

Evolution of Development Paradigms and Economic Development

From the Viewpoint of Development Economics

(For I2ID Part I Lectures)

Prof. Shigeru T. OTSUBO
GSID, Nagoya University
April 2011

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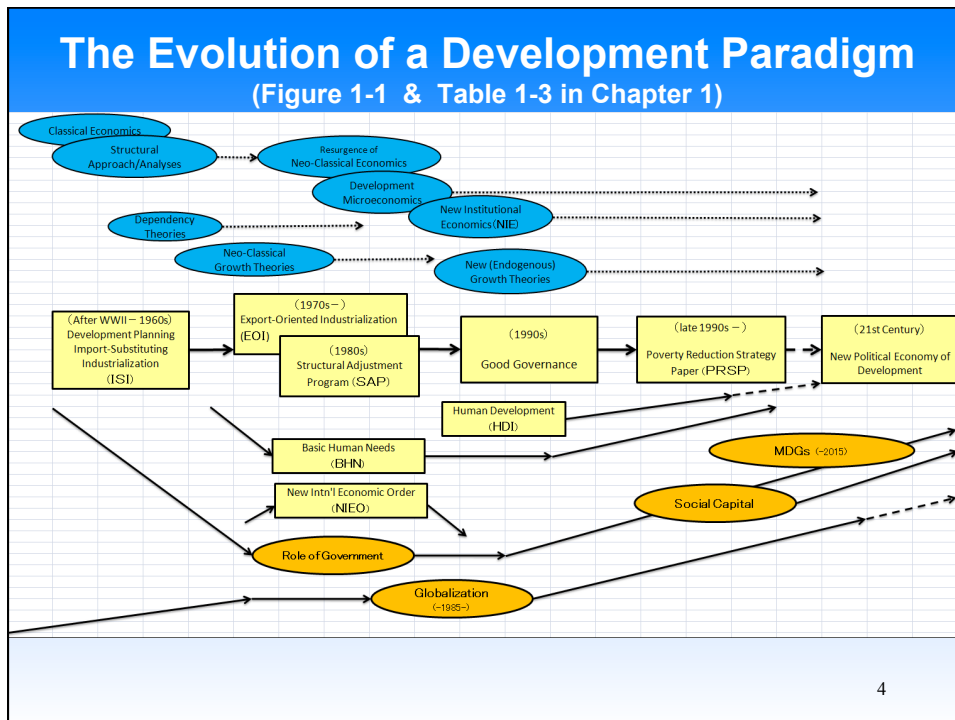


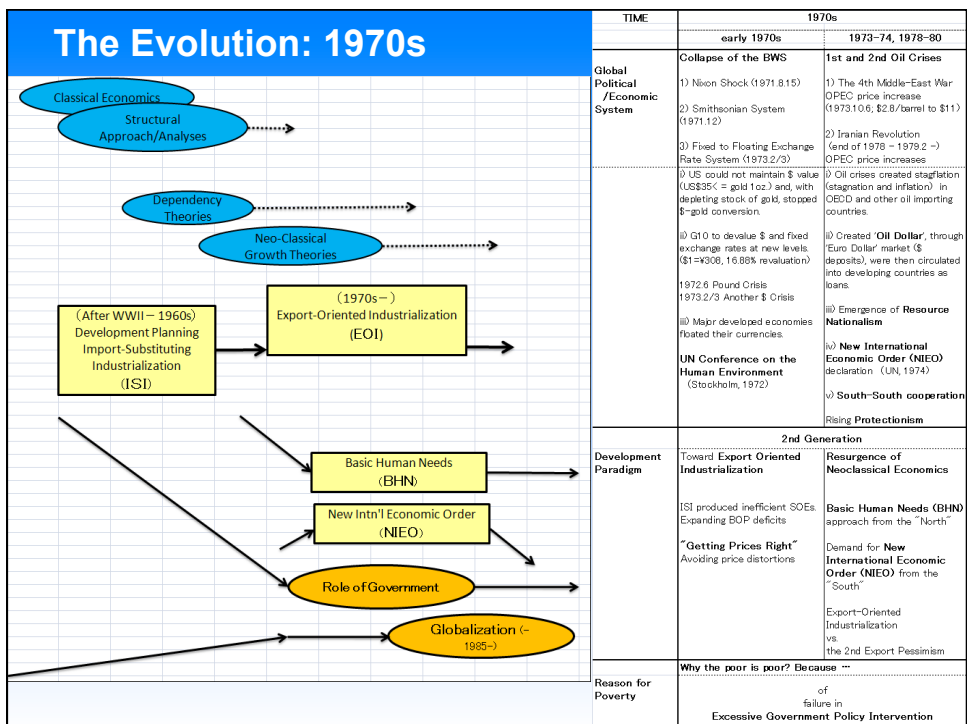
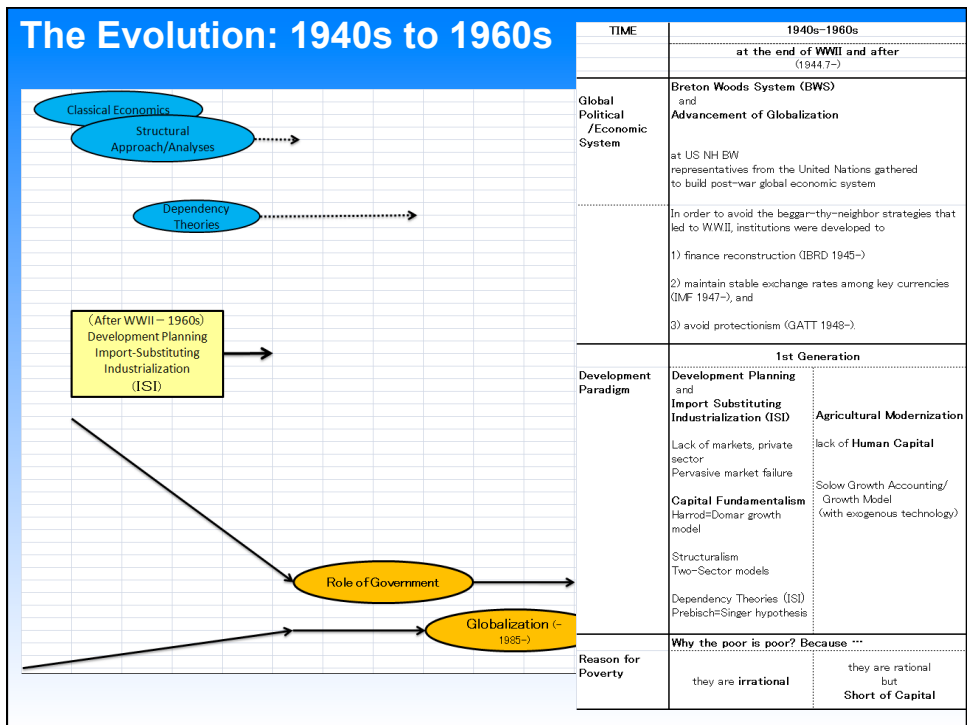
Organization of This Lecture

