INCOME POVERTY IN INDIA

HIMANSHU SEKHAR ROUT

DEPARTMENT OF A & A ECONOMICS

UTKAL UNIVERSITY, BHUBANESWAR - 751004 INDIA

E-mail: hsrout@utkaluniversity.ac.in

Brain Storming

- What is the economic growth rate of India?
- Is it not sufficient to lead a decent life?
- If yes, then what are the challenges? Why not a decent life?
- Does the benefits of growth not widely spread to various sections in society? Inclusive Growth?
- What is poverty?
- Is it only related to wealth, income or consumption?
- Is a person having crores of rupees not poor?
- Is there any panacea for it?
- Is India getting poorer?

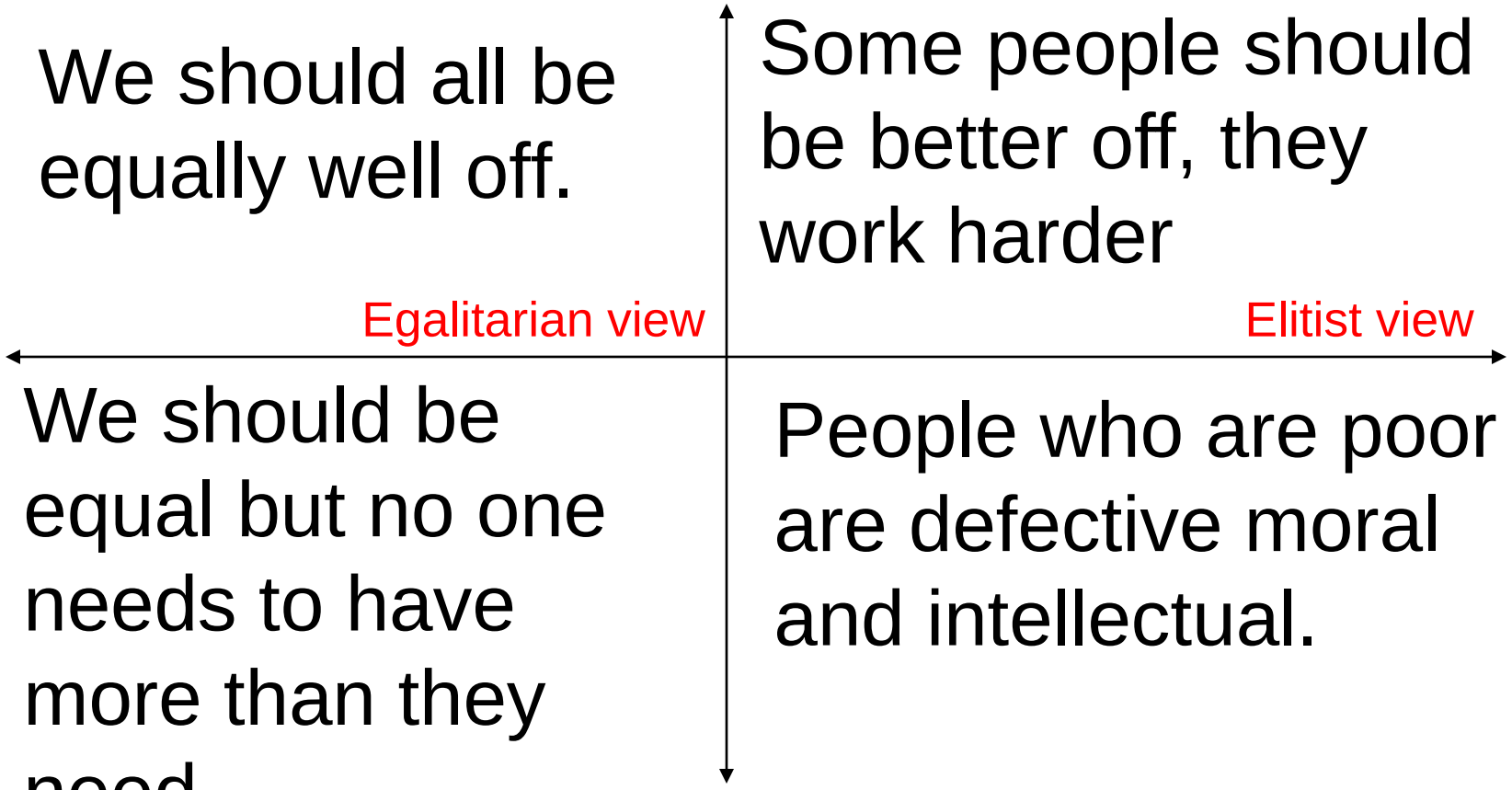
What is poverty?

- **Approach I**: Poverty is a situation where people do not have enough income or consumption to put them above some adequate minimum threshold.
- **Approach II**: Poverty may also be tied to a specific type of consumption; for example, people could be house poor or food poor or health poor.
- **Approach III**: The broadest approach to poverty focuses on the capability of the individual to function in society. Poor people often lack key capabilities; they may have inadequate income or education, or be in poor health, or feel powerless, or lack political freedoms.

What is poverty?

- Fundamentally, poverty is a denial of choices and opportunities, a violation of human dignity. It means lack of basic capacity to participate effectively in society. It means not having enough to feed and cloth a family, not having a school or clinic to go to, not having the land on which to grow one's food or a job to earn one's living, not having access to credit. It means insecurity, powerlessness and exclusion of individuals, households and communities. It means susceptibility to violence, and it often implies living in marginal or fragile environments, without access to clean water or sanitation (UN).

Moral views of poverty



Poverty: Absolute and Relative

- **Absolute poverty** or **destitution** refers to being unable to afford basic human needs, which commonly includes nutrition, clothing, shelter, and clean and fresh water.
- Deprived of getting the minimum requirements for biological survival.
- About 1.7 billion people are estimated to live in absolute poverty today in the world.
- This definition is typical of early studies of poverty.

Poverty: Absolute and Relative

- **Relative poverty** refers to lacking a usual or socially acceptable level of resources or income as compared with others within a society or country (Gini Coefficient).
- It can include lack of:
  - Educational opportunity
  - Material possessions
  - Health care
  - Good quality housing
  - Civil Rights
  - Social opportunity

Analysis of Poverty Definition

- Poverty is a social construction and so this reflects general standards of living and expectation.
- It helps us to understand broader debates such as social exclusion.
- Relative definitions tend to measure inequality rather than poverty.

Poverty Estimates: WHY

- To keep poor people on the agenda (to design, monitor and implement appropriate anti-poverty policies)
- To be able to identify poor people and so to be able to target appropriate interventions
- To monitor and evaluate projects and policy interventions geared to poor people
- To evaluate the effectiveness of institutions whose goal is to help poor people.
- To analyze poverty profiles by regions, socio-economic groups
- Determinants - factors affecting poverty

Poverty Estimates

- Income-based Measures
  - Seebohm Rowntree: Poverty is a level of total earnings insufficient to obtain the minimum necessities for the maintenance of “merely physical efficiency,” including food, rent, and other items.
  - Within a country, income or consumption survey
  - To compare across countries, use “International Dollar”
  - Using commodity prices, convert real income to PPP ➔ Purchasing Power Parity

Poverty Estimates

- Non income-based measures
- Health
  - Infant mortality figures are higher for poor than rich households
  - Difficult because this requires a system for registration of births and deaths
- Education
  - Net primary school enrolment rate
  - Ratio of enrolled primary-school-age children to all primary-school-age children.

Poverty Estimates

- Vulnerability: The risk that a household or individual will experience an episode of income or health poverty over time, including exposure to other risks.
- Indicators of vulnerability
  - Physical assets—those that can be sold to compensate for loss of income
  - Human capital: for example level of education
  - Income diversification
  - Links to networks: family-based networks, occupation-based groups of mutual help, rotating savings and credit groups,
  - Participation in the formal safety net: insurance, etc
  - Access to credits

Poverty Estimates

- Head Count Ratio (HCR): proportion of total population that falls below poverty threshold income or expenditure. Based on either national PL or $1.9-a-day PL.
- Poverty Gap Index (PGI): unlike HCR, it gives us a sense of how poor the poor are. It is equivalent to income gap below PL per head of total population, and expressed as a percentage of the poverty line.
- Squared Poverty Gap index (SPG): Adds the dimension of inequality among the poor to the poverty gap index. For a given value of the PGI, population with greater dispersion of income among poor indicates a higher value for the SPG.

Poverty Estimates

Head Count Ratio: $HCR = \frac{m}{n}$

Poverty Gap: $PG = \left(1/n\right)\sum_{i=1}^{m}\left(\frac{z - y_i}{z}\right)$

Squared Poverty Gap: $SPG = \left(1/n\right)\sum_{i=1}^{m}\left(\frac{z - y_i}{z}\right)^2$

m= no. of poor population, n = total population,
z= poverty line, y_i =income of i-th person

Poverty Estimates in India

- Intellectual genesis of poverty very old: Adam Smith, Ricardo, Marx: subsistence wage concept
- An early empirical work by Dadabhai Naoroji, 1901
- Estimated an income level “necessary for the bare wants of a human being, to keep him in ordinary good health and decency”. Estimated cost of food, clothing, hut, oil for lamp, barber and domestic utensils to arrive at ‘subsistence per head’.
- In the absence of income distribution data, Naoroji compared computed subsistence level with per capita production to draw attention to mass poverty.
- Remarkable work that parallels an early work on British

Poverty Estimates in India

- **Poverty line**: It is cut-off point on the line of distribution, which divides the population as poor and non-poor.
- **National / Indian Poverty Line:** Per capita nutritional requirements of 2400 calorie for rural and 2100 calorie for urban and based on this a monthly per capita expenditure (MPCE) of ₹49.09 in rural and ₹56.64 in urban was identified as the poverty line for 1973-74. This was updated to accommodate price changes over time [The *Report of the Task Force on Projections of Minimum Needs and Effective Consumption Demands (GoI, 1979)]*. (**Old Method: Lakdawala-1989**)

Poverty Estimates in India

- **Shortcomings of the old Method**
  - Difficult to accommodate price changes over time.
  - The calorie norms should change because of demographic shifts in age and sex and change in occupational patterns
  - Basic requirements like health, education, sanitation and housing are not included in the calculation of poverty line
  - A reference period of 30 days may not be appropriate for low frequency items of consumption expenditure.

Poverty Estimates in India

- **New Method (Suresh D Tendulkar)**: The Mixed Recall Period (MRP) monthly per capita expenditure above the 25.7 percentile constituted the new poverty line and the consumption of items around this constituted the poverty line basket (PLB) for urban India *[Report of the Expert Group to Review the Methodology for Estimation of Poverty (GoI, 2009)].*
- **International Poverty line:** Income per day of US$ 1 / US$ 1.25 (**Old Method**).
- **International Poverty line:** Income per day of US$ 1.9 (**New Method**)
- Percentage of people BPL is known as **head count ratio**.

World Poverty

- A fifth of the world’s people live on less than $ 1 a day.
- 44% of them are in South Asia (WDR 2000-01).
- India captures one third of the world's poor.

Indian Poverty Statistics

- A monthly per capita consumption expenditure of ₹356 and ₹539 for rural and urban areas respectively for 2004-05.
- More than a quarter of India's population remain below PL in 2004-05.
- 28.3% Rural, 25.7% Urban, 27.5% Total,
- Absolute no.: 302 million in 2004-05

PHASES I AND II: THREE DECADES OF GOOD INTENTIONS BUT POOR PERFORMANCE

- Poverty alleviation was always the central goal of the policy in India, with growth viewed as a means rather than an end in itself.
- The 4th para of the 1st Plan states:
  - The urge to economic and social change under present conditions comes from the fact of poverty and of inequalities in income, wealth, and opportunity. The elimination of poverty cannot, obviously, be achieved merely by redistributing existing wealth. Nor can a program aiming only at raising production remove existing inequalities. The two have to be considered together; only a simultaneous advance along both these lines can create the conditions in which the community can put forth its best efforts for promoting development.

PHASES I AND II: THREE DECADES OF GOOD INTENTIONS BUT POOR PERFORMANCE

- By 1956, we aimed at promoting a “socialistic pattern” of society in the country.
- In chapter 2, the Second Five Year Plan listed four key objectives:
  - “sizeable increase in national income so as to raise the level of living in the country”;
  - “rapid industrialization with particular emphasis on the development of basic and heavy industries”;
  - “a large expansion of employment opportunities”; and
  - “reduction of inequalities in income and wealth and a more even distribution of economic power.”

PHASES I AND II: THREE DECADES OF GOOD INTENTIONS BUT POOR PERFORMANCE

- Subsequently, Pitambar Pant, a member of the PC in 1962, prepared a 15-year plan (1961–76) that aimed at providing a "minimum level of living" for all Indians.
- Some of the key policies were adopted precisely with a view to
  - *promoting smaller entrepreneurs*,
  - *curbing the concentration of economic power*, and
  - *expanding employment opportunities*.

