1997), using the same set of data form NSS confirmed the above conclusion regarding levels of poverty.

**Chandrashekhar and Sen (1996)** did not have 1993-94 NSS consumption expenditure data, but estimated that in 1991-92, the poverty level was 35 percent; while that in rural areas was 44 percent. According to Tendulkar and Jain (1995) the states of Andhra, Assam, bihar, Karnataka, Maharastra and Rajasthan witnessed a significant decline in per capita consumption expenditure (at constant prices) thus indicating an upward movement in poverty.

**Michael Roemer and Mary Kay Gugerty March (1997)** this study demonstrates that economic growth benefits the poor in almost all the countries in which substantial growth has taken place. Indeed, economic growth appears to be one of the best ways to reduce poverty. The poor do better in counties that grow quickly, even if income distribution deteriorates slightly. Countries which experienced rapid economic growth over the last thirty years, such as Hong Kong, Korea, Malaysia, and Indonesia, saw the per capital incomes of the bottom 20 per cent and 40 per cent of the population grow significantly.

**Pant and Patra (2001)** used NCAER survey data to estimate the rural poverty and concluded that the rural poverty declined in 1993-94 (after 2 years of reform), after showing initial increase due to other reasons (including reduced rural per capita expenditure on poverty alleviation programs). Significantly this analysis finds evidence that reducing the poverty level has also led to reduction in depth and intensity of poverty also.

**Deaton (2002)** decomposes the change in the head count ratios into two components a growth component and a distribution component. The growth component reflects the increase of per capita expenditure, while the distribution captures that may take place in the distribution of per capita expenditure over households. According to him the 'net' or 'actual'; change in HCR, between 1993-94 and 1999-2000 is 5.9 per cent for all India. This exercise conducted state wise, shows wide disparity (a reduction of more than 10 per cent for Gujarat, Tamil Nadu, Haryana, Karnataka & Maharashtra while a less than 2 per cent for Assam and Orissa).

**Sen (2004)** using NSS data has come to the conclusions that the reforms have only benefited the elite and affluent classes. (Analysis of per capita consumption expenditure since 1980 in rural and urban India, the author has shown that top 20 per cent richest persons have increased their consumption by around 40 per cent over period 1989-90 onwards. This observation both, for rural and urban population is indeed surprising as it is totally contrary to the findings of these economic classes during the period 1965-66 to 1987-88. Chaturvedi A. (1990) in his study for BERF using NSS consumption expenditure data for rural India concluded that 'growth in consumption of non-food items specially the industrially produced consumer items is contributed to mainly by lower middle, middle and upper middle classes, the size of which is continuously growing.

**Gafar. T. Ijaiya, Mukaila. A. Ijaiya, Raja. A. Bello, Michael. A. Ajayi. 15; August 2011)** this paper explored the relationship between economic growth and poverty reduction in Nigeria. From the analysis, our findings indicate that the initial level of economic growth is not prone to poverty reduction, while an increase in economic growth is prone to poverty reduction, a situation that can only be sustained and improved upon if certain policy measures are put in place. Prominent among policy measures are stable macroeconomic policies, such as , sound fiscal and monetary policies that would create a hospitable climate for private investment and thus promote productivity that the poor and non-poor would benefit from. The policies should also be such that would emphasis on labor-intensive strategy given its ability to reduce poverty by increasing employment and improving the opportunities for productive activities among the poor.

**Suryanarayana (2008) and Jayaraj and Subramanian (2012a)** The findings of this paper findings imply that the picture that emerges from some recent studies (e.g. Dubey and Thorat 2011) which have argued that recent growth has been "more inclusive," by showing that the rates of poverty reduction during the period 2004-05 to 2009-10.

**Ratan Ghosal August 5-11, (2012)** We can plausibly say that our panel results are highly compatible with the policy evolutions towards poverty reduction and also with nature of the structural transformation with tremendous increase in service sector led growth which has also produced favourable impact on the reduction of poverty across states and over time. Therefore it is also plausible to conclude that for the further reduction in the magnitude of poverty of the people across the states, more emphasis should be placed not only on the increase in the growth rates but also on the tremendous increase in the social sector expenditures like health, education etc.