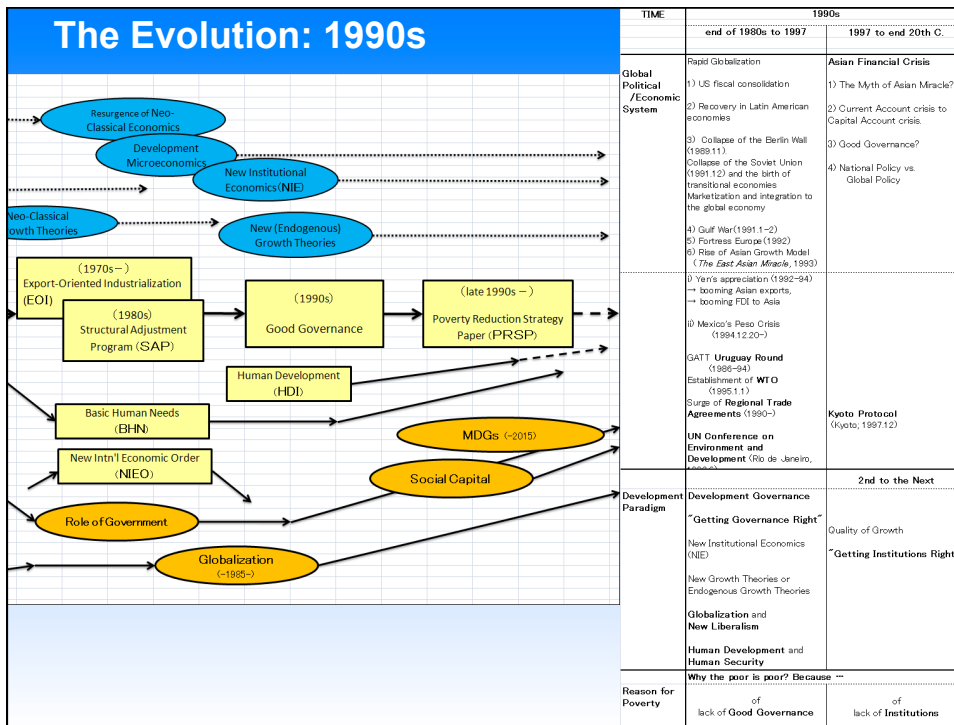
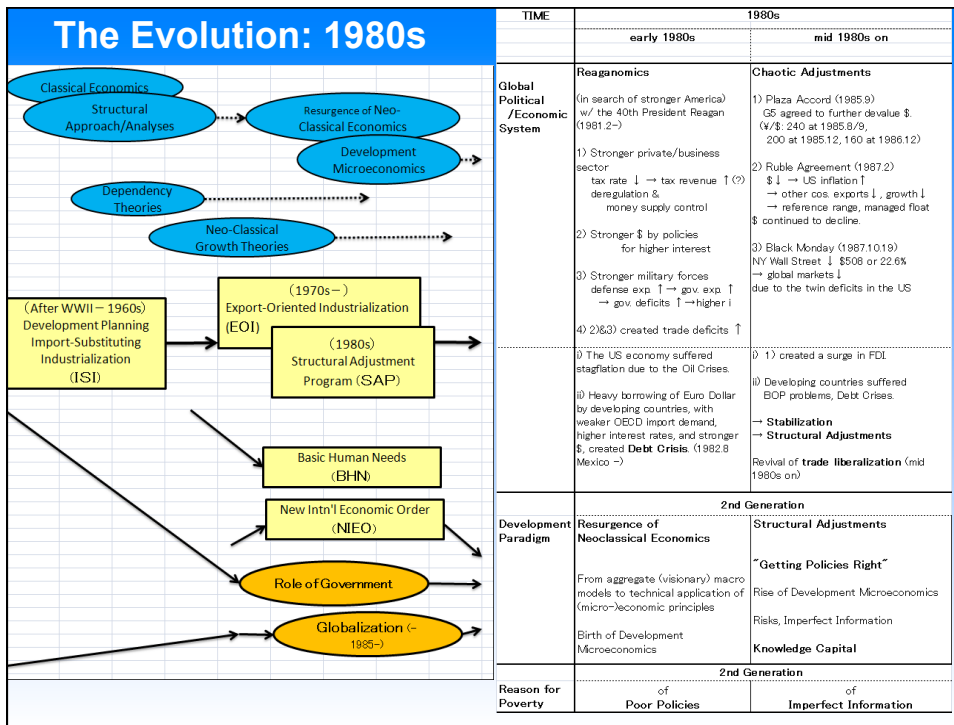
- 1. Evolution of Development Paradigms from the Viewpoint of Development Economist**
- 2. Economic Development in “Development”**
- 3. Poverty-Growth-Inequality Triangle**
- 4. Association with Other Subject Areas**
(Human Capital incl. Education, Governance, Democracy, Human Development ...)

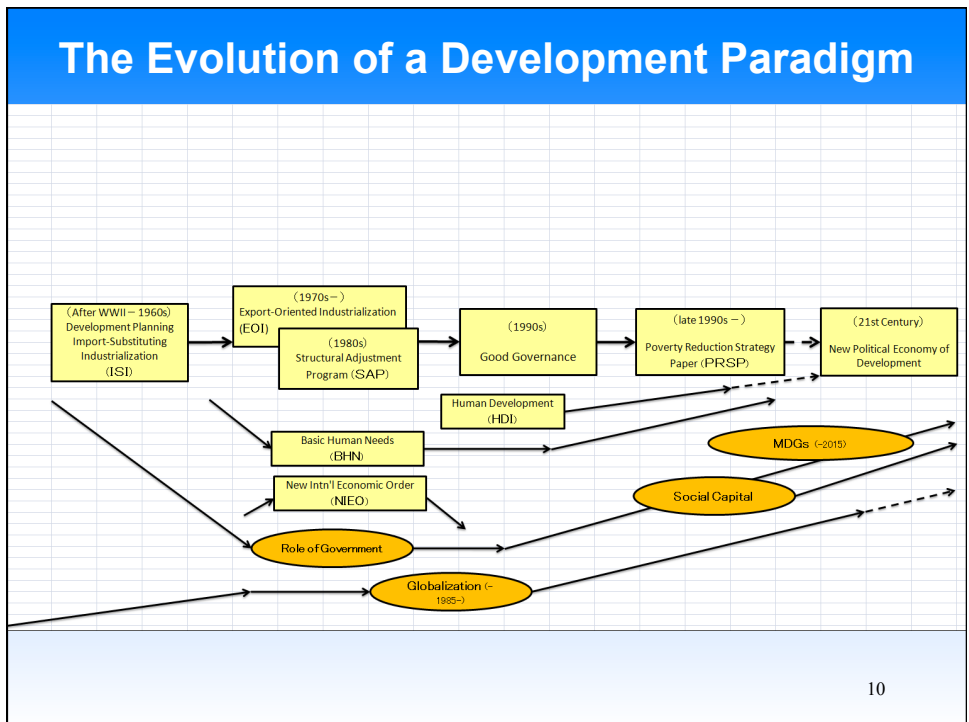
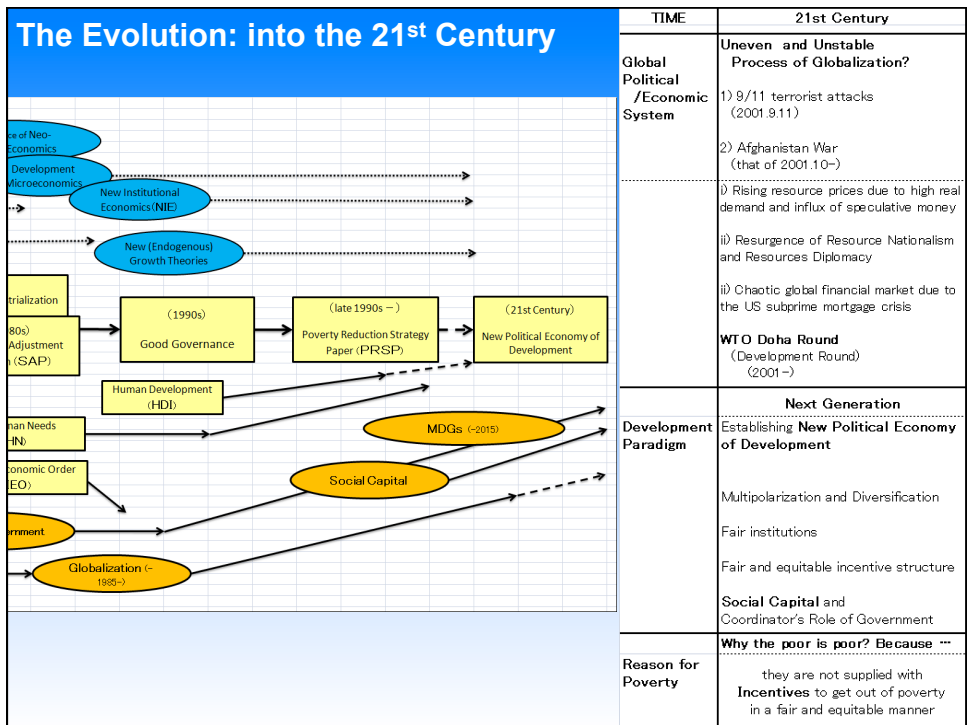
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1. Evolution of Development Paradigms.....