PHASES I AND II: THREE DECADES OF GOOD INTENTIONS BUT POOR PERFORMANCE

- India has had a long tradition of the study of poverty (NSS), the estimates have several well-known limitations.
- First, they are subject to the usual sampling and non-sampling errors, including those due to non-responses or biased responses.
- Second, the sample sizes and their duration have varied over time. The duration has ranged from as short as four months to a full year. The sample size has varied from fewer than 3000 to more than 100,000.

PHASES I AND II: THREE DECADES OF GOOD INTENTIONS BUT POOR PERFORMANCE

- Third, different individuals register their responses at different times in a year (seasonal variation).
- Fourth, the choice of the price index used to translate the poverty line from one year into another can greatly influence the poverty ratio.
- Fifth, the reference period for household consumption expenditures varies across items within the same round and sometimes may vary for the same commodities across rounds.

PHASES I AND II: THREE DECADES OF GOOD INTENTIONS BUT POOR PERFORMANCE

- Finally, estimates of per-capita expenditure in the NSS vary considerably from those generated by the National Accounts Surveys (NAS) and diverged considerably during the 1990s.
- There is consensus among economists who have studied poverty in India that there was no significant reduction in poverty during at least the first 25 years of development (***Table 1***).

UTKAL UNIVERSITY

Table 1: Rural, Urban and National Poverty Ratio

NSS Round	Survey Period	Year	Head Count Index		
			Rural	Urban	National
3	Aug 51–Nov 52	1951–52	47.37	35.46	45.31
5	Dec 52–Mar 53	1952–53	48.21	40.14	46.80
7	Oct 53–Mar 54	1953–54	61.29	49.92	59.30
8	Jul 54–Mar 55	1954–55	64.24	46.19	61.07
10	Oct 55–May 56	1955–56	48.34	43.15	47.43
11	Aug 56–Feb 57	1956–57	58.86	51.45	57.55
13	Sept 57–May 58	1957–58	55.16	47.75	53.84
14	Jul 58–June 59	1958–59	53.26	44.76	51.75
15	Jul 59–Jun 60	1959–60	50.89	49.17	50.58
16	Jul 60–Aug 61	1960–61	45.40	44.65	45.27
17	Sept 61–Jul 62	1961–62	47.20	43.55	46.54
18	Feb 63–Jan 64	1963–64	48.53	44.83	47.85
19	Jul 64–Jun 65	1964–65	53.66	48.78	52.75
20	Jul 65–Jun 66	1965–66	57.60	52.90	56.71
21	Jul 66–Jun 67	1966–67	64.30	52.24	62.00
22	Jul 67–Jun 68	1967–68	63.67	52.91	61.60
23	Jul 68–Jun 69	1968–69	59.00	49.29	57.11
24	Jul 69–Jun70	1969–70	57.61	47.16	55.56
25	Jul 70–Jun 71	1970–71	54.84	44.98	52.88
27	Oct 72–Sept 73	1972–73	55.36	45.67	53.37
28	Oct 73–Jun 74	1973–74	55.72	47.96	54.00
32	Jul 77–Jun 78	1977–78	50.6	40.5	48.36
38	Jan 83–Dec 83	1983–84	45.31	35.65	43.00
42	Jul 86–Jun 87	1986–87	38.81	34.29	37.69
43	Jul 87–Jun 88	1987–88	39.23	36.2	38.47
44	Jul 88–Jun 89	1988–89	39.06	36.6	38.44
45	Jul 89–Jun 90	1989–90	34.3	33.4	34.07
46	Jul 90–Jun 91	1990–91	36.43	32.76	35.49
47	Jul 91–Dec 91	1991–92	37.42	33.23	36.34
48	Jan 92–Dec 92	1992–93	43.47	33.73	40.93
50	Jul 93–Jun 94	1993–94	36.66	30.51	35.04
51	July 94–June 95	1994–95	39.75	33.50	38.40
52	July 95–June 96	1995–95	37.46	28.04	35.00
53	Jan 97–Dec 97	1996–97	35.69	29.99	34.40

PHASES I AND II: THREE DECADES OF GOOD INTENTIONS BUT POOR PERFORMANCE

- The key message conveyed by table 1 is that the poverty ratio at the national level fluctuated during 1951–78 between 45.27 percent in 1960–61 and 62 percent in 1966–67, but did not show a clear trend.
- Trend growth rate in the poverty ratio turns out to be −0.2 percent per year during 1951-61 (figure 1) and 1.34 percent during 1963-74 (figure 2).
- This shows the poverty ratio exhibited a slightly declining trend during 1951–61 and a slightly rising trend during 1963–74. The period 1951–74, taken as a whole, shows a slightly rising trend.

Figure 1: Poverty Trend, 1951-61

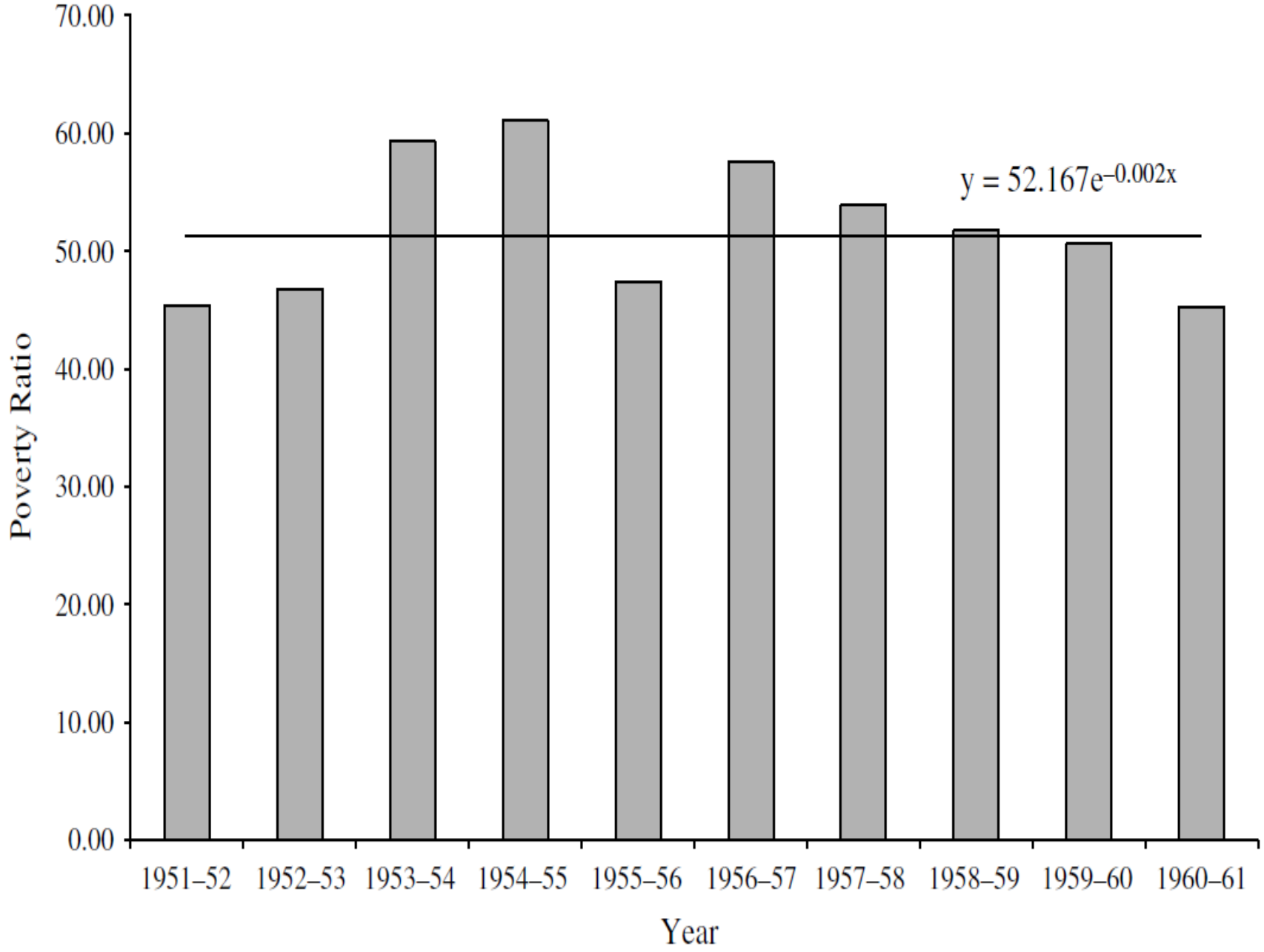
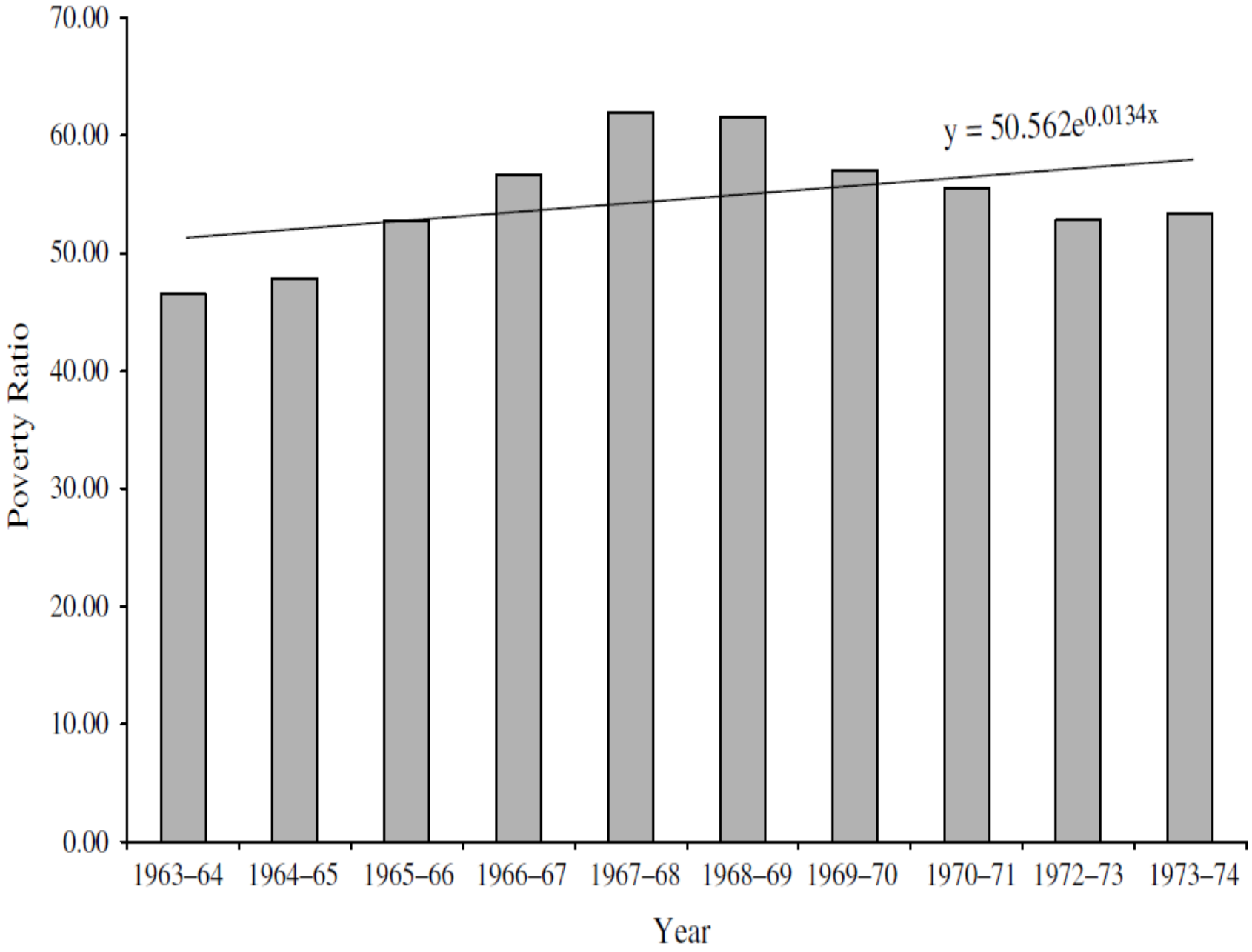


Figure 2: Poverty Trend, 1963-74



PHASES III & IV: LIBERALIZING REFORMS AND SIGNIFICANT DECLINE IN POVERTY

- Phase III saw the growth rate rise to 4.8 percent from 3.2 percent in phase II.
- This shift in the growth rate also coincided with a break in the poverty trend from 48.4 percent in 1977–78 to 43 percent in 1983–84, and to 38.5 percent in 1987–88.
- But in phase IV, there are several controversies regarding poverty situation in India. The initial controversy arose from the thin surveys following the 1993–94 thick survey.