**Chotikapanich, Griffiths, Rao, Kurunarathne ADBlapaper (2013)** we found that there was some reduction in poverty over time in relative and absolute terms for the whole of Asia and for most of the developing countries. For Indonesia, average income grew very rapidly during 2002-2005. This high growth rate lifted many people out of poverty, with approximately a 27 percentage point reduction by 2005.

## 4. IMPACT OF GROWTH ON POVERTY

Since the level of income and its growth, other factors apart are the crucial determining factor for the levels of living as well as the incidence of poverty of people. In fact, it has been found that our economy to achieve the trajector to high growth path between 1975 and 1990, which eventually culminated by the crisis of 1991 caused by high fiscal deficit vis-a-vis the current account deficit. Obviously the fall out of the crisis of 1991 caused by high fiscal deficit vis-a-vis the current account deficit. Of course during the post reform period and especially during the first five years of new millennium the growth rate of GDP has reached such a conspicuous level (i.e. 8 per cent - 9 per cent per annum) that India has been recognized as one of the fastest growing economies in the world. Interestingly, during the period of half a century the economy has also experienced remarkable structural transformation in respect of her composition of GDP. Parallely, it has also been found that in course of structural trasformation of our economy the service sector has been enjoying a comparative advantage in playing a leading role towards the achievements of remarkable growth rate such that the service sector driven growth has been christened as 'service sector revolution' in our economy.

According to Todaro (1977) and the World bank (1997) to determine the growth of any country's economy certain indicators are usually taken into consideration. These indicators include : (i) the nation's Gross Domestic Product (GDP); (ii) the nation's per capita income (iii) the welfare of the citizens; and (iv) the availability of social services and accessibility of the people to these services. Gross Domestic Product refers to the total output of final goods and services produced in a country during any given period of time by residence of a country irrespective of their nationality.

As a poverty reduction mechanism, higher technological capabilities will permit greater amount of output from any given level of input, while the increase in output permitted by improve technology will go a long way to increase standard of living of the people and thereby reduce poverty. Atoloye (1997) further stated that economic growth enhancing strategies such as import substitution and export-led growth strategies are also important for poverty reduction. For instance, the emphasis on export-led growth is in the pursuit of the international competitiveness which makes it possible for a country to control its domestic production process, increase productivity and generate surpluses which are transmitted across its national borders in return for foreign exchange. The maintenance of the tempo in addition to development of adequate human capital would help to accelerate and sustain income level and enables man to take control of his environment and pave the way for sustainable poverty reduction.