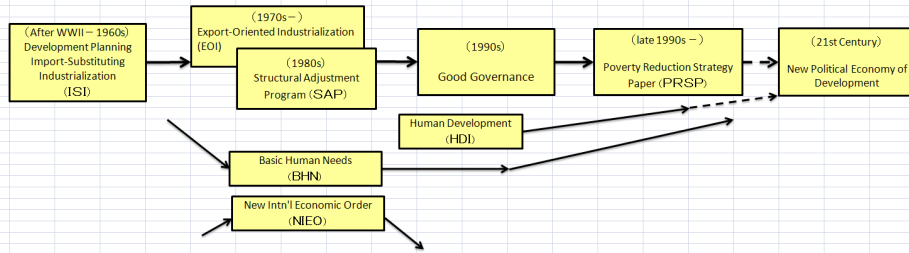






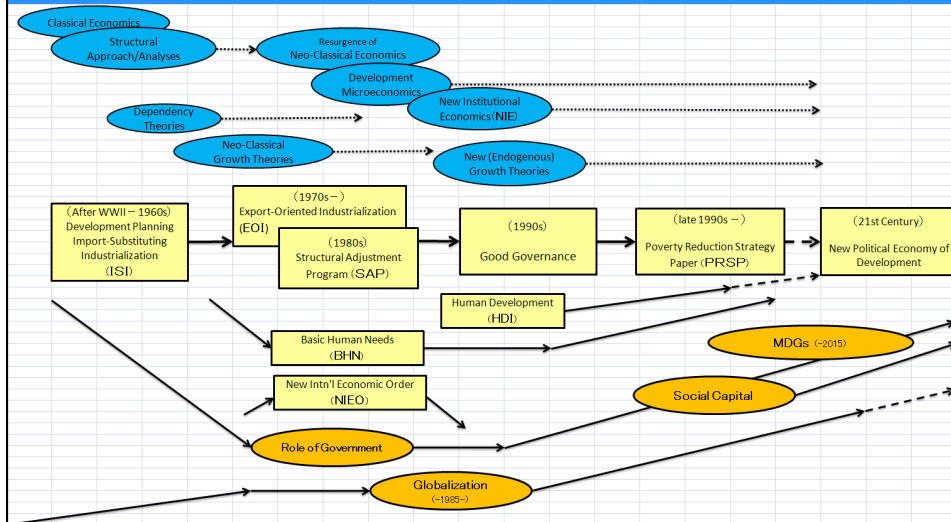


The Evolution of a Development Paradigm



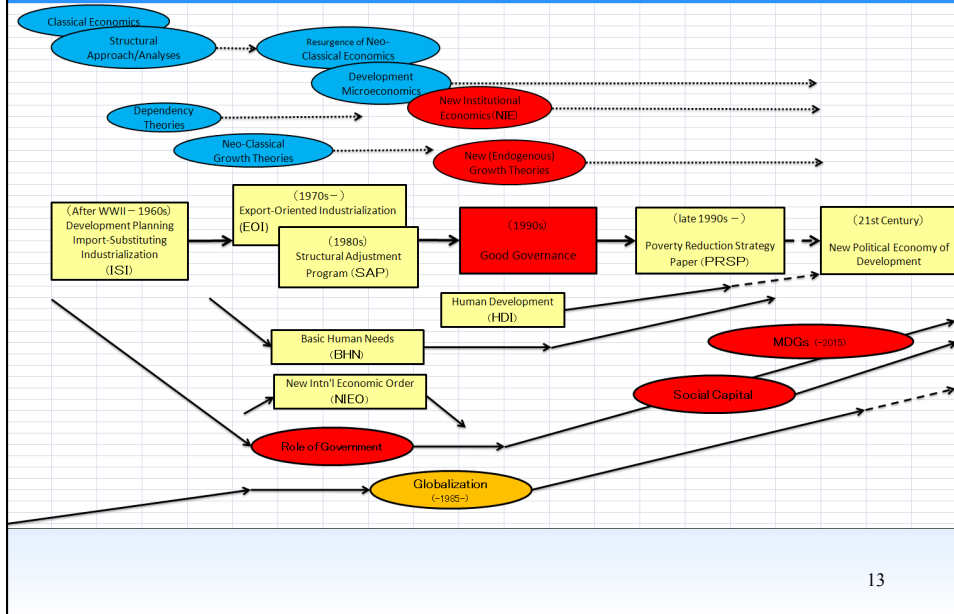
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The Evolution of a Development Paradigm



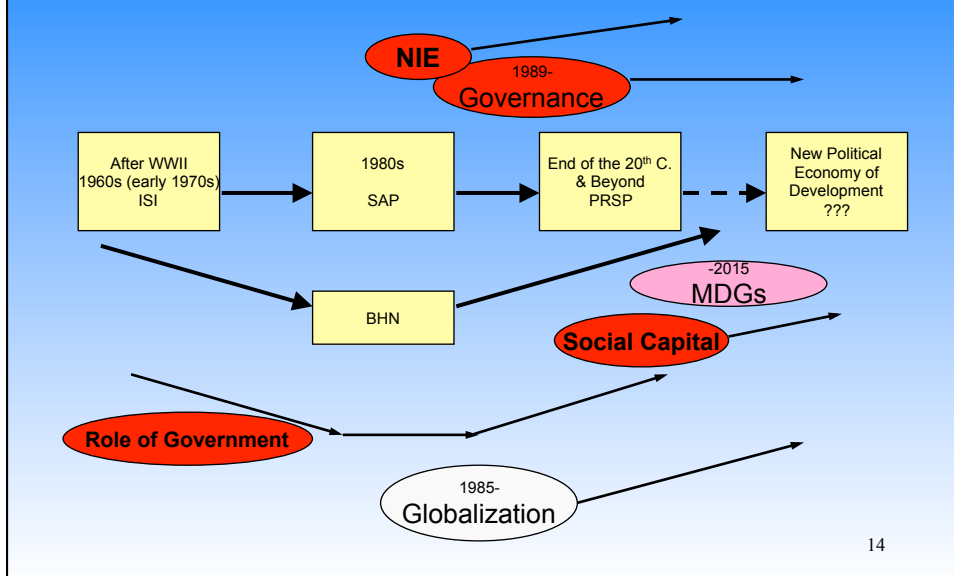
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The Evolution of a Development Paradigm



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The Evolution of Development Paradigm: A Simplified Review



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2. Economic Development in “Development”

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What is Economic Growth?

In the development economics field, the term “**economic growth**” and “**economic development**” are distinctively used. Strictly speaking, economic growth is the growth of the size of the real economy in a country, which is measured by the gross domestic product (GDP). The growth rate is what we call the economic growth rate. However, when discussing its effect to **poverty reduction**, there are times that **increase in the average income per capita (GDP divided by population)** is considered economic growth. In this case, **the rate of per capita income increase** is observed.

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What is Economic Development?

In economic development, “development” is perceived as a *process*. Economic development is defined as a concept that involves the following structural changes and social transformation that accompany economic growth.

- ◆ **Industrial transformation** (shift from an agriculture-dominant society to an industry-dominant society), and **economic structural changes** such as developments in economic/social infrastructure and institutions;
- ◆ **Social transformation** and the changes in lifestyles that accompany urbanization (labor migration from rural areas to cities);
- ◆ **Cultural transformation** such as the shift from family/relative/tribe-oriented organization/relationship to a more merit-based, contractual organization/ relationship;
- ◆ **Political transformation** including democratization and (legal) institution building for the establishment of property rights, contract enforcement, and so forth.

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What is Economic Development?

When we see “development” as *outcomes*, it is considered that development has happened or has been made, only when human well-being has improved along with economic growth (income growth).

Dadley Seers (1969) discusses as follows:

The questions to ask about a country’s development are therefore: What has been happening to **poverty**? What has been happening to **unemployment**? What has been happening to **inequality**? If all three of these have declined from high levels, then beyond doubt this has been a period of development for the country concerned. If one or two of these central problems have been growing worse, especially if all three have, it would be strange to call the result “development” even if per capita income doubled. (P-G-I Triangle & Pro-Poor Growth)

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Income Convergence?

Table 1-2 Changes in Regional Real Per Capita GDP (2000 US\$)

	1965	1975	1985	1990	1995	2000	2005	2005/1965	2005/1985
East Asia & Pacific	145	211	363	481	735	952	1,355	x9.3	x3.7
China	100	146	290	392	658	949	1,449	x14.5	x5.0
Europe & Central Asia				2,257	1,763	2,037	2,615		
Latin America & Caribbean	2,275	3,088	3,285	3,259	3,554	3,852	4,044	x1.8	x1.2
Middle East & North Africa	831	1,295	1,431	1,346	1,423	1,605	1,780	x2.1	x1.2
South Asia	199	221	275	328	379	450	566	x2.8	x2.1
India	188	215	260	317	372	453	588	x3.1	x2.3
Sub-Saharan Africa	494	587	539	531	494	515	569	x1.2	x1.1
LMIC	550	752	901	963	1,036	1,191	1,440	x2.6	x1.6
High Income Cos.	10,911	15,044	18,959	21,917	23,466	26,368	28,242	x2.6	x1.5
World	2,840	3,596	4,158	4,565	4,758	5,241	5,647	x2.0	x1.4

Note: Country compositions of geographical regions are basically fixed. Country compositions of income groups, however, change over years. For tabulation, they are fixed using 2005 World Bank income groupings.
 Source: Author's compilation using World Bank, *World Development Indicators 2007* CD-ROM.

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Income Convergence? (σ -convergence)

Mean Income (2000US\$) and Coefficient of Variation (CV)

	1965	1970	1975	1980	1985	1990	1995	2000	2005
Mean Income									
Low Income Cos. (54)	219	241	246	257	273	312	340	393	481
Lower Middle Income Cos. (58)	361	442	570	689	768	861	1,047	1,250	1,614
Upper Middle Income Cos. (40)		2,631	3,016	3,516	3,447	3,498	3,416	3,897	4,480
LMIC (152)	550	644	752	867	901	963	1,036	1,191	1,440
High Income Cos. (56)	10,911	13,375	15,044	17,304	18,959	21,917	23,466	26,368	28,242
High Income OECD (24)	11,190	13,742	15,419	17,732	19,606	22,712	24,256	27,304	29,251
Other High Income Cos. (32)	4,570	5,831	8,113	10,324	9,470	11,292	13,535	15,304	17,110
World (208)	2,840	3,314	3,596	3,981	4,158	4,565	4,758	5,241	5,647
CV									
Low Income Cos. (54)	0.51	0.54	0.56	0.55	0.51	0.49	0.55	0.49	0.49
Lower Middle Income Cos. (58)	0.55	0.62	0.56	0.51	0.47	0.45	0.53	0.47	0.43
Upper Middle Income Cos. (40)	0.63	0.58	0.51	0.50	0.45	0.35	0.41	0.36	0.30
LMIC (152)	1.13	1.14	1.06	1.01	0.99	0.96	1.04	1.05	1.04
High Income Cos. (56)	0.78	0.60	0.57	0.52	0.45	0.43	0.42	0.43	0.40
High Income OECD (24)	0.45	0.42	0.38	0.38	0.38	0.38	0.37	0.37	0.37
Other High Income Cos. (32)	1.30	0.97	0.85	0.73	0.49	0.38	0.34	0.33	0.38
World (208)	1.61	1.46	1.40	1.40	1.40	1.47	1.50	1.50	1.58