PHASES III & IV: LIBERALIZING REFORMS AND SIGNIFICANT DECLINE IN POVERTY

- The national poverty ratio fell from 38.5 percent in 1987–88 to 35 percent in 1993–94, rose in 1994–95, but fell back to the 1993–94 level in the subsequent two years.
- The 54th round which was in the field during the first six months of 1998 yielded estimates similar to those in 1993–94.
- This pattern in the poverty ratio led some reform skeptics to conclude that liberalizing reforms had not been good for the poor.

PHASES III & IV: LIBERALIZING REFORMS AND SIGNIFICANT DECLINE IN POVERTY

- The mean per-capita expenditure in the 54th (1998-99) round was approximately the same as in the 50th (1993-94) round, implying zero growth in the mean per-capita expenditure. But with per-capita GDP at factor cost growing more than 4 percent per year over the same period.
- While this debate was in progress, the results of the 55th round of the NSS, conducted in 1999–2000 showed a sharp decline in poverty over the previous round conducted in 1993–94, thereby reversing the conclusions.

PHASES III & IV: LIBERALIZING REFORMS AND SIGNIFICANT DECLINE IN POVERTY

- Poverty ratios fell more—in absolute percentage points as well as proportionately—between 1993–94 and 1999–2000 than between 1987–88 and 1993–94 (Figure 3).
- The decline in rural poverty was from 37.1 to 26.8 percent, and in urban poverty from 32.9 to 24.1 percent between 1993–94 and 1999–2000.
- In between there is a change in recall period. Traditionally, the NSS had given a “30-day recall” questionnaire to all respondents.

PHASES III & IV: LIBERALIZING REFORMS AND SIGNIFICANT DECLINE IN POVERTY

- After the 50th round (1993-94), however, the NSSO, which is responsible for conducting the NSS, introduced an additional experimental questionnaire that used different recall periods for different goods.
- This questionnaire used a seven-day recall period for food, *paan* (betel leaf stuffed with betel nuts and condiments), and tobacco; a one-year recall period for infrequently purchased items, including clothing, footwear, durable goods, and educational and institutional medical expenditures; and the traditional 30-day recall period for the remainder of the goods.

PHASES III & IV: LIBERALIZING REFORMS AND ... :

Expenditure Growth: The NAS versus the NSS

- Earlier we discussed that the mean per-capita expenditure in the 54th round shows virtually no change over that in the 50th round.
- This does not square with the fact that according to the NAS conducted by the CSO, per-capita GDP grew nearly 4 percent annually during this same period.
- Systematic comparisons show that the ratio of mean per-capita expenditure obtained from the NSS to that obtained from the NAS is less than unity, and declines rapidly during the 1990s.

PHASES III & IV: LIBERALIZING REFORMS AND ... :

Expenditure Growth: The NAS versus the NSS

- According to T. N. Srinivasan (1999), this ratio was 0.67 in 1987–88; fell to 0.55 in 1993–94, and to 0.5 in 1998–99.
- Both the NAS and the NSS are subject to a variety of sampling and non-sampling errors. Yet, the vast and rising differences between the expenditure estimates obtained from the two sources are not easily explained.
- One possible explanation is that the NSS estimate consists of household expenditures only, whereas NAS estimates include additional items, such as expenditures incurred by non-profit organizations, imputed rent on owner-occupied housing, and net interest earned by financial intermediaries.

PHASES III & IV: LIBERALIZING REFORMS AND ... :

Expenditure Growth: The NAS versus the NSS

- According to a cross-validation study by the National Accounts Department, the last two of these items account for 22 percent of the levels of differences between NAS and NSS estimates.
- But this is far from sufficient to account for the full and rising gap over time between the two estimates.
- The differences between the NSS and NAS mean per-capita expenditures pose an important dilemma for researchers.

PHASES III & IV: LIBERALIZING REFORMS AND ... : Farmers Suicides

- Many politicians, columnists, and NGOs have expressed fears that this phenomenon reflects shrinking economic opportunities and increased distress among farmers even as economic reforms bring good fortune to many others.
- Srijit Mishra offers comprehensive data on suicides in India. The rate rose from 292 in 1997 to the peak of 2066 in 2000, and fell back to 247 in 2003.
- The longest available time series on suicides ranges from 1975 to 2001 and relates to the entire population. Specifically, it does not separate suicide rates for farmers.

PHASES III & IV: LIBERALIZING REFORMS AND ... : Farmers Suicides

- Mishra calculates the age-adjusted Suicide Mortality Rate (SMR), defined as the ratio of deaths from suicide per 1,00,000 population of those aged five years or more, grew 2.4 percent per annum for males and 2.3 percent per annum for females between 1975 and 2001.
- The suicide rates among males and females in the general population have been rising since the data became available.
- The natural question at this point is whether the suicide rates among male farmers are higher than those in the general population.

PHASES III & IV: LIBERALIZING REFORMS AND ... : Farmers Suicides

- The data (1995 to 2004) show a rising trend in the SMR among male farmers, while that among non-farmers.
- In 2004, the latest year for which data are available, the SMR among male farmers (19.2) was considerably higher than that for non-farmers (13.4).
- Across states the higher SMR among male farmers is driven by extra-high SMR in some large states. Four states—Andhra Pradesh, Karnataka, Kerala, and Maharashtra—account for more than half of the suicide mortality among farmers.

PHASES III & IV: LIBERALIZING REFORMS AND ... : Farmers Suicides - Causes

- High and rising suicide rates among farmers have led to considerable speculation that reforms are to blame for them.
- But there is no systematic study to date that establishes this connection. Virtually all studies analyze the phenomenon at a point in time in a specific state, and look into the causes of suicide within the sample considered.
- Let us take a study by R S Deshpande (2002) conducted in Karnataka.

Table 2: Reasons for Suicide (Karnataka)

Reason	Percent
Habits like drinking, gambling, overspending	20.35
Failure of crops	16.81
Other reasons (e.g., chit fund)	15.04
Family problems with spouse or others	13.27
Chronic illness	9.73
Marriage of daughters	5.31
Political affiliation	4.42
Property disputes	2.65
Debt burden	2.65
Price crash	2.65
Borrowing beyond paying capacity (e.g., house construction)	2.65
Loss in nonagricultural activities	1.77
Failure of bore wells	0.88

OPENNESS, GROWTH, AND POVERTY ALLEVIATION

- Though the link among openness, growth, and poverty alleviation is disputed by some, most economists believe that trade openness alleviates poverty both directly and through faster economic growth.
- The direct effect works through at least two channels.
- First, we have what trade economists call the Stolper-Samuelson effect. Labor-abundant economies have a comparative advantage in labor-intensive goods.

OPENNESS, GROWTH, AND POVERTY ALLEVIATION

- Second, typically, protectionist policies discriminate against agriculture, which employs the bulk of the poor. With the current move toward ending protection and subsidies in agriculture worldwide, the end to any bias against exportable agricultural products in trade policy offers an additional route to poverty alleviation.
- The indirect effect, which works through growth, is much more powerful. It works through at least three channels.

OPENNESS, GROWTH, AND POVERTY ALLEVIATION

- First, growth leads to what Jagdish Bhagwati (1988) calls the active “pull-up” effect rather than what skeptics call the passive “trickle-down” effect. Growth rapidly absorbs the poor into gainful employment and out of marginal jobs.
- Second, rapidly growing economies generate vast fiscal resources that allow governments to undertake targeted antipoverty programs.
- Finally, growth that helps raise incomes of poor families also improves their ability to access public services such as education and health care.

Causes of Poverty

- Lack of income and assets to attain basic necessities— food, shelter, clothing, and acceptable levels of health and education
- Sense of voicelessness and powerlessness in the institutions of state and society
- Vulnerability to adverse shocks, linked to an inability to cope with them.
- Lack of h*uman* assets, such as the capacity for basic labor, skills, and good health
- Lack of *natural* assets, such as land

Causes of Poverty

- Lack of *physical* assets, such as access to infrastructure
- Lack of *financial* assets, such as savings and access to credit
- Lack of *social* assets, such as networks of contacts and reciprocal obligations that can be called on in time of need, and political influence over resources
- Exclusive growth

Way Forward

- Inclusive growth – create opportunities for the poor
- Empowerment – political, legal, social, economic
- Security - reducing their vulnerability to such risks as ill health, economic shocks, and natural disasters and helping them cope with adverse shocks
- Focus on Agriculture Growth

Way Forward

- Guarantee Employment and Universal PDS
- Social Protection & Transfer of Minimum Income
- Compulsory and Comprehensive health Insurance
- Compulsory Education to the children
- Interconnections at local and national level
- International action
- Social Insurance

Is India getting poorer?

- A look at the 25-year period between 1981 (60%) and 2005 (42%) – 18% decline living on less than $ 1.25 a day.
- The number of people living below a dollar a day (2005 prices) has also come down from 42 percent to 24 percent over the same period.
- Both measures show that India has maintained even progress against poverty since the 1980s, with the poverty rate declining at a little under one percentage point per year.

How does India compare with the rest of the world when it comes to fighting poverty?

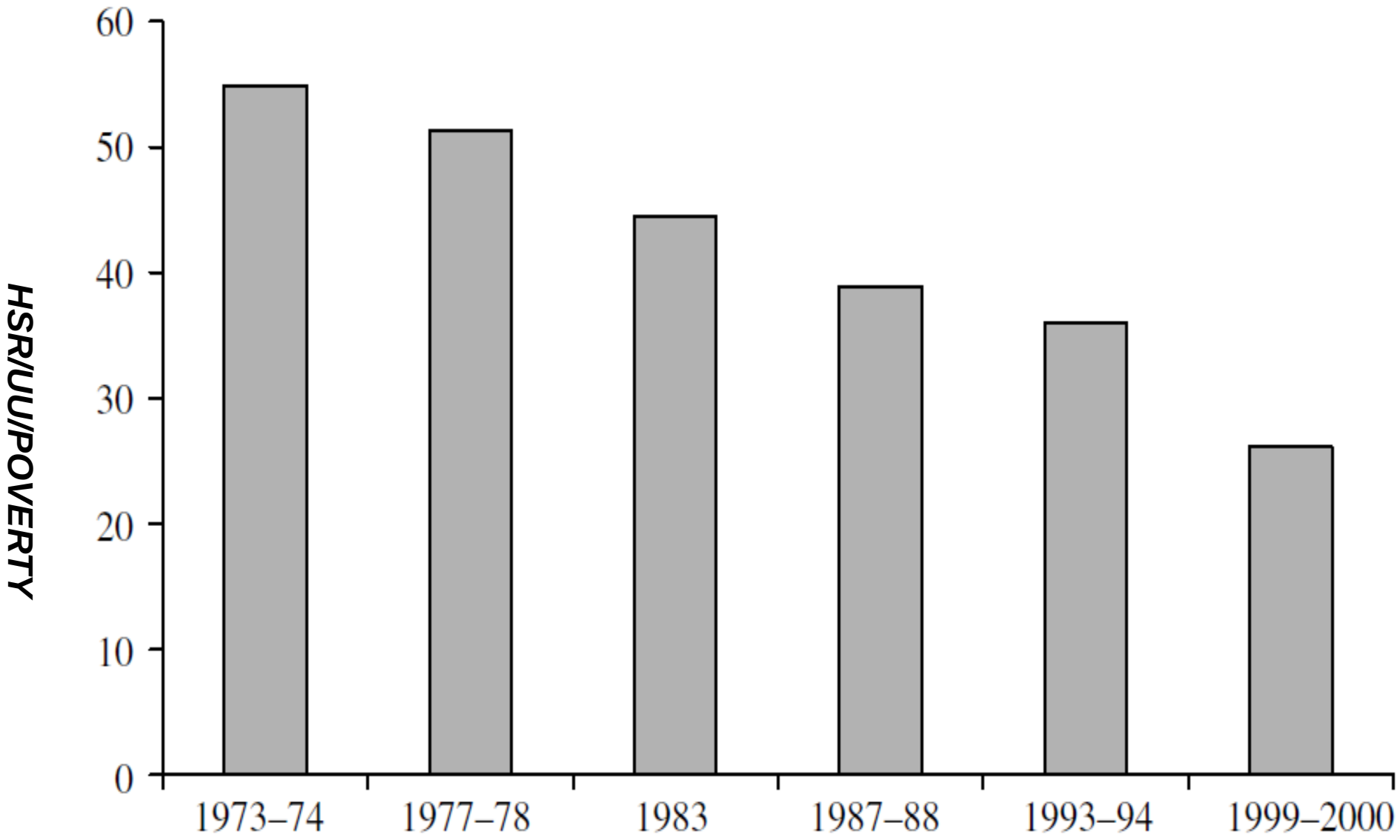
- India's poverty declined by 19% between 1990 and 2005 as against 38% globally.
- However, when China is excluded from the count, the global decline falls to 18%,.
- It means, largely because China has achieved a much faster rate of poverty reduction.

