ECONOMIC GROWTH AND INEQUALITY

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Abstract

In order to discuss anti-poverty policy, one needs to know whether the situation is getting better or worse, and why. That is a complicated question that this article attempts to answer. The answers depend on whether we are talking about (1) money or goods like health education and material possessions, (2) the U.S. measure of $5,000 per person per year or the UN measure $365, (3) countries or individuals, (4) a long or short-term perspective, (5) the well-being of poor people or the gap between the poor and the rich, (6) poor, medium, or rich countries, and (7) per capita income, percent who are poor, or more complicated indexes.

Introduction

Economic growth is occurring in most of the world. This refers to measures of national income, spending, and/or output generated within a country or by citizens of the country wherever they might be. Likewise, an increase in per capita income is occurring in most of the nations of the world because national incomes are growing faster than national populations. Important related things (that money can buy) are also improving, such as health care and education levels.

This desirable growth is mainly due to new technologies, improved training for handling new technologies, increased domestic competition, increased international competition, and public policy designed to stimulate all four of those causal variables.

Public policy is also concerned or should be concerned with enabling displaced workers and business firms to be able to find better jobs through such devices as training vouchers, tax rebates for adopting new technologies, and providing delayed commissions to employment agencies for finding jobs for displaced workers.

International Journal of Economic Development
2, 2, 2000, pp. 158-190

Economic growth may have some downsides or costs, such as displaced workers. Another possible downside is that as the rich get richer and the poor also get richer in modern economic growth, the gap may widen between the rich and the poor since the rich may gain more than the poor. A key purpose of this introduction is to discuss the empirical and normative relations between economic growth and inequality.

Who are the Poor?

In a first draft of this article, I said the poor must be getting richer because up is the only direction they can go in. I mistakenly thought poor people in the world were so poor that they could not be any poorer. I especially thought one could not go much lower than $1,000 per year or surely not lower than $1 a day or $365 a year. My eyes were opened to the realities of world poverty by the poverty table in *World Development Indicators* (World Bank, 1997). The essence of that table is reproduced below in Table 1 entitled "Who are the World's Poor?"

It shows that 39 of the 59 countries reporting poverty information had more than 10% of their population earning less than $1 a day. That is less than $365 a year which to middle-class Americans seems almost unbelievable. Poverty in the United States is defined roughly as earning less than $16,000 a year as of 1990 for a family of four or about $10,000 a year for a single individual. It is not $4,000 in the U.S. for a single individual because a single adult renting an apartment pays almost the same as a four-person, single-parent family. A single adult may also wear more expensive clothes than three young children and a mother.

What is even more unbelievable is that many of these countries have more than or close to a majority of their population earning less than $1 a day, not just a few isolated families or individuals. That is the case with Guinea Bissau at 87%, India at 53%, Kenya at 51%, Lesotho at 51%, Niger at 62%, Peru at 50%, Senegal at 54%, Uganda at 50%, and Zambia at 87%. Most of the rest of the population may not be doing a lot better, contrary to the thinking that these countries have a lot of rich people to offset the poor people. More on that income gap later.

The $1 a day income as a measure of poverty was begun by the United Nations in 1985. Unfortunately, the data in Table 1 is only one point in time. It is generally for about 1990, although it varies from country to country. We have over-time data for per capita income and for the inequality gap in Tables 2 and 3. It would be interesting to know whether the percentages in Table 1 have decreased over the past generation. They probably generally have, as indicated by upward changes in per capita income. Those percentages in Table 1 are, however, outrageously high by any moral standard of decency, even if they have decreased.

The larger table in the World Bank book shows for many countries how each defines national poverty. Most do so at a figure higher than $1 a day probably because they are either embarrassed to use the $1 a day standard, or because it is inapplicable. It seems inapplicable to the U.S., Canada, and West Europe, where the

Table 1. Who are the World's Poor?