(Source) Author's own calculations from World Bank, *World Development Indicators 2007* CD-ROM.

$$c_v = \frac{\sigma}{\mu} \quad \sigma = \sqrt{\frac{1}{N} \sum_{i=1}^N (x_i - \mu)^2}$$

(from Otsubo (2009), *Globalization and Development*)

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3. 所得水準の相対的収束 (σ 収束)

表1-7 1人当たり実質GDP水準と変動係数の推移 (2000年米ドル値で計算)

	1965	1970	1975	1980	1985	1990	1995	2000	2005
変動係数									
低所得諸国 (54)	0.51	0.54	0.56	0.55	0.51	0.49	0.55	0.49	0.49
低中所得諸国 (58)	0.55	0.62	0.56	0.51	0.47	0.45	0.53	0.47	0.43
高中所得諸国 (40)	0.63	0.58	0.51	0.50	0.45	0.35	0.41	0.36	0.30
開発途上国全体 (152)	1.13	1.14	1.06	1.01	0.99	0.96	1.04	1.05	1.04
先進国 (高所得) (56)	0.78	0.60	0.57	0.52	0.45	0.43	0.42	0.43	0.40
高所得 OECD (24)	0.45	0.42	0.38	0.38	0.38	0.38	0.37	0.37	0.37
高所得 OECD外 (32)	1.30	0.97	0.85	0.73	0.49	0.38	0.34	0.33	0.38
世界 (208)	1.61	1.46	1.40	1.40	1.40	1.47	1.50	1.50	1.58

(出所) World Bank, *World Development Indicators 2007* CD-ROMより筆者作成。

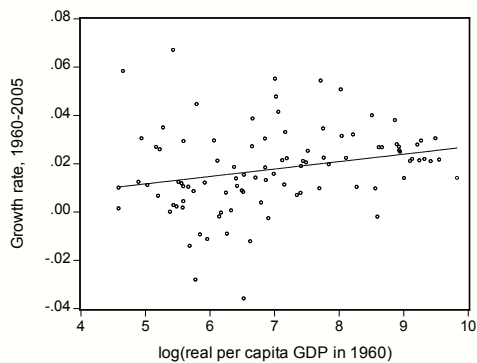
- ◆ 世界は、高所得諸国間および高中所得途上諸国間の強い所得収束傾向と、低中所得途上諸国間と低所得途上諸国間の弱い所得収束傾向を内包しつつ、1980年代を境に途上国諸国全体として、そして世界全体として所得収束傾向から所得拡散傾向に転じていることになる。なにがしかの条件を共有する各所得グループの構成国間では所得収束が起きると同時に、条件等が異なると思われる所得グループの間の隔たりは広がっていると考えられる。

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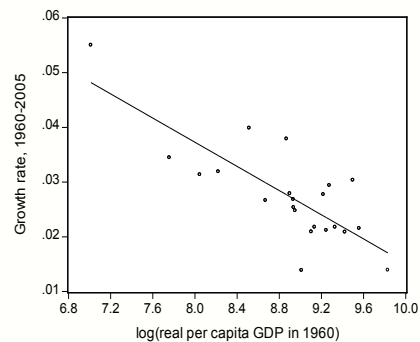
Income Convergence?

(Absolute β -convergence)

All Countries: 1960-2005



High Income OECD 24 Countries: 1960-2005



(Source) Otsubo (2009), *Globalization and Development*.

(Barro's Ad Hoc Growth Equation Estimation)

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Factors for Higher Income Growth & Catch-Up?

Explanatory Variables	Period-Average Growth Rate of Mean Real Per-Capita Income	
	Estimated Coefficients	Standard Error
Conditional Income Convergence		
(1) Initial level of income (nbg)	-0.0254	0.0031
Initial Human Capital		
(2) Male secondary and higher years of schooling (of persons aged 25 and over)	0.0118	0.0025
(3) Life expectancy (nbg)	0.0423	0.0137
(4) (1) X (2)	-0.0062	0.0017
Population Pressure		
(5) Fertility rate (nbg)	-0.0161	0.0053
Governance -Institutions		
(6) Government consumption to GDP ratio (excl spending on education and defense)	-0.136	0.026
(7) Rule of law index (subjective composite indicator)	0.0293	0.0054
(8) Democracy index (index of political rights)	0.090	0.027
(9) Democracy index squared	-0.088	0.024
(10) Inflation rate (economic governance/management)	-0.043	0.008
Other Control Variables		
(11) Terms of trade change (changes in export price/import price ratio)	0.137	0.030
	R ² for each period	.58 .52 .42
	No. of observations for each period	80 87 84

Table 1-4
Estimated Ad Hoc Growth Equation
(Human Capital, Governance,
Institutions and Economic Growth)

Note: Dependent variables are the growth rates of real per capita GDP for 1965-75, 1975-85, and 1985-90. Estimation is carried out by three-stage least-squares (with different instrumental variables used for each period/equation). *p* value for joint significance of two democracy variables (items (8) and (9)) is 0.0006 (i.e. jointly significant). Dependent variables are classified by this author in order to facilitate readers' understanding of the estimated results.
Source: Barro (1997), Table 1.1, simplified and re-categorized by this author.

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If all Aid had gone into productive investment

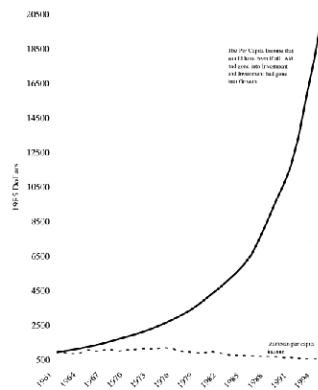


Fig. 1. The gap between the linear aid-investment-growth model and the actual outcome in Zambia.

Predictions by a financial gap model, Minimum Standard Model (MSM), Revised MSM (RMSM) built on Two-Gap (resource-gap) model and the Harrod-Donar growth model.

Source: Figure 1 in William Easterly, "The Ghost of Financing Gap: Testing the Growth Model of the International Financial Institutions," *Journal of Development Economics*, Vol. 60, No. 2 (December 1999)

Money alone is not enough!!

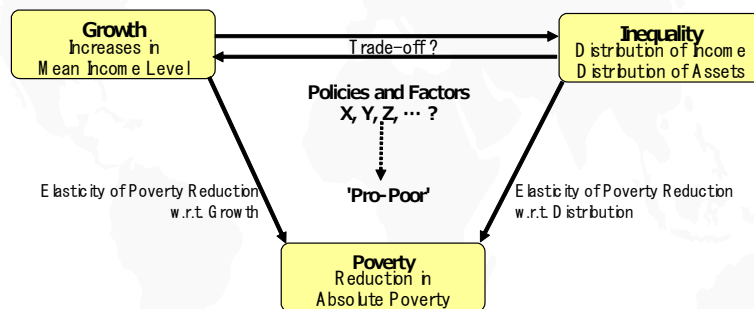
But if that Money was not available?

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3. Poverty-Growth-Inequality Triangle

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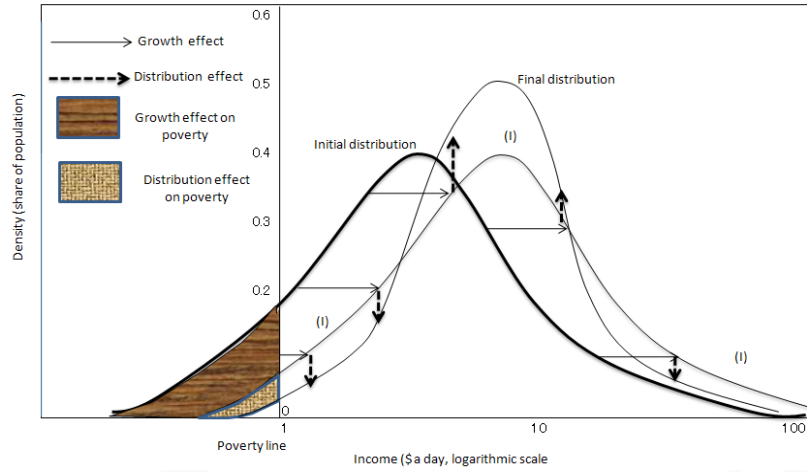
Figure 0: Poverty-Growth-Inequality Triangle



Source: Author

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Figure 0.5: Decomposition of change in distribution and poverty into growth and distribution effects