References

- Ahluwalia, M. S. (1990): Policies for Poverty Alleviation, *Asian Development Review: Studies of Asian and Pacific Economic Issues*, 8(1): 1-14
- Datt, G. And Mahajan, A. (2011): *Indian Economy*, S. Chand Publishing, New Delhi, Pp. 369-395.
- Government of India (2011): *Press Note on Poverty Estimates*, Planning Commission, New Delhi, 27th January.
- Panagariya, Arvind (2008): *India: the Emerging Giant*, Oxford University Press, New York, Pp.129-156.
- World Bank (2000): World Development Report 2000/01, Oxford University Press, New York, Pp. 31-41.

Thank you

Figure 3: Poverty Trend, 1973-2000



INEQUALITY IN INDIA

HIMANSHU SEKHAR ROUT

DEPARTMENT OF A & A ECONOMICS

UTKAL UNIVERSITY, BHUBANESWAR - 751004 INDIA

E-mail: hsrout1@utkaluniversity.ac.in

Scheme of Presentation

- Forms of Inequality
- Inequality at national level: Evidences and Policies
- Regional inequality: Evidences and Policies
- Urban – Rural Inequality

FORMS OF INEQUALITY

- In the Indian context, inequality may be analyzed from at least five different perspectives.
- First, Income inequality: Even as accelerated growth improves the status of all, including the poor, it may be accompanied by proportionately larger increases in the incomes of the rich.
- Second, Regional inequality: This form of inequality in India is studied at the state level and refers to the distribution of the mean incomes across states.

FORMS OF INEQUALITY

- Third, Rural-Urban Inequality: benefits of growth may accrue disproportionately to the urban population. Here we compare the mean rural and urban incomes.
- Fourth, growth may benefit workers in the organized—mainly public sector more than those in the unorganized sector (increasing ratio of the wages in the organized and unorganized sectors).
- Finally, wage inequality: growth may be accompanied by a faster increase in the wages of the skilled than of the unskilled.

Inequality at the National Level: Empirical Evidences

- The discussion of national inequality may be divided into two sections: empirical evidence and the case for addressing inequality through specific policy measures.
- **Empirical Evidence**
- Deaton and Drèze (2002) provide calculations for rural, urban, and all-India inequality.
- They use two indexes of inequality: (i) difference between the logarithms of arithmetic and geometric means of expenditures, and (ii) the variance of logarithm of per-capita expenditures across HHs.

Inequality at the National Level: Empirical Evidences

- The larger the value of either index, the greater is inequality.
- Rural inequality declines according to both indexes, while urban inequality rises from 0.19 to 0.20 according to the first index and remains unchanged according to the second index.
- At the all-India level, inequality is unchanged according to the second index and rises from 0.17 to 0.18 according to the first index.
- The overall thrust of this evidence is that rural inequality remained unchanged or fell slightly during 1994–2000, while urban inequality rose noticeably.

Inequality at National Level: Policies

- Policies aimed at tackling inequality can be broadly divided into two categories:
  - (i) *tax and expenditure polices* that redistribute, rather than create income from the higher-income groups to lower-income groups, for example, progressive income taxation, the employment guarantee scheme, and subsidies on food and fertilizer, and
  - (ii) *policies that do not use resources but improve the ability of lower-income groups to profit from the economy and its growth*, for example reservation of jobs and slots in educational institutions for certain disadvantaged sections of the society.

Inequality at National Level: Policies

- While there is some role for redistributive policies that directly target the poor, there are scepticism that the case for assigning such policies a central role in the quest for poverty reduction or deploying them to address inequality beyond what is required to fight poverty.
- There are at least three reasons for this scepticism. First, in principle, increased equality can have a direct adverse impact on poverty if redistribution of income from a few individuals to many leads to increased conspicuous consumption and reduced philanthropy.

Inequality at National Level: Policies

- Second, policies aimed at the reduction of income inequality may also have an adverse effect on growth, and therefore on poverty. The empirical evidence on whether policies that promote greater equality also lead to faster growth is at best mixed (Forbes, 2000).
- Finally, while it is not difficult to identify policies that promote equity and growth simultaneously, once equity and fairness are turned into explicit goals of the policy, populism among the political leadership and the ability of the lobbies to capture the policies often leads to the adoption of precisely those policies that are detrimental to growth.

Regional Inequality: Empirical Evidences

- If we go by per-capita incomes across states, inequality has definitely gone up.
- S. L. Shetty (2003) reports the Gini coefficient for real per-capita GSDP for all states as well as for the 16 major states between 1980–81 and 2000–01 which shows **a steadily rising trend throughout the period**.
- Its value for all states rising from 0.209 in 1980–81 to 0.217 in 1987–88, 0.237 in 1993–94 and 0.292 in 2000–01.

Regional Inequality: Empirical Evidences

- By taking eight variables: per-capita expenditure, head count poverty ratio, literacy rate, a formal education enrolment index, IMR, life expectancy, access to safe water, and access to housing constructed with relatively permanent materials; **Nirvikar Singh and T N Srinivasan** (2002) find that there is no evidence of rising interstate inequality in the 1990s.
- The un-weighted SD of the index across 14 major states falls marginally from 0.075 in 1991 to 0.072 in 2001.
- Nirvikar Singh, Lavesh Bhandari, Aoyu Chen, and Aarati Khare (2003) have gone on to apply the convergence analysis, using the Planning Commission's HDI, and have found evidence in favour of convergence.

Regional Inequality: Policies

- The policymakers and analysts have a tendency to focus more centrally on the GDP rather than the HDI, for which the interstate inequality has gone up. This is because of the five following points
- First, the critical question we must ask is whether increasing inequality across states is the result of richer states getting richer and poor states getting poorer, or of all states growing fast but richer states growing faster.

Regional Inequality: Policies

- Regional inequality reflects slower progress in poverty alleviation in the poorer states, an attack on poverty would automatically attack regional inequality.

- Third, leaving poverty aside, inequality in growth rates across states, even when it results from richer states growing faster and the other states stagnating, may lead to beneficial demonstration effects on the latter.

Regional Inequality: Policies

- Fourth, under the licensing regime, the location of the manufacturing facility could be made a condition of the grant of the license. The central government used this power to distribute industries across states in order to achieve its regional balance objective.

- Finally, given interstate mobility of workers, migration is likely to help alleviate regional inequality at least to some degree, which is not captured in the per capita state domestic product.

URBAN-RURAL INEQUALITY

- Michael Lipton (1976) brought the concept of an urban bias in the process of economic development.
- The ratio of urban to rural per-capita consumption expenditure has risen steadily in India at least since the mid-1980s.
- According to the calculations done by Deaton and Dreze (2002), the average per-capita consumption expenditure between 1993–94 and 1999–2000 rose 8.7 percent in the rural areas and 16.6 percent in the urban areas in India. Thus, there is clear evidence of rising urban-rural divide.

URBAN-RURAL INEQUALITY

- This type of inequality is least disturbing in comparison to income inequality.
- Rapid economic transformation is usually accompanied by increased urban-rural inequality.
- It is the faster growth in incomes in the urban areas that pulls rural workers into gainful employment there.

References

- Deaton, A. and Dreze, J. (2002): Poverty and Inequality in India: A Re-Examination, *Economic and Political Weekly, 37(36): 3729-48.*
- Panagariya, Arvind (2008): *India: the Emerging Giant*, Oxford University Press, New York, Pp.157-167.
- Singh, N., Bhandari, L., Chen, A., & Khare, A. (2003): Regional Inequality in India: A Fresh Look, *Economic and Political Weekly*, 38(11): 1069-1073 .

Thank you

UNEMPLOYMENT SCENARIO IN INDIA

HIMANSHU SEKHAR ROUT

DEPARTMENT OF A & A ECONOMICS

UTKAL UNIVERSITY, BHUBANESWAR - 751004 INDIA

E-mail: hsrout@utkaluniversity.ac.in

Scheme of Presentation

- A quick review of previous knowledge (What, types and causes)
- Measurement of unemployment
- How to simulate employment?
- Consequences of Unemployment
- Jobless Growth
- Green Jobs and Growth

Concept of Unemployment

- What is unemployment?
- Unemployment refers to the inability of willing workers to find gainful employment.
- **Okun's Law** states that for each additional one percent increase in unemployment there is a corresponding 3.3 percent decline in output .
- The **unemployment rate** is the proportion of the labor force that is unemployed. To calculate the rate, you need to know the number of people unemployed and the number of people in the labor force.

Concept of Unemployment

- ***Unemployment rate = number of unemployed people / labor force***
- The **labor force** consists of all persons over the age of 16 who are either working for pay or actively seeking paid employment.
- People who are not employed and not actively seeking employment are not counted as part of the labor force.
- The **labor-force participation rate** is the percentage of the working-age population working or seeking employment.

Concept of Unemployment

- Other employment problems include those individuals who are either working part-time and seeking full-time employment, or are employed at jobs below their capacity are called **underemployed**.
- Underemployed people are counted as being employed and not included in the unemployment rate.
- Another employment problem occurs when people indicate that they are actively seeking employment but are not really interested in finding a job are called the **phantom unemployed**.
- The phantom unemployed are counted as part of the unemployment rate even though they are not really interested in working.

Types of Unemployment

- Types of unemployment in UDCs
  - Structural Unemployment (structure & Productivity)
  - Disguised unemployment
  - Underemployment (excess capacity)
  - Open unemployment
  - Seasonal unemployment
  - Educated unemployment
- Types unemployment in Developed Countries
  - Cyclical unemployment
  - Frictional unemployment

Causes of Unemployment

- Rapid Population growth
- Inadequate employment planning
- Underdevelopment (low productivity, less capital, inadequate irrigation etc)
- Faulty education system / Unemployable education
- Jobless growth

Measurement of Unemployment

- Measurement of Unemployment
  - Usual Principal Status (UPS): available for but without work for major part of the year
  - Usual Principal and Subsidiary Status (UPSS): Besides UPS, those available but unable to find work on a subsidiary basis (for at least 30 days introduced in 61st Round of NSSO) during a year
  - Current Weekly Status (CWS): A person having worked for an hour or more on any one day or more days during the reference period
  - Current Daily Status (CDS): A person who works for one hour but less than four hours is considered having worked for half a day. If s/he works for four hours and more during a day, s/he is considered as employed for whole day.

Trends of Unemployment

- In 2011-12, 36.4% of the Indian population was active in the labour force, that is, either working or actively seeking work according to the UPS.
- About 45% of Indian workers were engaged in agriculture and related activities, whereas in 2009-10 it was just about 50%.
- The proportion of the working population engaged in the secondary and tertiary sectors is growing, with 24% of them in the secondary sector and about 30% in the service sector in 2011-12.

Trends of Unemployment

- In terms of type of employment, 50% of Indian workers were self-employed, 20% were employed on a regular wage or salary, and 29% were on a casual wage.
- In terms of participation in the labour force, the proportion of males in both rural and urban areas was much higher than that of females.
- Overall, the unemployment rates in all categories fell in the last decade, going by the more comprehensive CDS measure.

UTKAL UNIVERSITY

Table 1: Trend in Unemployment Rates (% of labour force)

Year	UPS	UPSS	CWS	CDS
1972-73	3.80	1.61	4.32	8.35
1977-78	4.23	2.47	4.48	8.18
1983	2.77	1.90	4.51	8.28
1987-88	3.77	2.62	4.80	6.09
1993-94	2.56	1.90	3.63	6.03
1999-2000	2.81	2.23	4.41	7.32

Table 2: Trends of Unemployment in the last Decade

Categories/Survey Years	1999-2000	2004-05	2009-10	2011-12
Rural male (%)	7.2	8.0	6.4	5.5
Rural female (%)	7.0	8.7	8.0	6.2
Urban male (%)	7.3	7.5	5.1	4.9
Urban female (%)	9.4	11.6	9.1	8.0

Rural, Urban and Gender Aspects of Unemployment

- The trend for rural female participation saw a drastic fall after an increase in 2004-05 (Table 3).
- Urban female participation, which also increased in 2004-05, fell in 2009-10 and then increased marginally in 2011-12, but to a level lower than that in 2004-05.
- In general, female participation in the labour force has been low and is falling. This decline in participation of females in the labour force, especially in rural areas, has been dubbed "**de-feminisation**" (Abraham 2013).

Rural, Urban and Gender Aspects of Unemployment

- Further, no significant increase in the proportion of female workers was seen in either secondary sector or tertiary sector employment in rural areas (Table 4).
- This is in keeping with the trend of fewer women in work, especially in rural India.
- Urban female workers in the secondary and tertiary sectors have grown as a proportion of total workers in the last decade or so, but this increase is meagre relative to the number of women leaving the labour force in rural areas.

Rural, Urban and Gender Aspects of Unemployment

- The rural female self-employed category fell marginally from about 11% in 1999-2000 to 9% in 2011-12 (except in 2004-05 when it was 12%) (Table 5). The proportion of rural females engaged on casual wages declined all through this period. This was once again in keeping with the general fall in female participation in work.
- In urban areas, however, there was a marginal rise in the proportion of female regular wage employees.