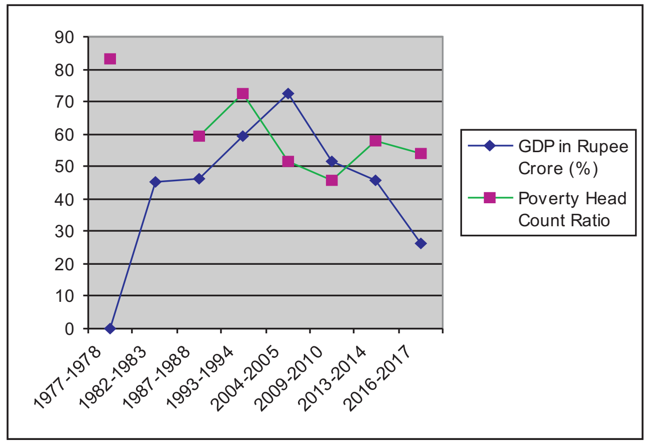
Now as far as the incidence of poverty concerned it is well recognized that because of the growth mediated strategy of development and later the inclusion of the direct public intervention Programs of the government the magnitude of the incidence of poverty has declined not only at the national level but also at the rural and urban areas across the states in varying degrees. However the dynamics behavior of the extent of poverty clearly reveals that the rate of decline was almost negligible up to 1970 because of the failure of the trickle down hypothesis so that about 51 per cent of our total population lived below the official poverty line in the mid 70s. Later since mid-70s the extent of poverty started declining at a faster space both at the national level and cross-state level such that between 1977-78 and 1987-88 national level poverty declined to 39 per cent and thereafter by 2015-16 it has reached the figure of 29.8 per cent. It is worth mentioning that while analyzing the temporal behavior of the incidence of income poverty across the states we have used the planning commission estimates of poverty. Now since the Planning commission has changed the methodology of estimation of poverty for 2012-13 and 2015-16 by switching over from Lakdawala methodology to the Tendulkar methodology which covers broader perspective for measuring poverty, the same estimates have also been used for the periods 2012-13 and 2015-16 respectively. Obviously because of the change of methodology causing an upward shift in state specific poverty lines we find rather a mild increasing trend in the incidence of poverty across the states between 2012-13 and 2015-16. This seems to have produced little impact on our panel regression analysis. It is worth mentioning here that higher figures of head count poverty for almost all the states have been registered. However, if we compare the figures of poverty estimated by using Lakdawala methodology for the same periods then we find almost all the states excepting M.P., Maharashtra, Punjab, Rajasthan and Orissa have experienced falling trend in poverty. It also interesting to note that in all the states excepting Assam the incidence poverty has fallen between 2009-10 and 2015-16 estimates for both years are based on Tendulkar methodology. It is also interesting to note that our calorie based estimate of poverty for 2015-16 reveals same declining trend in the poverty with a relatively lesser degree of incidence of poverty across the states as compared to the Tendulkar based estimates for the same period. Now to judge the relative positions of states in respect of their ability towards the reduction of poverty we have ranked all the states such that the state having the lowest incidence of poverty has got rank one and so on. It is obvious from table-4 that no state has been able to retain constant rank. We find that the relative positions of the states in respect of their ability of reduction of poverty varies remarkably at the inter temporal level over the period of our study.

**Table 1.**
**Relationship between GDP and Poverty**

| Year | GDP in Rupee Crore | Poverty Head Count Ratio |
|---|---|---|
| 1977-1978 | 97633 | 83.32 |
| 1982-1983 | 178985 | 85.52 |
| 1987-1988 | 332068 | 59.42 |
| 1993-1994 | 817961 | 72.47 |
| 2004-2005 | 2971464 | 51.35 |
| 2009-2010 | 6108903 | 45.63 |
| 2013-2014 | 11236635 | 58.01 |
| 2016-2017 | 15251028 | 54.13 |

***Source :*** GDP from RBI, Indian statistic.com and Poverty (HCR) of India from World Bank.

**Graph 1.**
**Relationship between GDP**




In 1977-1978, the poverty head count ratio (PHCR) was 88.97 for the same year when GDP increases 178905 crore rupees. In the year 1982-1983 the PHCR declines from 88.97 to 84.79. So it can be said that when GDP increases the poverty line declines in more sim Figure (1) below gives a overview of the dynamic behavior of the level of GDP and Poverty which is being calculated in the form Poverty. Head Count Ratio. It reveals more or less an increasing trend over the period between 1978 to 2017. GDP has a strong impact on poverty. It shows a inverse relationship between GDP and poverty due to increase in GDP poverty ratio declines. So if we look over the past few years with the increase in standard of living the poverty ratio is declining. If we look over the table (1) the (PHCR) poverty head count ratio has declined significantly from 88.97 in the year 1977-1978 to 54.13 in the year 2016-2017. We also find out the growth rate which you can see with the help of graph (1) which also shows that with the increase in economic growth leads decrease in poverty.

## 5. IMPACT OF GDP ON INEQUALITY

The measurement of the effect of inequality on poverty is a difficult task because inequality in distribution can change in infinite ways. It is not possible to establish a simple formula; relating changes in aggregate measures of inequality such as the Gini index to changes in poverty. The larger will be the increase in poverty for a given increase in the Gini index.