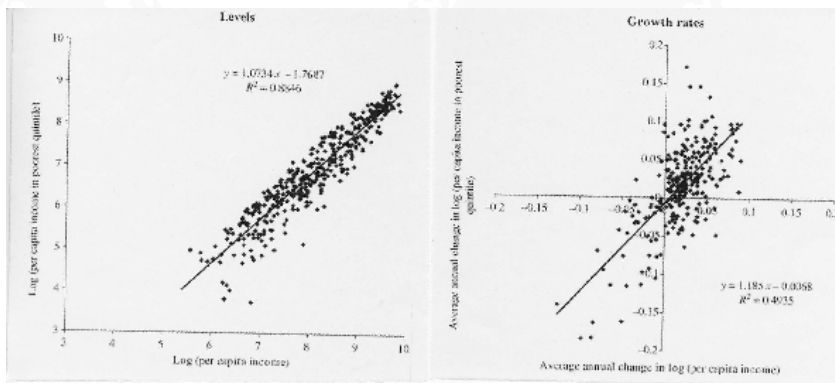


Source: Bourguignon (2003), Figure 1.2; Bourguignon (2004), Figure 1

Change in Poverty = F(growth, distribution, change in distribution) (assuming log-normal distribution)

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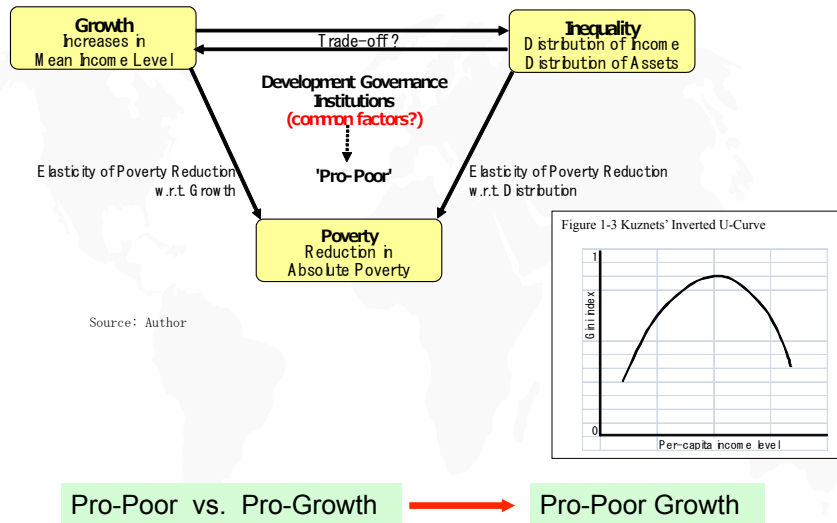
Figure 4 : Growth is good for the poor (Figure 1-4 in Ch.1)



Source: Dollar and Kraay (2007), Figure 1

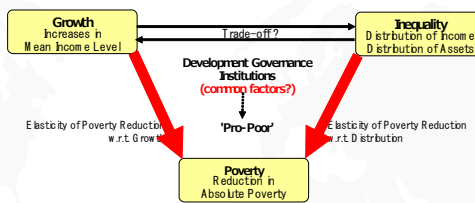
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Figure 1: Poverty-Growth-Inequality Triangle



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Elasticities of Poverty Reduction – Crossing Effects



Ravallion (2005) "Inequality is Bad for the Poor"

$$\text{Rate of poverty reduction} = [-9.33 \cdot (1 - \text{Inequality index}) + 3.031] \cdot \text{Ordinary growth rate}$$

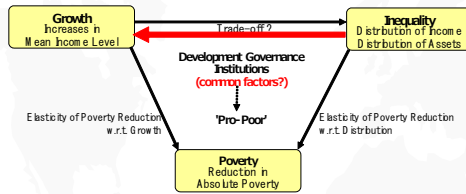
Applied to 62 sample cos.

As Gini increases from 20 to 60, the Elasticity of Poverty Reduction w.r.t. Growth declines from -4.3 to -0.6.

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Inequality in Income/Assets → Growth 1

Figure 1: Poverty-Growth-Inequality Triangle



WDR 2006: Equity and Development (2005)

With imperfect markets, inequalities in power and wealth translate into unequal opportunities, leading to wasted productive potential and to an inefficient allocation of resources. (p.7)

Imperfect Capital Markets, Imperfect Land Markets, Imperfect Markets for Human Capital

Economic and political inequalities are associated with impaired institutional development. (p.8)

The second channel through which inequality affects long-run processes of development is the shaping of economic and political institutions. (p.9)

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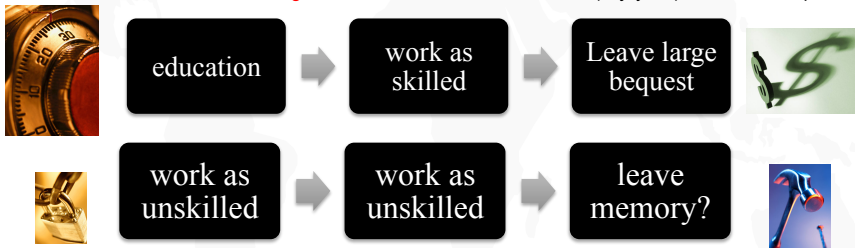
A Story of Rich and Poor Dynasties

Overlapping Generations Model with Inter-Generational Altruism, Originated from Galor and Zeira (1993)

Utility (Happiness) Function: $u = \alpha \log c + (1-\alpha) \log b$



- 1) Individuals are assumed to be identical w.r.t. their 'potential' skills and preferences and differ only w.r.t. their inherited wealth (unequal asset distribution!).
- 2) Individuals live for 2 periods. 1st period: either being educated or work as unskilled. 2nd period: work as skilled or as unskilled according to their education levels, consume (enjoy life), and leave bequests.



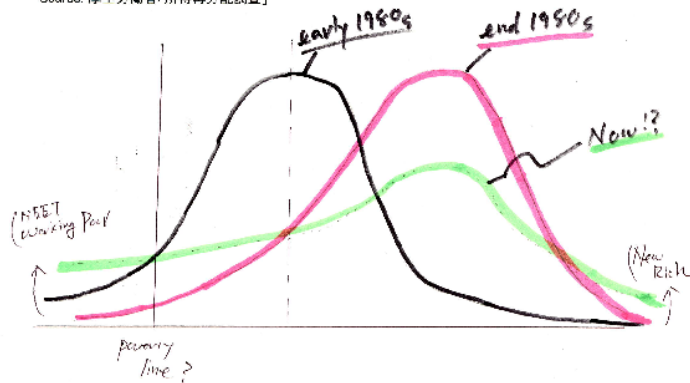
- 1) S-T: **Imperfect Credit Markets** ($i^b > i^l$, loans on collateral not on the 'potential'); Wealth distribution affects economic performance.
- 2) L-T: **Indivisibility in Investment in Human Capital** (large initiation fees, etc.); inequality persists and the inherited wealth distribution will affect economic/social performance in the long run (not only in the S-L).

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Recent Movements in Japan's Gini Indices

	1981	2005	Change
Gini Index before Redistribution (当初所得)	0.3491	0.5263	1.51
Gini Index after Redistribution (再分配所得)	0.3143	0.3873	1.23

Source: 厚生労働省「所得再分配調査」



Source : Author's unscientific imagination !?

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4. Association with Other Subject Areas

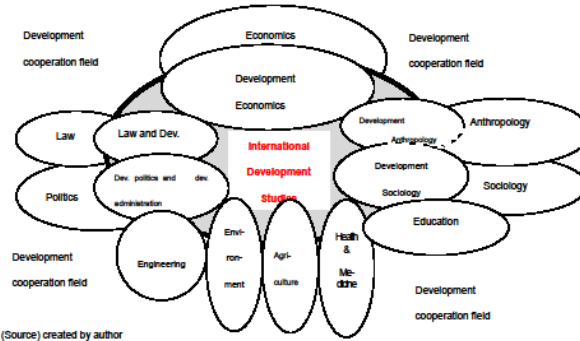
(Human Capital incl. Education, Governance, Democracy, Human Development...)

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Building 'Interdisciplinary' and 'Active' International Development Studies



Figure 0-1 Relationship of the interdisciplinary international development studies and other related academic fields



(Source) created by author

**Given issues/problems in the field:
we are in need of Multidisciplinary Network Studies**

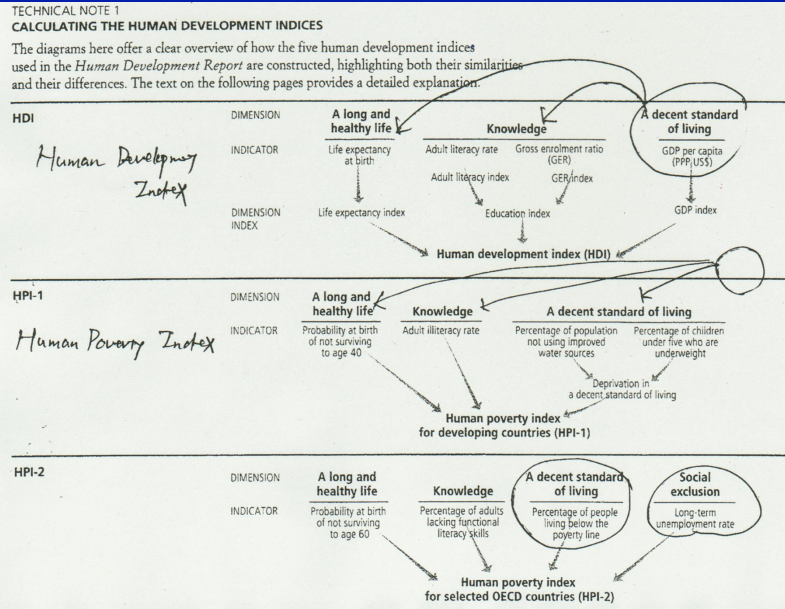
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Source: Barro (1997), Table 1.1, simplified and re-categorized by this author.