How to stimulate employment?

- New products
- Growth in demand
- Technological innovation
- Higher quality and/or productivity
- Organizational innovation
- Higher skills
- Better access to information
- Legislation and law enforcement
- Administrative responsiveness
- Environment/health consciousness
- Change of attitudes

Demand-side Policies to Reduce Unemployment

- These are mainly measures to boost total labour demand (reduce cyclical unemployment)
  - Lower interest rates (a monetary policy stimulus)
  - A lower exchange rate (helps exporters)
  - Lower direct taxes (fiscal stimulus to spending power)
  - Government spending on major infrastructure projects
  - Employment subsidies – designed to reduce the cost to a business of employing additional workers
  - Incentives to encourage flows of foreign investment to our country – particularly in areas of above average unemployment

Supply-side Policies to Reduce Unemployment

- Supply-side policies are measures to improve labour supply (reduce frictional and structural unemployment)
  - Increased spending on education and training (including an emphasis on “lifetime-learning”)
  - Improved flows of information on job vacancies
  - Changes to tax and benefits to improve incentives
  - Measures designed to make the labour market more flexible so that workers have the skills and education that gives them improved employment options

Economic and Social Costs of Unemployment

- The private costs for the unemployed
  - Loss of income
  - Fall in real living standards
  - Increased health risks
    - Stress
    - Reduction in quality of diet
    - Social exclusion because of loss of work and income
  - Loss of marketable skills (human capital) and motivation
    - The longer the duration of unemployment, the lower the chances of finding fresh employment - the unemployed become less attractive to potential employers

Consequences of Unemployment

- Economic consequences for businesses
  - Negative consequences
    - Fall in demand for goods and services
    - Fall in demand for businesses further down the supply chain
    - Consider the negative multiplier effects from the closure of a major employer in a town or city
  - Some positive consequences
    - Bigger pool of surplus labour is available – but still a problem if there is plenty of structural unemployment
    - Less pressure to pay higher wages
    - Less risk of industrial / strike action – fear of job losses – leading to reduced trade union power

Consequences of Unemployment

- Consequences for the Government (Fiscal Policy)
  - Increased spending on unemployment benefits and other income –related state welfare payments
  - Fall in revenue from income tax and taxes on consumer spending
  - Fall in profits – reduction in revenue from corporation tax
  - May lead to rise in government borrowing (i.e. a budget deficit)

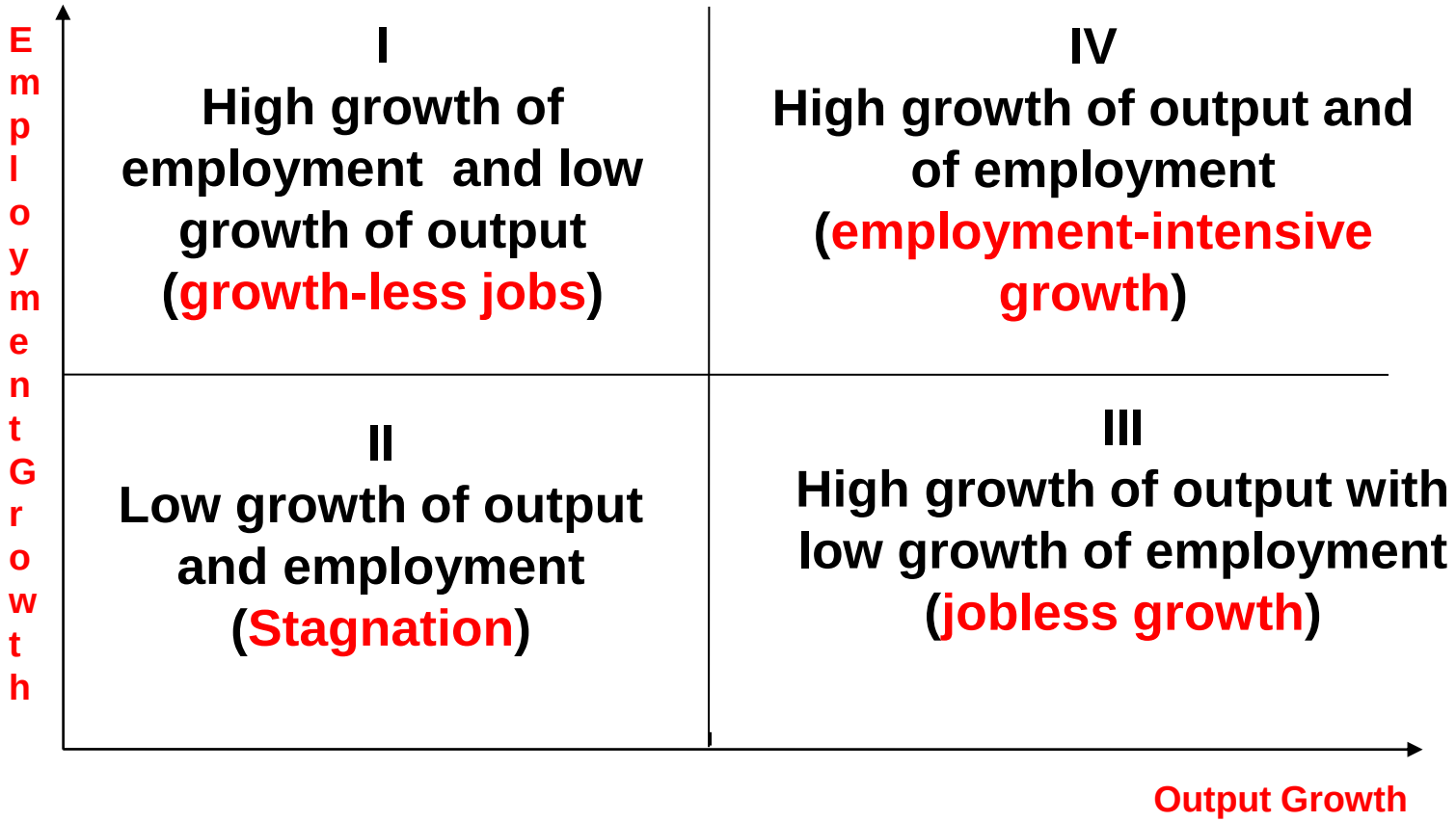
Consequences of Unemployment

- Consequences for the economy as a whole
  - Lost output (real GDP) from people being out of work – the economy will be operating well within its production frontier
  - Unemployment seen as an inefficient way of allocating resources – labour market failure?
  - Some of the long-term unemployed may leave the labour force permanently – fall in potential GDP
  - Increase in the inequality – rise in relative poverty

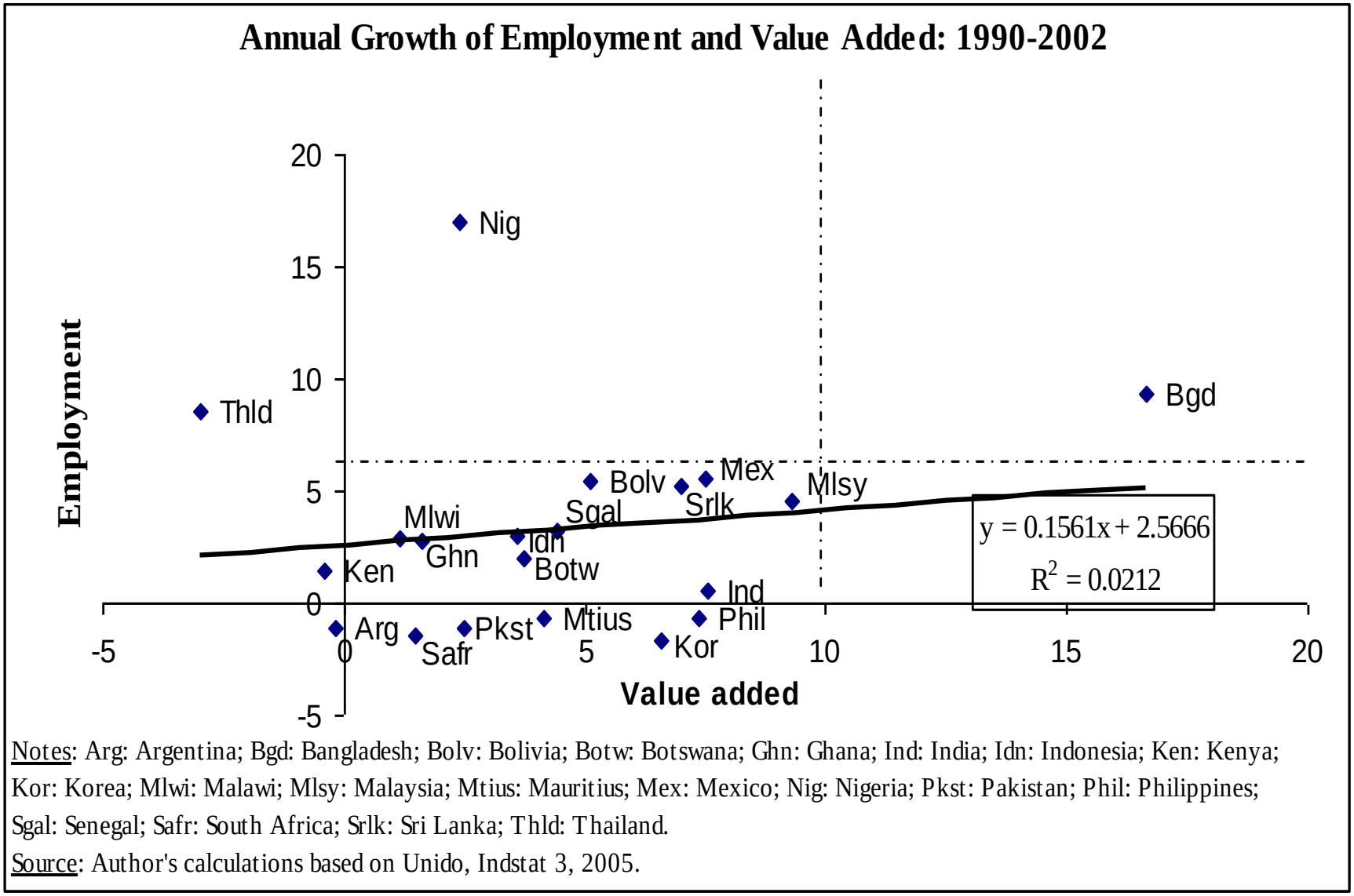
JOBLESS GROWTH

- Low and declining employment growth in relation to output
- Different possible combinations of output and employment growth
  - ✓Low output low employment (stagantion)
  - ✓Low output high employment (growthless jobs)
  - ✓High output low employment (jobless growth)
  - ✓High output high employment (employment intensive growth)

Combination of Output and Employment Growth



Relationship between Employment and Output Growth (1990-2002)



Notes: Arg: Argentina; Bgd: Bangladesh; Bolv: Bolivia; Botw: Botswana; Ghn: Ghana; Ind: India; Idn: Indonesia; Ken: Kenya; Kor: Korea; Mlwi: Malawi; Mlsy: Malaysia; Mtius: Mauritius; Mex: Mexico; Nig: Nigeria; Pkst: Pakistan; Phil: Philippines; Sgal: Senegal; Safr: South Africa; Srlk: Sri Lanka; Thld: Thailand.

Source: Author's calculations based on Unido, Indstat 3, 2005.