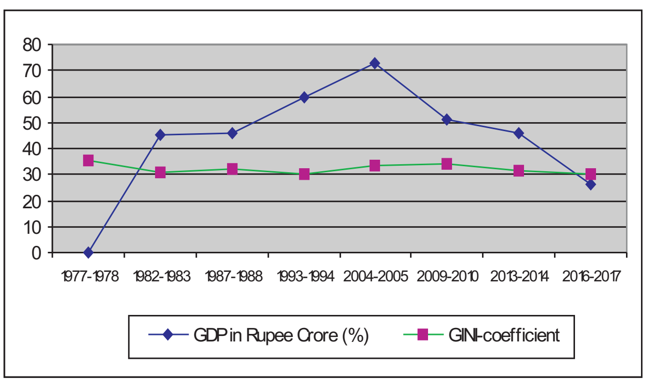
This suggests that economic growth if accompanied by an increase in inequality may not lead to an increasingly proportional increase in poverty, as was the case when growth did not change inequality.

**Table 2.**
**Relationship between GDP and GINI-coefficient Inequality**

| Year | GDP in Rupee Crore | GINI-coefficient |
|---|---|---|
| 1977-1978 | 97633 | 35.09 |
| 1982-1983 | 178985 | 31.10 |
| 1987-1988 | 332068 | 31.90 |
| 1993-1994 | 817961 | 30.08 |
| 2004-2005 | 2971464 | 33.40 |
| 2009-2010 | 6108903 | 33.90 |
| 2013-2014 | 11236635 | 31.60 |
| 2016-2017 | 15251028 | 30.30 |

***Source :*** GDP from RBI, Indian statistic.com and GINI-Coefficient of India from World Bank.

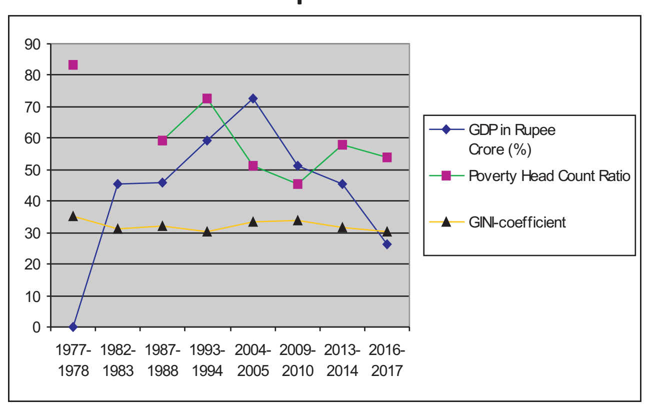
**Graph 2.**
**Relationship between GDP**




If we take a closer look on table (2) we can find out that from the year 1977-1978 to 1993-1994 GDP has a strong impact on the value of GINI-coefficient. If we look over the Economic theory like Kuznets curve it also shows that economic growth led decline in inequality which has been also proved by this data. As the size of GDP has increased from 97633 rupee crores in the year 1977-1978 to 817961 rupees crores in the year 1993-1994, the value of Gini-coefficient has improved from 35.09 to 30.08 for the same time period. It means during the pre-reform period an increase in the size of GDP has led to the decline in income inequality. But an interesting fact can be note down from table (2) that after economic reforms (from 1994 onwards when its impact started to realized) an increase in the size of GDP has widened the economic inequality. This can be seen in table (2) that in 1993-1994 the size of GDP was 17717.02 and Gini-coefficient was 30.08 in the same year. When GDP increased to 2971464 in 2005, the Gini-coefficient value increased to 33.4 and when the former increased to 6108903 rupees crore in the year 2009-2010 then the later increased to 33.9 in the same year. Further, in the year 2013-14, GDP in Rupees crores was 11236635 and GINI-coefficient was 31.6 while in 2016-17, GDP was 15251028 and later was 30.3. It is a clear indication that after reforms the income inequality has widened. If we look over the graph (2) the growth rate of GDP is increasing inequality is reducing this shows also that with the decrease in inequality poverty reduces.