Human Development Index



Economic Growth and Human Development

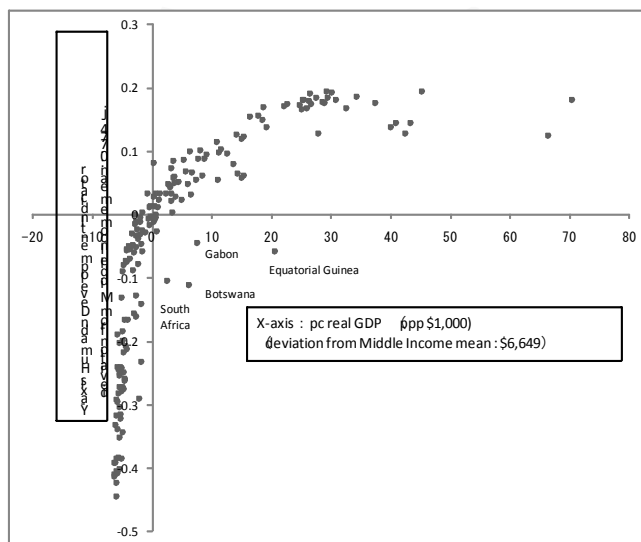


Figure 1-5
Per Capita Income and Human

Note: Horizontal axis: per capita income levels in the year 2006 (in 2005-based PPPs) shown in deviations from the mean income of Middle-Income countries (ppp \$6,649).
 Vertical axis: human development indicators in the year 2006 shown in deviations from the mean value of the Middle-Income countries (0.774).
Source: Author's own compilation using the original data set on the Human Development Data Site of the United Nations Development Program (UNDP) < <http://hdr.undp.org/en/statistics/data/>>.



5. In Conclusion ...

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What is Development? 1

*Introduction to International Development Studies:
An Interdisciplinary Approach*

co-editors: Prof. S. Otsubo, development economist
Prof. H. Kimura, political scientist,
Prof. S. Ito, development sociologist

In this book, we define ‘development’ as **the reform of the whole structural system that produces material as well as non-material poverty.**

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What is Development? 2

When ‘proper incentives to get out of poverty’ so defined by a development economist are given to the ‘structural poor’, if they are equipped with ‘capabilities’ and ‘adaptability’ to respond, those who cannot easily benefit from ‘trickle-down’ may rise to their feet and overcome poverty by themselves.

The ‘potential poor’ who may easily fall into poverty given external economic/social/natural shocks are equipped with resilience supported by social capital including social safety nets, they may not have to fall into poverty repeatedly.

The poor have to be treated as active participants to development. For that end, people have to be ‘empowered’.

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What is Development? 3

The state of ‘development’ should be the situation where people are empowered and a country is full of empowered human beings.

‘International development’ should be the international cooperation/collaboration heading for this end.

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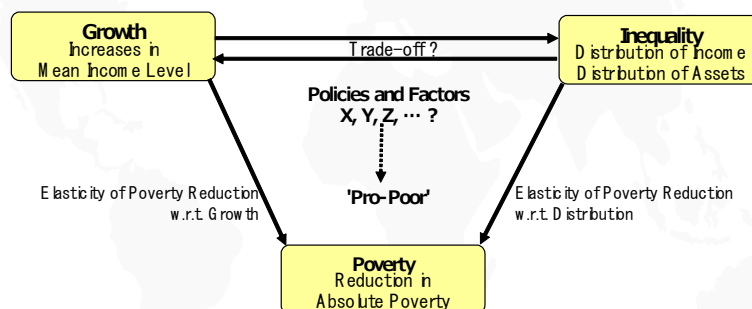
Three Pillars of Poverty Reduction

Therefore, we set the three pillars of poverty reduction as follows:

1. Attainment of 'pro-poor' growth (the **growth engine** has to be running),
2. Adoption of **proper public policies**, incl. exercising **good governance** and building institutions, and
3. **Empowerment** of the 'structural poor' and the 'potential poor'.

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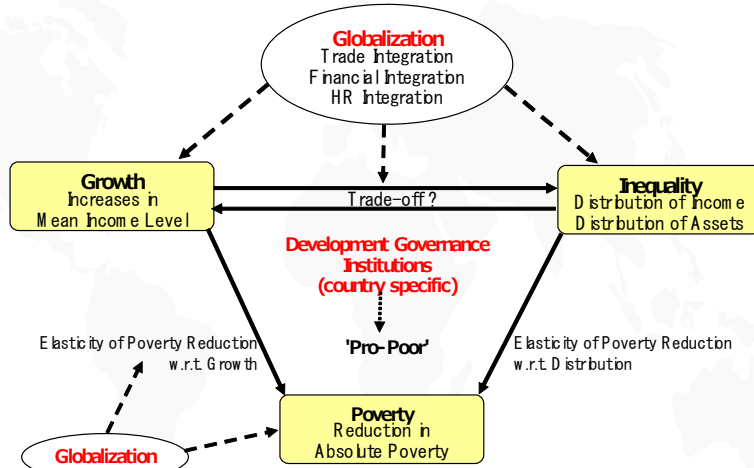
Figure 0: Poverty-Growth-Inequality Triangle



Source: Author

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Figure 5: Expanded Analyses on the Poverty-Growth-Inequality Triangle



Source: Author

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Gross National Happiness?



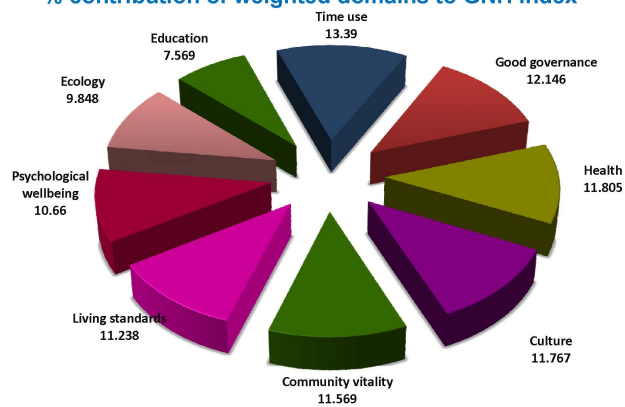
Gross National Happiness?



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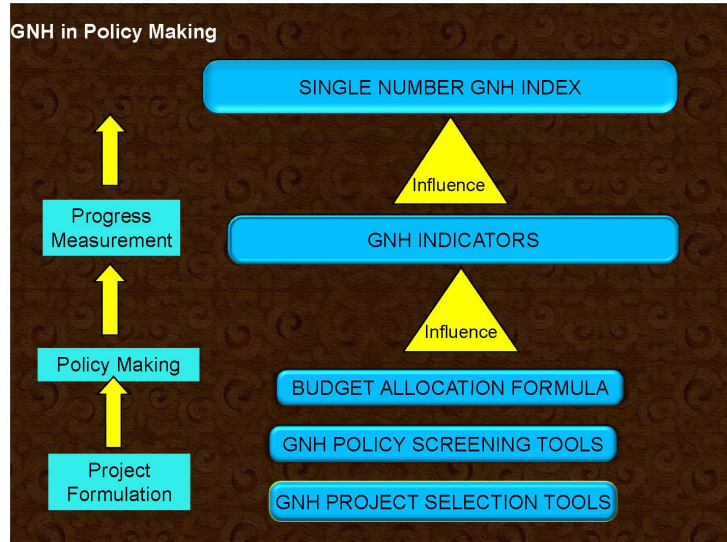
Gross National Happiness?

% contribution of weighted domains to GNH Index



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Gross National Happiness?



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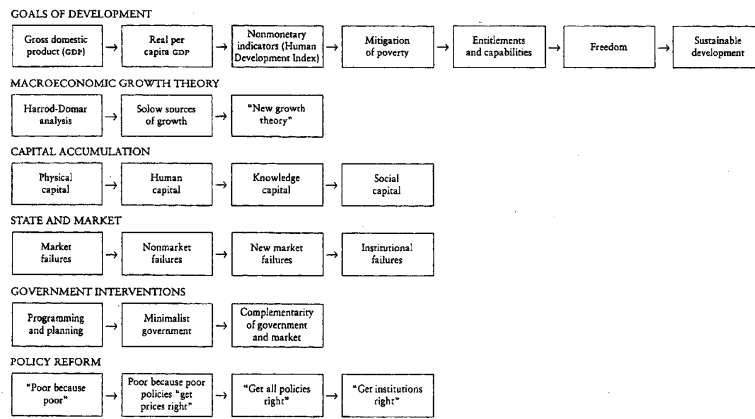
“Poverty never sleeps.....