Employment and GDP Growth Rate in India

Year	GDP Growth (in %)	Employment Growth (in %)
1973-74 / 1983	4.7	2.4
1983/1993-94	5.0	2.0
1993-94/2004-05	6.3	1.8
2004-05/2009-10	9.0	0.22

Table 6: Employment Elasticity with respect to GDP

Sector	1972-73/77-78	1977-78/83	1983/87-88	1987-88/93-94	1993-94/99-2000	1999-00/2004-05	2004-05/2009-10	1972-73/83	1983/93-94	1993-94/2004-05	1999-00/2009-10
1	2	3	4	5	6	7	8	9	10	11	12
Primary Sector	0.41	0.63	-9.10	0.46	0.02	0.90	-0.53	0.46	0.49	0.26	-0.05
Mining & Quarrying	0.88	0.98	0.96	0.26	-0.41	0.50	0.73	0.86	0.53	-0.02	0.61
Manufacturing	1.12	0.61	1.01	0.01	0.24	0.78	-0.11	0.78	0.41	0.47	0.25
Utilities	0.38	1.81	0.78	0.52	-0.84	0.76	0.14	1.00	0.64	-0.32	0.37
Construction	0.37	5.09	3.23	-0.02	1.00	0.89	1.22	1.44	1.16	0.94	1.06
Secondary Sector	0.97	0.90	1.29	0.03	0.37	0.87	0.39	0.87	0.53	0.59	0.60
Trade, Hotelling etc.	1.06	0.63	0.70	0.65	0.68	0.51	0.12	0.81	0.67	0.61	0.30
Transport & Communication etc.	1.03	0.94	0.45	0.66	0.59	0.41	0.13	0.91	0.56	0.49	0.25
Financing, Insurance, Real estate & business services	1.56	1.23	0.16	0.56	0.68	1.43	0.47	1.25	0.39	0.99	0.81
Community, social and personal services	1.01	0.63	0.05	1.28	-0.19	0.54	0.12	0.71	0.67	0.06	0.28
Tertiary Sector	1.03	0.67	0.31	0.79	0.34	0.54	0.14	0.77	0.57	0.43	0.30
All Non-Agricultural	1.01	0.76	0.66	0.46	0.35	0.66	0.23	0.81	0.55	0.48	0.41
Total	**0.57**	**0.56**	**0.38**	**0.42**	**0.16**	**0.47**	**0.02**	**0.52**	**0.41**	**0.29**	**0.20**

Causes of Jobless Growth

- Factories provide relatively well-paid and regular jobs in an economy in which underemployment is vast and increasing.
- A structural transformation of the economy relies upon the manufacturing sector to draw ‘surplus’ labour off the land into more productive employment (Lewis, 1954).
- Deregulation of industry and trade in the 1980’s results the growth in output and productivity not by increasing jobs.
- Acceleration of wages in the 1980’s and after.
- Technology, R&D

Green Jobs and Growth

- The OECD has suggested that investing in green activities has significant **job creation** potential (OECD, 2011).
- Green jobs are **decent jobs** in agriculture, manufacturing or service that
  - Reduce consumption of energy and raw materials
  - Limit green house gas emissions
  - Minimize waste and pollution
  - Protect and restore ecosystems

Green Jobs and Growth

- The OECD has also noted that “green growth is gaining support as a way to pursue economic growth and development, while preventing environmental degradation, biodiversity loss and unsustainable natural resource use” (OECD, 2010).
- Climate-smart policies are those that enhance development, reduce vulnerability, and finance the transition to low-carbon growth paths” (World Bank, 2009)

Green Jobs and Growth

- A green economy is one that does not generate pollution or waste and is hyper-efficient in its use of energy, water, and materials. Using this green utopia as a yardstick would mean that currently there are few green jobs.
- But what are the consequences of ‘green’ growth for labor markets?
- United Nations Environment Programme (UNEP) (2011) has argued that “the greening of economies is not generally a drag on growth but rather a new engine of growth; that it is a net generator of decent jobs, and that it is also a vital strategy for the elimination of persistent poverty.”

Green Jobs and Growth

- Specifically, but not exclusively, this includes jobs that help to protect and restore ecosystems and biodiversity; reduce energy, materials, and water consumption through high-efficiency and avoidance strategies; de-carbonize the economy; and minimize or altogether avoid generation of all forms of waste and pollution.
- But green jobs also need to be good jobs that meet longstanding demands and goals of the labor movement, i.e., adequate wages, safe working conditions, and worker rights, including the right to organize labor unions.
- Green Jobs have become an emblem of a more sustainable economy and society, that preserves the environment for present and future generations and is more equitable and inclusive of all people and all countries.

Green Jobs Initiatives

- The ILO is joining forces with the UNEP as well as with other UN agencies and partners to help realize the potential for green jobs and a positive labour market transition in the face of climate change.
- In his report to the International Labour Conference on “Decent Work for Sustainable Development”, ILO Director called for a major ILO programme on climate change.
- The ILO “green jobs initiative” responds to climate change policy of the UN system.

Green Job in India: MGNREGA

References

- Islam, R (2010): *The Challenge of Jobless Growth in Developing Countries: An Analysis with Cross Country Data*, BIDS Occasional Paper No. 1, BIDS, Dhaka.
- Papola, T. S. (2013): *Economic Growth and Employment Linkages: The Indian experience*, Working Paper No. 2013/01, Institute for Studies in Industrial Development, New Delhi.
- Papola, T. S. (2008): *Employment Challenges and Strategies in India*, ILO-Asia Pacific Working Paper Series, International Labour Organization, New Delhi.
- Papola, T. S. and Sahu, P. P. (2012): *Growth and Structure of Employment in India: Long-Term and Post-Reform Performance and the Emerging Challenge*, A Study Report, ISID
- Shaw, A. (2013): Employment Trends in India: An Overview of NSSO's 68th Round, *Economic & Political Weekly*, 48(42): 23-25.

Thank you

Table 3: Comparison of Number of Workers (in Million, UPS)

Categories/Survey Years	1999-2000	2004-05	2009-10	2011-12	Average Yearly Change between 1999-2000 and 2004-05	Average Yearly Change between 2004-05 and 2009-10	Average Yearly Change between 2009-10 and 2011-12	Average Yearly Change between 2004-05 and 2011-12
Rural male	199.53	213.6	226.75	230.97	2.81	2.63	2.11	2.48
Rural female	83.06	91.5	80.92	72.13	1.69	-2.12	-4.4	-2.77
Urban male	78.65	90.76	102.54	108.28	2.42	2.36	2.87	2.50
Urban female	16.52	20.68	20.97	23.26	0.83	0.06	1.15	0.37
Total workers	377.76	416.54	431.18	434.64				
Net change in employed persons per year					7.76	2.93	1.73	2.59

BACK

Table 4: Sector-wise Workers as a Percentage of Total Workers (UPS)

Sectors	Primary				Secondary				Tertiary			
Survey Years	1999-2000	2004-05	2009-10	2011-12	1999-2000	2004-05	2009-10	2011-12	1999-2000	2004-05	2009-10	2011-12
Rural male	37.91	33.15	33.11	31.69	6.73	9.99	9.95	11.43	8.56	9.53	9.56	9.93
Rural female	18.67	17.33	14.86	12.47	2.12	2.3	2.06	2.29	1.54	1.59	1.78	1.71
Urban male	1.31	1.26	1.38	1.39	6.67	7.34	8.21	8.77	12.31	12.64	14.16	14.9
Urban female	0.64	0.75	0.58	0.43	1.21	1.47	1.56	1.77	2.32	2.65	2.8	3.2
Total workers	58.53	52.5	49.92	45.99	16.73	21.09	21.78	24.26	24.74	26.41	28.29	29.74

BACK

Table 5: Each Category of Employment as a Percentage of Total Workers (UPS)

Type of Employment / Survey Years	Self-employed				Regular Wage				Casual Wage			
	1999-2000	2004-05	2009-10	2011-12	1999-2000	2004-05	2009-10	2011-12	1999-2000	2004-05	2009-10	2011-12
Rural male	28.99	28.86	28.35	28.99	4.80	4.58	4.68	5.42	19.40	19.24	20.09	18.66
Rural female	11.18	12.03	9.62	8.95	0.87	0.97	1.04	1.24	10.22	8.22	7.26	6.28
Urban male	8.40	9.46	9.81	10.49	8.55	8.71	10.13	10.95	3.42	3.06	4.03	3.62
Urban female	1.61	1.97	1.74	1.99	1.61	2.04	2.20	2.64	0.97	0.86	1.04	0.78
All persons	50.17	52.31	49.53	50.42	15.83	16.30	18.04	20.25	34.00	31.38	32.43	29.34

BACK

INFLATION IN INDIA

HIMANSHU SEKHAR ROUT

DEPARTMENT OF A & A ECONOMICS

UTKAL UNIVERSITY, BHUBANESWAR - 751004 INDIA

E-mail: hsrout@utkaluniversity.ac.in

Scheme of Presentation

- Price Behaviour in India
- Inflation and Economic Growth
- Sources of Inflationary Pressure
- Food Inflation

Tri-problems in the eve of Indian Five Year Planning

- Influx of refuges as a result of partition in 1947
- Acute food shortage
- **Growing inflation**

Price Situation during 1951-71 …1

- One of the objectives of the first Plan was to *combat inflationary pressures*.
- Aided by bumper crops, the plan largely succeeded in achieving this objective.
- At the end of first plan, the price index was 99 (with 1952-53 = 100) but index of food articles had decline: food articles – 95, cereals – 88, pulses – 77.
- During the first plan price situation was very favourable and the common men were happy.

Price Situation during 1951-71 …2

- The success of first plan and the favourable movement of prices encouraged the GoI to lunch more elaborate plans and undertake a greater deficit financing.
- This leads to a gradual and steady rise in prices throughout the second plan.
- The price level rose by 20% by 1964-65.
- The price position deteriorated badly during the third five year plan: Chinese aggression (1962), Indo – Pak war (1965), and severest drought in 100 Years (1965 – 66).

Price Situation during 1951-71 …3

- Between 1961-66, the rise in the prices was: foodstuffs 40%, cereals 45%, and pulses 70%.
- The next two years were years of acute inflation – galloping inflation – when the WPI shot up by 14% and 11% respectively.
- Fortunately the bumper harvest of 1967-68 saved the situation and inflationary rise in prices was completely arrested.

Galloping Inflation during 70s …1

- The rise in prices during the first three years of the fourth five year plan (1969-1972 ranged between 7 points to 9 points.
- In the fourth and fifth year, the price level rose by 19 points and 47 points respectively - because:
  - Large influx of refuges from Bangladesh
  - Heavy expenditure of government on the refuges
  - wide spread failure of Khariff crops in 1972-73
  - Complete failure of government procurement of wheat
  - Sudden rise in crude oil prices in 1973
  - World wide inflation and depreciation in the external value of rupee

Galloping Inflation during 70s …2

- Government under Mrs. Indira Gandhi took a number of fiscal and monetary measures to check the rise in prices:
  - Use a compulsory deposit scheme, 1974
  - Imposition of limits on dividends
  - Credit squeeze by RBI
  - Use of Maintenance of Internal Security Act (MISA) (1971) against smugglers, hoarders and black-marketeers
- All these steps had favourable impact on the price situation.

Price Movement during Janata Rule (1977-79)

- Successful in holding the price level: WPI in March 1977 - 183, Jan 1978 – 184, Jan 1979 – 185 (base 1970-71).
- This is due to
  - Production of food grains was a record 131 million tones.
  - Buffer stock of food grains had crossed 20 million tones
  - Industrial production had recorded a rise in 9% in 1978 over previous year
  - The production of industrial raw materials like cement, steel et cetera was extremely satisfactory.
  - The FOREX position was also comfortable (₹5000 crore)
- But in the prices increased from 185 from Feb 1979 to 224 in Jan 1980 due to a heavy deficit financing budget in Feb 1979.

Price Movement during 80s

- Congress government regarded inflation was the number one problem
- But the WPI rose by 38 points in 1980-81 – from 218 to 256, an increase of 17% because of
  - Poor agricultural production in 1979-80
  - Low industrial production
  - Hike in oil prices by 130% in 1980
  - Measures by the government
  - Adjustment in CRR
- But in 6^{th} and 7^{th} Plan, inflation was controlled at 7%.

Price Situation in 90s

Since beginning of 1990 the price rise (around 10%) was engineered by

- Increase in the prices of food grains
- Rise in the price of petroleum and its products
- Heavy Fiscal deficits

But by 1996, the price situation was controlled to strict monetary and fiscal measures.