This histogram the combined relationship between PHCR, GDP and Gini coefficient.

**Graph 3.**
**Relationship between GDP**




## 6. CONCLUSION AND SUGGESTIONS

This study demonstrates that economic growth benefits the poor in almost all the countries in which substantial growth has taken place. Indeed, economic growth appears to be one of the best ways to reduce poverty. This paper explored the relation among inequality, poverty and economic growth (GDP) in India. From the analysis, the findings indicate that the increase in economic growth is prone to reduce poverty and inequality a situation that can only be sustained and improved upon if certain policy measures are put in place. Prominent among policy measures are stable macroeconomic policies, such as, sound fiscal and monetary policies that would create a hospitable climate for private investment and thus promote productivity that the poor and non-poor would benefit from. The policies should also be such that would emphasis on lab our-intensive strategy given its ability to reduce poverty by increasing employment and improving the opportunities for productive activities among the poor. And circumstances the poorest segments of the society will se an improvement in their life conditions.

Beyond macroeconomic stability are sound legal and regulatory framework that are necessary in ensuring that both domestic and foreign investors are effectively protected against sudden and arbitrary changes in the economic environment and the rules of the game. There is also the need for renewed emphasis on government interventions in the nation's economic activities that would help the poor particularly those found in the agricultural and the informal sectors. In this regard, the government should intensify effort in the provision of more infra structural facilities and the maintenance and repair of existing ones. Efforts should also be made to improve the agricultural sector through resuscitation of agricultural produce marketing board, intensive research and technological innovations, provision of credit facilities to farmers (to be channeled through micro-finance institutions and cooperative societies) and provision of quality health care services.

The issue of good governance that has eluded the nation and corruption that has ruined the nation's economy should also be address. When good governance is allowed to thrive civil and economic liberties that are essential for individual initiative and development would be enhanced. Similarly, with good governance, the rulers will be able to provide necessary opportunities to the poor including social services, employment, safety nets and security and information that will permit accountability, transparency and openness which in the long run would help increase economic growth and reduce poverty.

Encouraging effective private investment is essential because investment and technological innovation are the main drivers of growth in jobs and labor incomes. Fostering private investment requires reducing risk for private investors through stable fiscal and monetary policy, stable investment regimes, sound financial systems, and a transparent business environment. Certainly, the rule of law and anti-corruption measures are also important. Special measures are frequently required to ensure that micro enterprises and small businesses can participate effectively in markets that are more vulnerable, yet employ a large number of poor people. For example, ensuring access to credit, lowering transaction costs of reaching export markets, and reducing restrictions on the informal sector will all help creating a sound business environment for poor households and small firms. Public investment in expanding infrastructure and communications and upgrading the skills of the labor force has to complement private investment to enhance competitiveness and create new market opportunities.

Opening to international markets offers and important opportunity for income growth as long as countries have the infrastructure and institutions to stimulate a strong supply response (e.g. call centers in Ghana, garment factories in Vietnam). Therefore, the opening needs to be well designed with special attention to bottlenecks.

Addressing asset inequalities across

gender, ethnic, racial and social divides. Special action is required to tackle socially-based inequality such as concentrated farm land ownership in rural communities, under-schooling of girls relative to boys, and the limited independence of wowen due to lack of access to productive means. Ethnic inequalities can easily flare up into violence, which in turn can set back economic development for a generation.

Getting infrastructure and knowledge to poor areas. Special action is also needed in order to improve the social and economic infrastructure in poor and remote areas, which to a great extent also contribute the poverty problem. Similarly, basic urban services should be provided to city slums so that urban poor people may have chance to participate more actively in over growth.

Thus there is every reason to believe that economic growth reduces poverty. There is little evidence to support the contention that economic growth and outward-oriented policies will hurt the poor. Countries with higher rates of economic growth over the last 30 years have achieved greater reductions in poverty.

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