Thank you

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Meier and Stiglitz, Frontiers of Development Economics (P. 3)

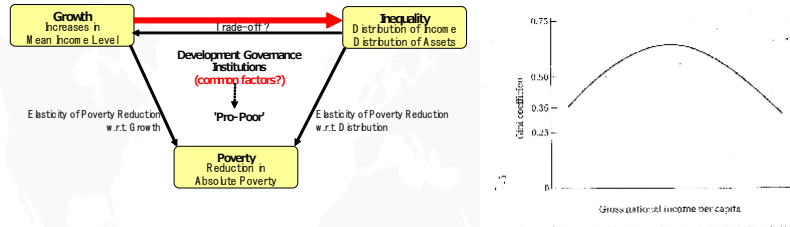
Figure 1. The Evolution of Development Thought



The Poverty-Growth-Inequality Triangle

Remaining slides

Kuznetz Hypothesis – Kuznetz' Inverted U Curve 1



Kuznetz (1955)

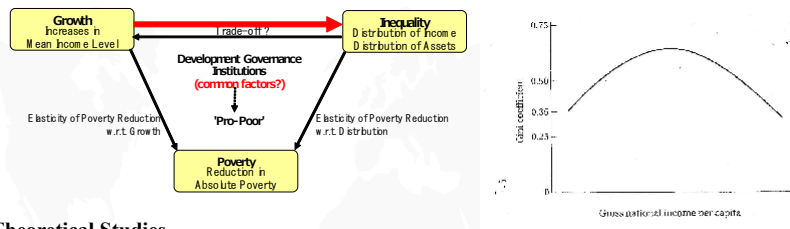
The paper is perhaps 5 per cent empirical information and 95 per cent speculation, some of it possibly tainted by wishful thinking. (p.26)

Fields (2001)

Although the two early studies by Kuznetz (1955 and 1963) are widely cited as providing evidence in favor of the Kuznetz curve, the actual data he presents do not support this. His key table, reproduced here as table 3.2, reveals only two countries (Prussia and Saxony) in which the inverted-U pattern held; in the other seven (United Kingdom, Germany, Netherlands, Denmark, Norway, Sweden, and the United States), inequality fell. (p.47)

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Kuznetz Hypothesis – Kuznetz' Inverted U Curve 2



Theoretical Studies

Stiglitz (1969) – Neoclassical Model of Growth and distribution

Simple model of accumulation w/ i) a linear savings fn., ii) a constant reproduction rate, iii) homogeneous labor, iv) equal inheritance, then, all wealth and income is asymptotically evenly distributed.

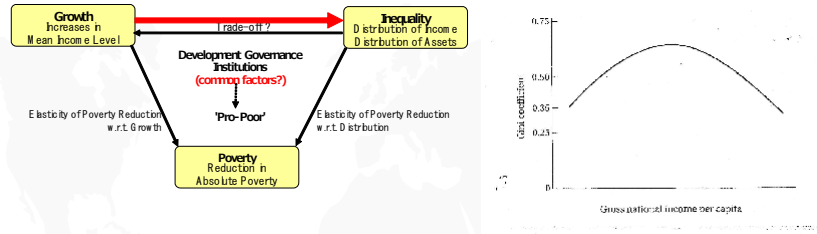
Forces of inequality are then 1) heterogeneity of labor force, 2) class savings behavior (advent of capitalist and workers classes), and 3) alternative inheritance policies (such as primogeniture).

Fields (1980) – Limiting Cases of Dualistic Development (Two-Sector Models)

- i) Modern-Sector Enlargement → Lorenz curves cross, but **most likely 'Inverted U'**
Lewis' (1954) two-sector model with unlimited supply of labor
- ii) Modern-Sector Enrichment
- iii) Traditional-Sector Enrichment

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Kuznetz Hypothesis – Kuznetz’ Inverted U Curve 3



Empirical Studies

1970s-80s Kuznetz’ inverted U-curve Confirmed In Cross-Country Studies

e.g. Paukert (1973), Ahluwalia (1976), Ahluwalia, Carter and Chenery (1976), etc.

1990s Rejected In Panel & Cross-Country w/ Fixed Effects Studies

e.g. Deininger and Squire (1996, 1998), Bruno, Ravallion, and Squire (1996)

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Table 1: Growth, Inequality, and Poverty

Indicator	Periods of growth (8)		Periods of decline (7)	
	Improved	Worsened	Improved	Worsened
Inequality	45	43	2	5
Income of the poor ^a	77	11	2	5

Note: “Improved” in the income distribution implies a decrease of the Gini coefficient; “worsened” implies an increase. The sample includes ninety-five economies.

a. The income of the lowest quintile.

Source: Deininger and Squire 1996 Table 7

Deininger and Squire (1996) constructed a data set of Gini coefficients and other income distribution measures with 682 observations for 108 countries from the 1960s to the 1990s. (decadal changes/growths)

Table 1 (their Table 7) summarize **movements in Gini coefficients and real income of the poorest quintile during decadal growth episodes** (defined by the availability of distribution data that span at least one decade).

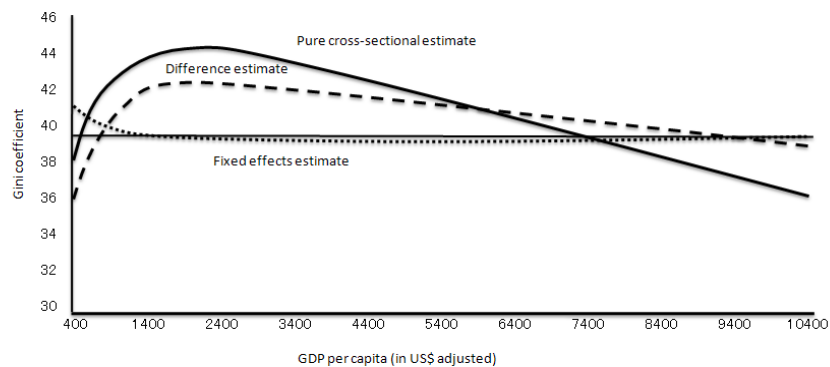
First, there appears to be little systematic relationship between growth and changes in aggregate inequality (inequality as measured in Gini coefficients). ... The simple correlation between contemporaneous as well as lagged income growth and the change in the Gini coefficient is insignificant for the whole sample as well as for subsamples defined in terms of country characteristics (rich or poor, equal or unequal, fast-growing or slow growing economies).

The average annual percentage change in the Gini coefficient in our sample was only 0.28 points, compared with an average growth rate in per capita income of 2.16 percent.

Second, Although we do not find significant correlations between aggregate growth and changes in inequality, there is a strong correlation between aggregate growth and changes in the income of all quintiles except the top one. (p. 587)

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Figure 3: Cross-country estimates of the Kuznets curve



Source: Bourguignon 2004, Figure 5

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Bourguignon(2004) interpretation of
 Deiningger and Squire (1998) based on D&S(1996) Data

Data come from an unbalanced panel, with several observations for each country at approximately 10 year intervals.

When all the observations are pooled together and a simple regression of the Gini coefficient over income per capita and the inverse of income per capita is run, then a clear inverted-U curve is obtained.

However curvature loses significance when the estimation is made on decadal differences for each country in the sample, that is to say when only time changes are taken into account.

Finally, when fixed country effects are introduced in the original estimate, so that all countries are assumed to follow parallel paths rather than the same path, then the inverted-U shape disappears. In effect the curve becomes practically flat, and even the decline in inequality for low incomes fails to be statistically significant.

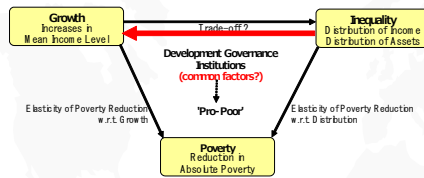
This shows that:

These results certainly do not imply that growth has no significant impact on distribution. Rather they indicate that there is too much country specificity in the way growth affects distribution for any generalization to be possible. Indeed, case studies, as opposed to cross-sectional studies, show that distributional changes have very much to do with the pace and structural features of economic growth in the period under analysis. (p. 13)

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Inequality in Income/Assets → Growth 2

Figure 1: Poverty-Growth-Inequality Triangle



Theoretical Studies (Inequality is bad for growth) (mostly on Assets Inequality)

Galor and Zeira(1993), Banerjee and Newman (1993), Benabou (1996), Aghion et al. (1999), Bardhan et al. (1999), etc.

Galor and Zeira(1993)

An equilibrium model of open economies with overlapping generations and inter-generational altruism. Individuals live for two periods. In the first they may either invest in human capital and acquire education or else work as unskilled. In the second period they work as skilled or unskilled—according to their education level, consume and leave bequests.

$$u = \alpha \log c + (1-\alpha) \log b, 0 < \alpha < 1,$$

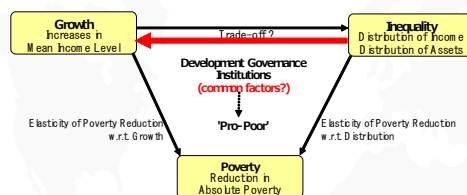
where c is consumption in the second period, b is bequest

In the presence of credit market imperfections and indivisibilities in investment in human capital, the initial distribution of wealth affects aggregate output and investment both in the short and in the long run. This is an additional explanation for the persistent differences in per-capita output across countries.