Average Annual Inflation Rate		
	All Commodities	Primary Articles
1991-96	10.6	11.3
1996-01	5.1	5.4
2001-06	4.7	3.6

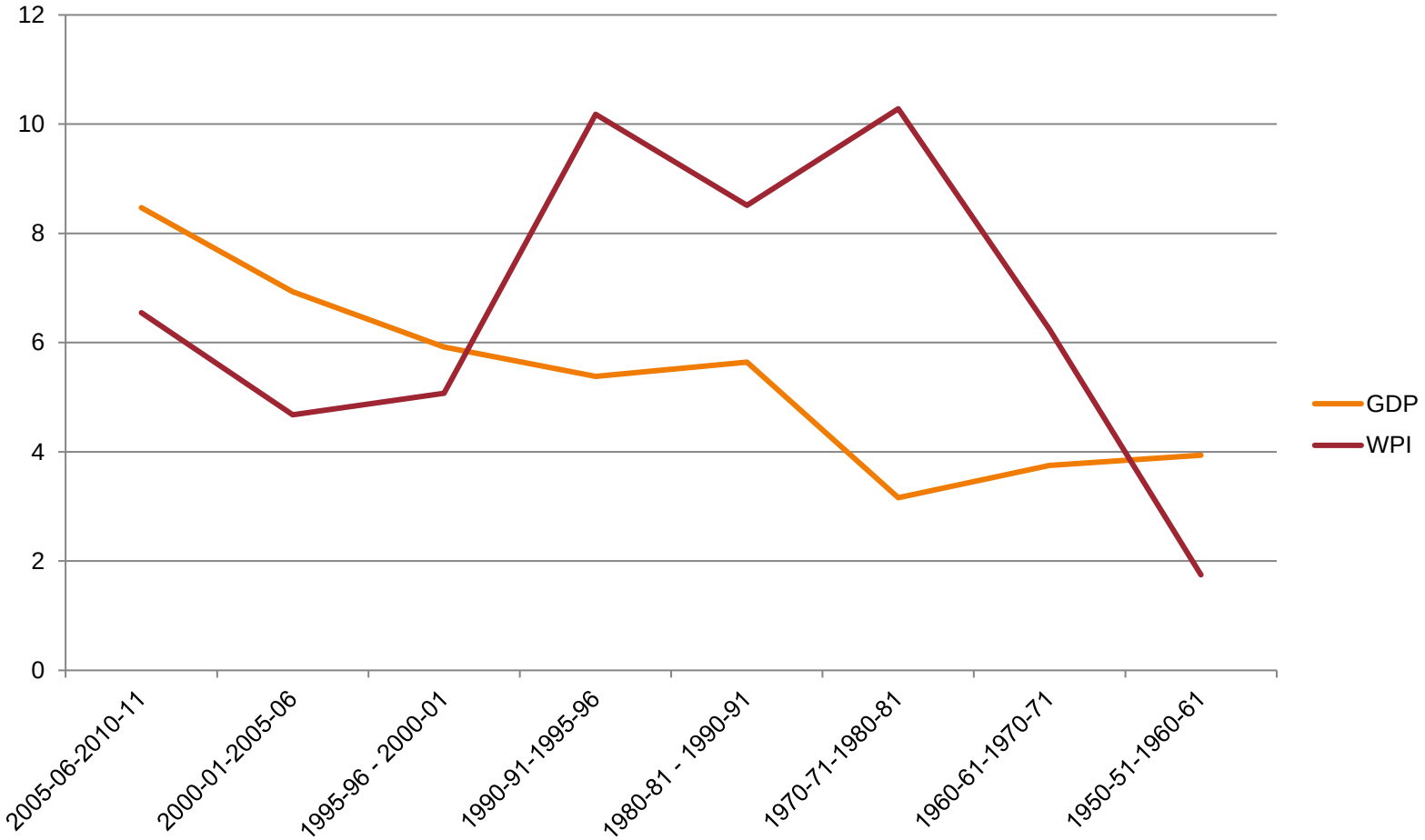
How important is the inflation-growth trade off?

- The long-run rate of growth is determined by real factors: technical progress, demographics and the savings rate. Inflation on the other hand is a monetary phenomenon. *Prima facie* we expect them not to be related.
- We can think of some qualifications, of course:
  - Inflation is a tax on money holders.
  - Inflation volatility increases uncertainty in a money-using economy thereby increasing the riskiness of investment projects and affecting the growth rate adversely.
  - Inflation makes debtors better off and creditors worse off.
- Thus, for moderate rates of inflation has positive impact on the rate of long-run growth.

Growth vs. Inflation: India, 1951-2011

Period	Average annual growth rate of GDP at constant prices (%)	Average annual rate of WPI inflation (%)
2005-06 to 2010-11	8.47	6.55
2000-01 to 2005-06	6.93	4.68
1995-96 to 2000-01	5.92	5.07
1990-95 to 1995-96	5.38	10.18
1980-81 to 1990-91	5.64	8.51
1970-71 to 1980-81	3.16	10.28
1960-61 to 1970-71	3.75	6.24
1950-51 to 1960-61	3.94	1.75

The Indian evidence above shows the lack of any simple unidirectional relationship between inflation and growth.


12
10
8
6
4
2
0
2005-06-2010-11
2000-01-2005-06
1995-96 - 2000-01
1990-91-1995-96
1980-81 - 1990-91
1970-71-1980-81
1960-61-1970-71
1950-51-1960-61
GDP
WPI

Inflation and Economic Growth

- The relationship between inflation and growth remains a controversial one in both theory and empirical findings originated in the Latin American context in the 1950s.
- The issue has generated an enduring debate between *structuralists* and *monetarists*.
- The structuralists believe that inflation is essential for economic growth, whereas the monetarists see inflation as detrimental to economic progress.
- Friedman (1973) summarized the inconclusive nature of the relationship between inflation and economic growth as follows: —historically, all possible combinations have occurred: inflation with and without development.

Possible Impacts

- There are three possible results regarding the impact of inflation on output and growth: i) positive; ii) none; and iii) negative.
- Tobin (1965), who assumed money as substitute to capital, established the positive impact of inflation on growth, his result being known as the Tobin effect.
- Sidrauski (1967) established the second result, showing that money is neutral effect on economic growth.
- The negative impact of inflation on growth, also known as the anti-Tobin effect, is associated mainly with cash in advance models (e.g., Stockman, 1981) which consider money as complementary to capital.

Two School of Thoughts

- Researchers of the first camp: the difference between actual and potential output and asserts a positive relation between inflation and growth.
- The underlying reasoning is that if actual output rises above potential output, this will create an upward pressure on wages in the labor market. Higher wages, in turn, will lead to higher production costs and hence higher prices. This conclusion has been supported by empirical findings.

Two School of Thoughts

- Gerloch and Smets (1999), for instance, show that 1% increase over potential output raises inflation by 0.2% in the subsequent quarter in the European Monetary Union.
- Mallik and Chowdhury (2001) analyse inflation-growth dynamics in four South Asian countries (Bangladesh, India, Pakistan and Sri Lanka) and find statistically significant evidence of a positive relation between these two variables.

Two School of Thoughts

- Researchers belonging to the second camp base their arguments on the Real Business Cycle theories and assert that inflation negatively affects growth.
- Kydland and Prescott (1990) argue that supply shocks, not demand shocks, are responsible for the inverse relationship. Supply shocks render the prices countercyclical, while demand shocks cause pro-cyclical moves in prices towards output.

Inflation and Growth in India

- In the short run, the relationship between growth and inflation is usually positive. Policies that raise output (for example, expansionary fiscal and monetary policies) also raise prices.
- Inflation is undesirable because it adversely affects some sections of the population (especially the poor and those whose earnings are not indexed to prices), distorts relative prices, leads to an appreciation of real exchange rates, erodes the value of the financial assets and creates instability.

Inflation and Growth in India

- The ultimate policy objective is a higher level of well-being for the population, but a conflict arises in the means of achieving it—by higher growth or by lower inflation.
- There is a trade-off involved and both cannot be achieved together.
- Inflation in India has declined steadily from an average of 10.3 % between 1990–1994, to 8.9 % during 1995–1999 and to 4.3 % in this decade.

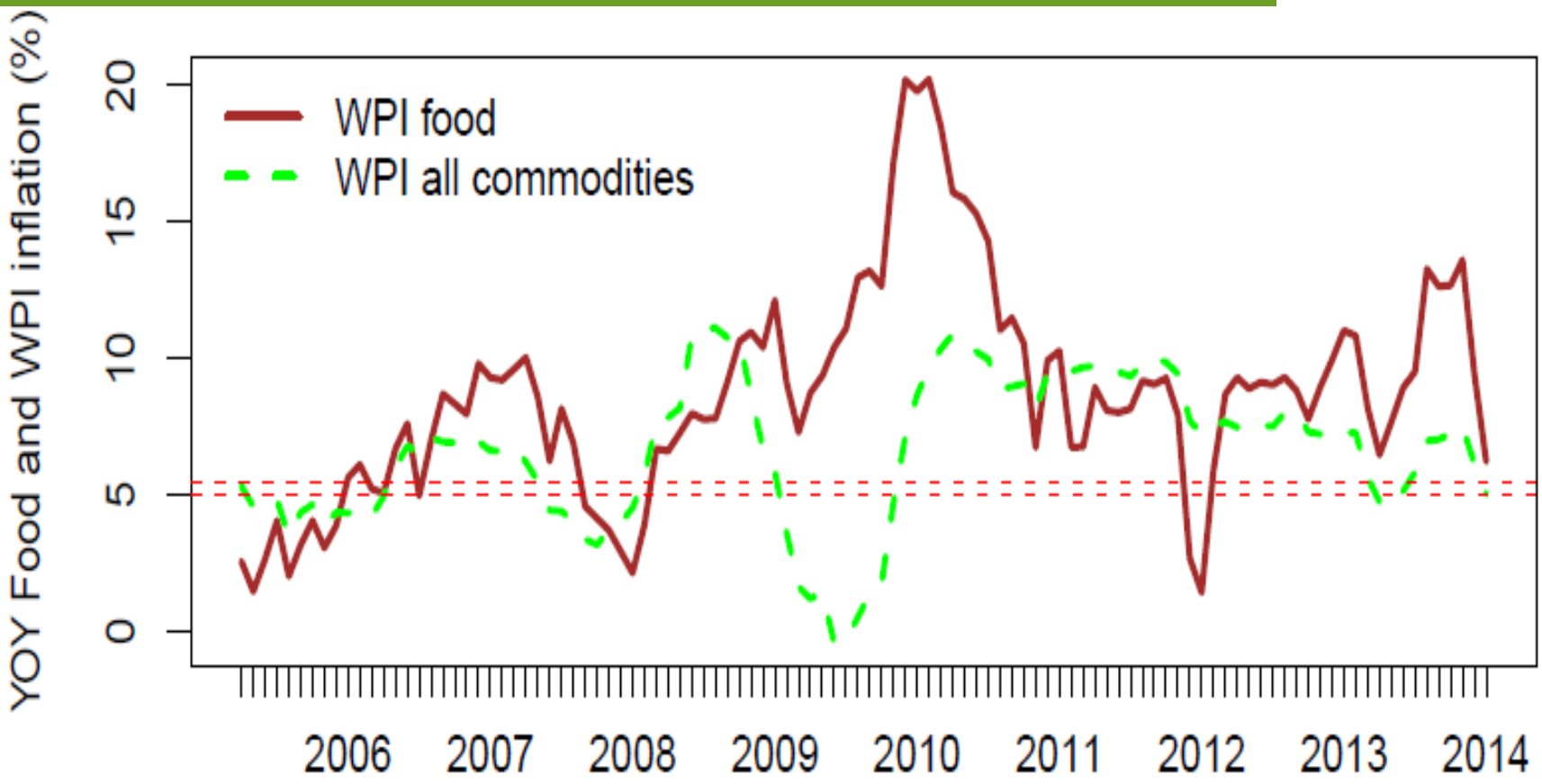
Sources of Inflationary Pressures in India

- Administrative Prices
- Natural Disaster
- Food price Rise
- Increase in wage rate
- Area and production, which is dependent on weather and technology
- Government policies
- No substitute product
- Demand/consumption
- Seasonal Cycles

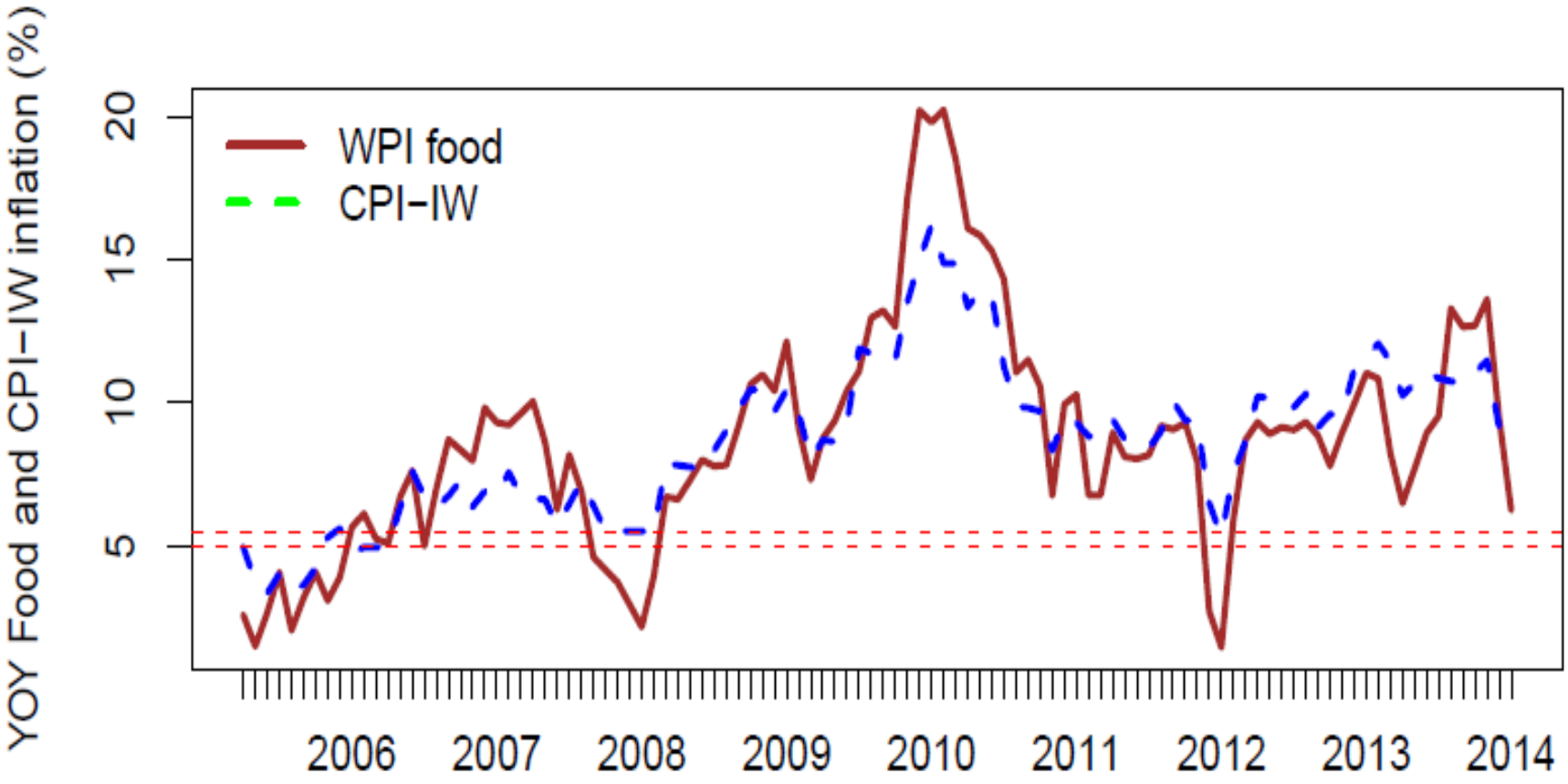
Scheme of Presentation

- Price Behaviour in India
- Inflation and Economic Growth
- Sources of Inflationary Pressure
- Food Inflation