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Inequality in Income/Assets → Growth 3

Figure 1: Poverty-Growth-Inequality Triangle



Empirical Studies (Inequality in initial **Income/Consumption** is bad for growth)

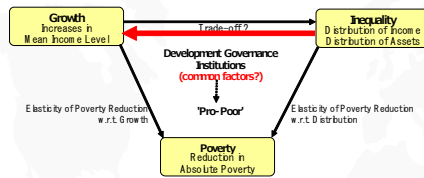
Alesina and Rodrick(1994), Clarke(1995), Bridsall et al. (1995), Benabou (1996), Perotti(1996), Forbes (1998), Deininger and Squire(1998), Li and Zou (1998), Barro (1999), Deininger and Olinto (2000), Easterly(2002)

This led to fear that the “empirical regularity” of a negative inequality-growth relationship may be similar to the famous Kuznets curve—very robust in a cross section but disappearing once country level fixed effects were introduced (Deininger and Squire 1998). (p.8)

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Inequality in Income/Assets → Growth 4

Figure 1: Poverty-Growth-Inequality Triangle



Empirical Studies (Inequality in initial Assets is bad for growth)

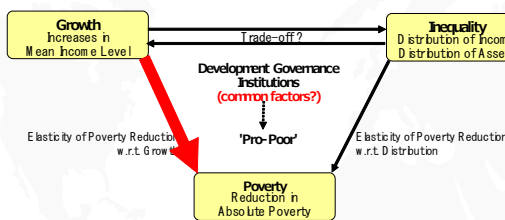
Deiningering and Olinto (2000) uses assets (land) rather than income (and a GMM estimator) in a panel study of interrelationship between inequality and growth. (261 observations from 103 countries)

Deiningering and Olinto (2000) find evidence that asset inequality—but not income inequality—has a significant and relatively large negative impact on growth. They also find that a highly unequal distribution of assets reduces the effectiveness of educational interventions (as it reduces attractiveness/returns to investment in human capital.)

Use of a micro panel data of farm-household for rural areas in four provinces of southern China, spanning the period 1985-90, covering 6651 farm households living in 131 counties. **Ravallion (1998)** finds a significant and negative effect of local asset distribution on individuals' consumption growth. Comparing the coefficient attached to the initial inequality in assets, individual micro estimation of consumption growth returns almost three times larger negative impacts of asset inequality on consumption path, as compared to that in country aggregate consumption growth regression. Pointing to the needs of micro studies.

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Elasticity of Poverty Reduction w.r.t. Growth



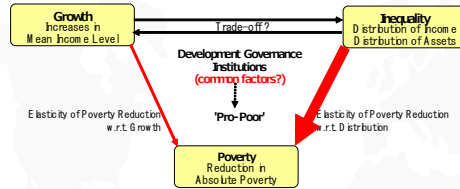
			Poverty Rate (headcount)	Poverty Gap	Squared Poverty Gap
Ravallion and Chen (1996)	1987-1994	42	-0.26 (half of mean income)		
			-0.31 (1\$PPP a day)	-0.37	
Bruno, Ravallion, and Squire (1996)	1984-1993	20	-2.12 (1\$PPP a day)		-3.46
	India	40 years 33 HS	-1.33 (Indian poverty line)		-2.26
Adams (2003)	1980-1999	50 cos. 101 obs.	-0.26 (1\$PPP a day)	-0.3	-0.34

This indicates that the gains are not confined to those near the poverty line.

(Bruno, Ravallion, and Squire, 1996, p. 10).

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Elasticity of Poverty Reduction w.r.t. Distribution 1



Bourguignon(2003)

1980s-1990s 50 cos. 114 periods Poverty Rate (headcount, 1\$PPP a day)
 Rate of change in Poverty Rate on Rate of change in Survey Means --- -1.65
 Rate of change in Poverty Rate on Rate of change in Survey Means & Gini --- -2.01 & 4.72

Use of Cross Terms -- As expected, both a lesser level of development and a higher level of inequality reduce the growth elasticity of poverty.

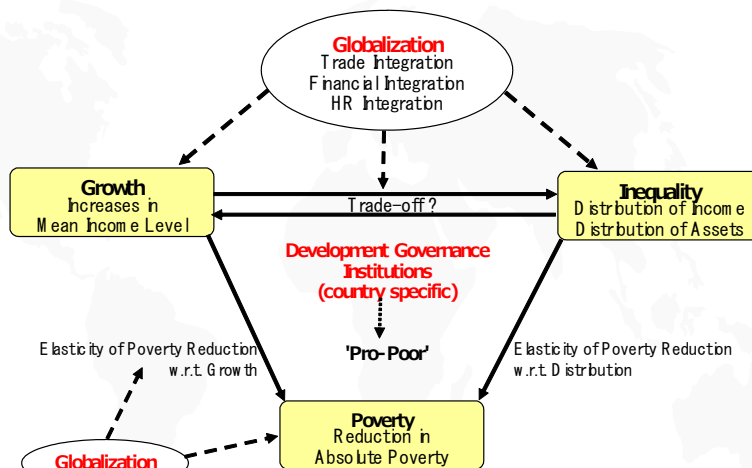
Bruno, Ravallion, and Squire (1998)

1984-1993 20cos. Poverty Rate (headcount, 1\$PPP a day)
 Rate of change in Poverty Rate on Rate of change in Survey Means & Gini --- -2.28 & 3.86

Elasticity of Poverty Reduction w.r.t Distribution is Two Times Larger as compared to Elasticity of Poverty Reduction w.r.t Growth !!

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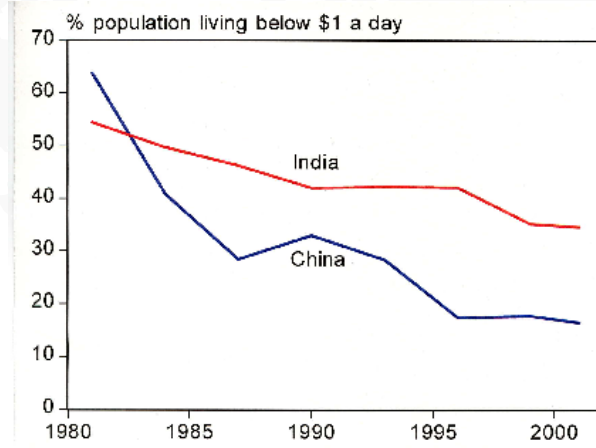
Figure 5: Expanded Analyses on the Poverty-Growth-Inequality Triangle



Source: Author

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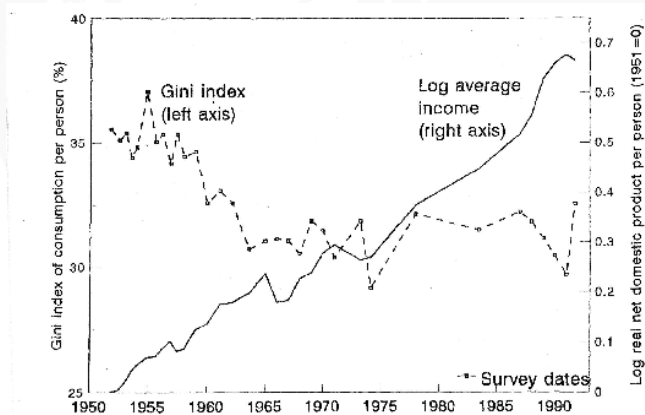
Figure 6 : Poverty incidence in China and India, 1981-2001



Source : Ravallion (2005), Figure 12

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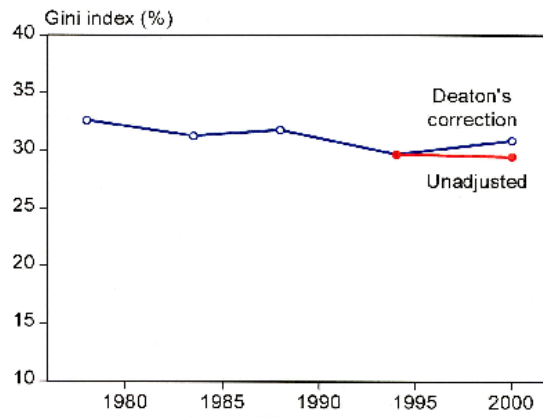
Figure 7 : Inequality and average income in India



Source : Bruno, Ravallion, and Squire (1996), Figure 1

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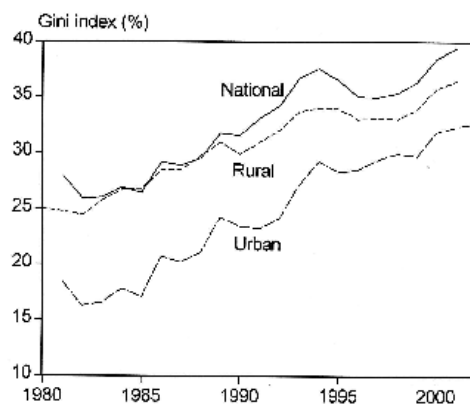
Figure 8 : Inequality over time in India (more recent years)



Source : Ravallion (2005), Figure 9

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Figure 9 : Income inequality in rural and urban areas and nationally (China)



Source : Ravallion and Chen (2004), Figure 5

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