Food Inflation: Motivation



Food Inflation: Motivation

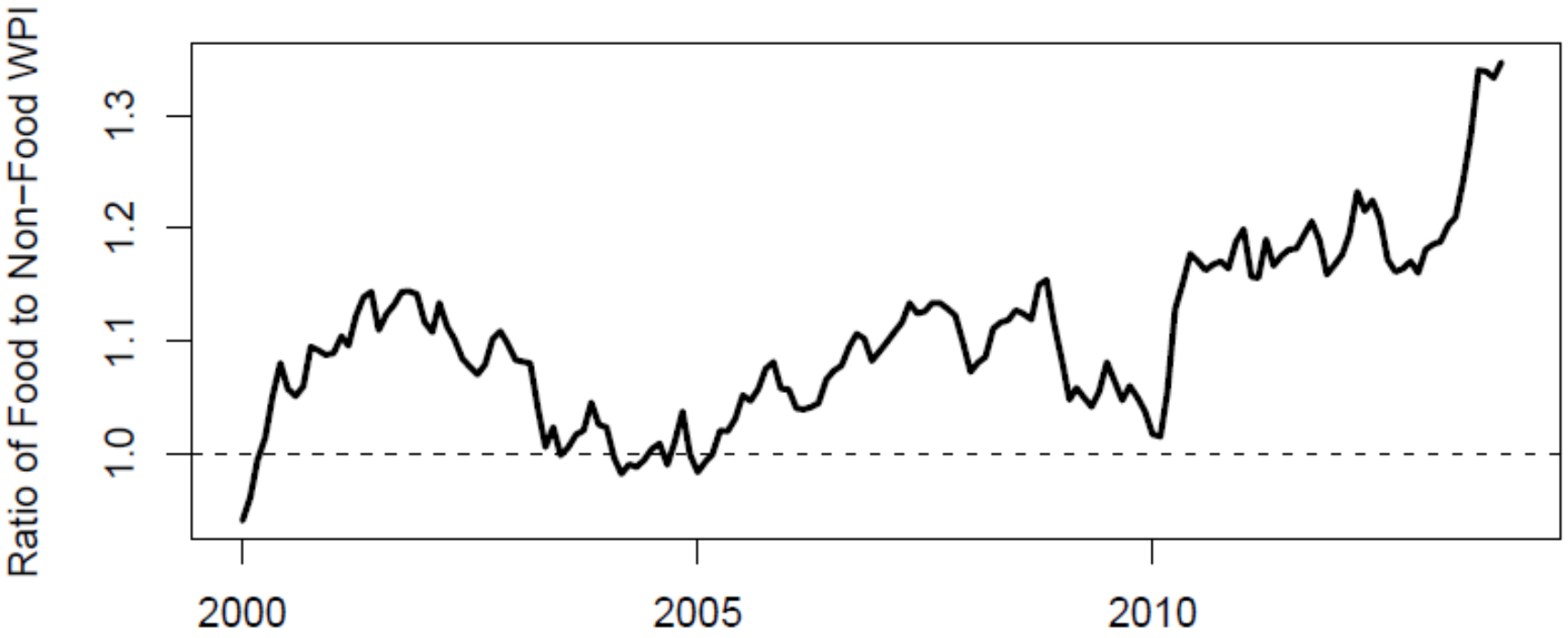


Food Inflation: Stylized Facts

- Over the years the share of agriculture and allied sector, in our GDP has come down significantly: from around 25 per cent in the mid-1990s to around 14 per cent now.
- However, food currently accounts for over one-third of our wholesale price index (WPI) and over one-half of our consumer price index (CPI).
- Since the food economy is essentially dependent on domestic production, fluctuation in agricultural production has a direct bearing on output and inflation.

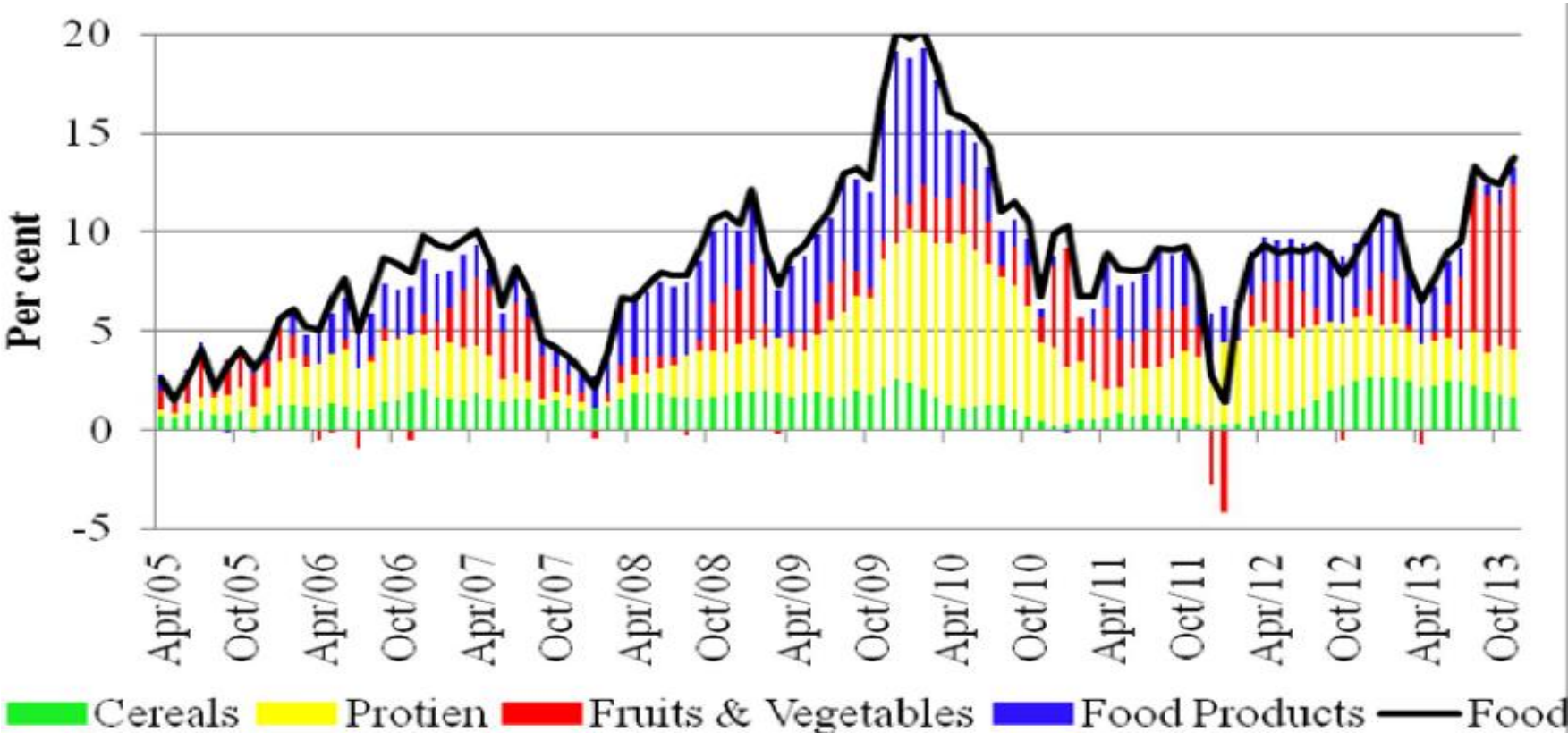
Food Inflation: Stylized Fact 1 -
Rising Relative Prices of Food

- WPI food price level has persistently been higher than WPI non-food price level since 2005
- Sharp rise in relative price of food to non-food inflation since 2010



Food Inflation: Stylized Fact 2 –
Drivers of Food Inflation

- Food inflation has driven by cereals, fruits and vegetables, protein (milk, meat and fish) at different points in time



Factors Influencing Food Inflation

- Demand Supply mismatch
  - Dietary shift in a growing economy
  - Rising demand
  - Stagnant productivity
- Rising cost of inputs
  - Agricultural wages
  - Fuel prices

Demand-Supply Mismatch

- Rising per capita income and diversification of Indian diets has increased the demand for high-value food products
- Food consumption has also obeyed Bennet's law with starchy staples in the food basket are displaced by protein-rich foods
- These shifts in food basket are reflected in time series and cross section data

Demand-Supply Mismatch

- Share of cereal steadily falls over time, while shares of protein and vitamin-rich diets rise over time
- For both rural and urban population, the ratio of average per capita monthly consumption of cereals by a household at above 70% of MPCE to that by a household at below 70% of MPCE is slightly greater than 1
- For rural and urban populations, such ratios for luxury items such as milk and fish and meat are 4 and 3 respectively

Bennet's Law: Time series evidence Rural and urban food basket has changed over time

Region	Year	Cereals ↓	Pulses	Dairy ↑	EFM ↑	Vegetables ↑	Fruit ↑
Rural	1972-73	55.7	5.9	10.0	3.4	4.9	1.5
	1987-88	41.1	6.3	13.4	5.2	8.13	2.5
	1993-94	38.3	6.0	15.0	5.2	9.5	2.7
	1999-00	37.4	6.4	14.8	5.6	10.4	2.9
	2004-05	32.7	5.6	15.5	6.0	11.1	3.5
	2009-10	24.2	5.8	13.5	8.3	14.5	4.3

Region	Year	Cereals ↓	Pulses	Dairy ↑	EFM ↑	Vegetables ↑	Fruit ↑
Urban	1972-73	36.1	5.3	14.4	5.1	6.8	3.1
	1987-88	26.6	6.0	16.8	6.4	9.4	4.4
	1993-94	25.6	5.5	17.9	6.2	10.1	4.9
	1999-00	25.8	5.8	18.1	6.4	10.6	5.0
	2004-05	23.8	4.9	18.6	6.4	10.6	5.2
	2009-10	18.4	5.6	15.6	8.2	12.7	7.2

Stagnant productivity: Trend in yield

- Decline in yield from the decade of 1990s to 2000s in wheat, pulses and vegetables

	1990s	2000s	Trend
Rice	1.4%	1.5%	
Wheat	2.9%	1.1%	↓
Pulses	1.8%	1.2%	↓
Fruits	0.7%	0.7%	
Vegetables	3.2%	1.7%	↓

Rising Costs of Inputs: Agricultural Wage

- It is often argued that universal implementation of NREGA has increased agricultural wages contributing to food price pressure
- Structural break in agricultural wages inflation for different activities was estimated by Rudrani Bhattacharya, Narhari Rao and Abhijit Sen Gupta in 2014 and found that 10% rise in wage inflation causes 2.3% rise in food inflation after four months of the shock and declines afterwards
- 10% rise in food inflation causes 3.8% rise in wage inflation; however the impact dies down in subsequent periods

Rising cost of inputs: Fuel prices

- Fuel is used to transport the produce from the producer to the consumer as well as power several machines
- In India, fuel prices have been administered to a large extent although there have been some recent movements towards integration of oil prices with market forces
- Rudrani Bhattacharya, Narhari Rao and Abhijit Sen Gupta in 2014 estimated the degree of pass-through of fuel inflation to food inflation
- They found that, there are significant pass-through from fuel inflation to food inflation, i.e., 10% rise in fuel inflation leading to a 1.3% rise in food inflation after 5 months, the effect declines afterwards

Thank you

Bennett's Law

- Bennett's Law: as people become wealthier, they switch from simple starchy plant-dominated diets to a more varied food input that includes a range of vegetables, fruit, dairy products, and especially meat.

BACK