Countries	% < $1	Population (millions)	Quantity < $1
AFRICA			
Guinea-Bissau	87 %	0.9	0.8
Zambia	85	7.6	6.5
Madagascar	72	10.9	7.8
Niger	62	7.3	4.5
Senegal	54	7.0	3.8
Lesotho	50	1.7	0.8
Kenya	50	22.4	11.2
Uganda	50	16.2	8.1
Rwanda	46	6.7	3.1
Zimbabwe	41	9.3	3.8
Botswana	35	1.2	0.4
Ethiopia	34	47.4	16.1
Mauritania	31	1.9	0.6
Nigeria	29	110.1	31.9
Guinea	26	5.4	1.4
South Africa	24	34.0	8.2
Côte d'Ivoire	18	11.2	2.0

Countries	% < $1	Population (millions)	Quantity < $1
Tanzania	16	24.7	4.0
EAST EUROPE			
Kyrgyz Republic	19 %	4.3	0.8
Romania	18	23.0	4.1
Slovak Republic	13	8.0	1.0
LATIN AMERICA			
Guatemala	53 %	8.7	4.6
Peru	49	20.7	10.1
Honduras	46	4.8	2.2
Nicaragua	44	3.6	1.6
Ecuador	30	10.1	3.0
Brazil	29	144.4	41.9
Panama	26	2.3	0.6
Dominican Republic	20	6.9	1.4
Costa Rica	19	2.7	0.5
Chile	15	12.8	1.9
Mexico	15	83.7	12.6
Venezuela	12	18.8	2.3
ASIA			
Nepal	53 %	18.0	9.5
India	52	815.6	424.1
China	29	1088.4	315.6
Philippines	28	59.9	16.8
Indonesia	14	174.8	24.5
Pakistan	12	106.3	12.8

Notes:
1. % < $1 = Percent of population making less than $1 per day. 1990 figures .
2. Quantity < $1 = Quantity of population making less than $1 per day. 1990 figures.
3. Countries included are those with more than 10% under $1 per day for which data is available.
4. Source on Income = World Bank. 1997. *World Development Indicators*, pp. 50-53.
5. Source on Population = Jan Hogendorn. 1992. *Economic Development*. Harper Collins.

data imply that the percentage of the population below $1 a day is virtually 0%. This is indicated by countries much poorer than the U.S., Canada, and West Europe being close to 0%.

The big advantage of the $1 a day percentage is that it is not distorted by rich people who are irrelevant to measuring how many poor people there are. This is untrue of the per capita income figure. One could have 100 people living in a society. Each one could earn less than $1 a day and one person could earn $1 million a year. The per capita income would be $1000 per person but 99% would be below the $1 a day international poverty line. That percentage figure is more meaningful than per capita income, but unfortunately, it is not as available prior to about 1990.

To further bring out the answer to the question "Who Are the World's Poor?", we can look to the data which converts the percentages in Table 1 into numbers of people. If we do that for all countries, we find that 1.3 billion people in the world live on less than $1 a day. That is one-fourth of the world's population since there are less than 6 billion people in the world. We have made great progress in the past generation in terms of improved health care, education and per capita income, but obviously we have a lot to do if 25% of the world lives on less than $1 a day.

Are the Poor Getting Richer or Poorer?

Countries versus Individuals

Table 2 provides some answers to whether the poor are getting richer, poorer, or less poor. We do not have data on a survey of the six billion people of the world over time or as of one point in time. Instead, we have data by countries. If the poor countries of the world are getting richer, then the poor individuals of the world are probably also getting richer because the poor countries of the world contain most of the poor individuals. By that, we mean that the rich countries have very few people who are making less than a $1 a day, whereas many poor countries have substantial percentages and quantities of such people.

In trying to generalize from countries to individuals, we could be committing what is known as the ecological fallacy. This phenomenon was first systematically studied by Emile Durkheim, the French sociologist. He observed that European countries which were mainly Catholic (such as France) had higher suicide rates in the 1800s than European countries which were mainly Protestant (such as Sweden). If from that information, one concludes that Catholics were committing suicide at a higher rate than Protestants, then one would be wrong because analysis of the sub-national data showed that most of the suicides in France were French Protestants.

Thus, if the per capita income of the poorest countries of the world goes up, poor people in those countries may not be getting richer. Maybe only the rich people in those countries are getting richer. The U.N. on the right side of Table 2, however, shows that the poorest countries of the world may be getting poorer. That could be consistent with those countries getting poorer, but perhaps only the poor individuals are getting poorer, and the rich individuals are getting richer. It could also be consistent with only the rich people in those countries getting poorer, and the poor people getting richer. This is the disadvantage mentioned before of working with averages like per capita or average income. When the average goes up or down, we cannot be sure how different segments of society or the class structure are changing. We operate on the possibly questionable assumption that when the average goes up, both the rich and the poor benefit although one class might benefit more. When the average goes down, this probably reflects that both the rich and the poor are worse off although one class may be more worse off. Further light is thrown on this problem by Table 3, which deals with changes in the inequality gap over time.

Table 2. Are Relatively Poor Countries Getting Richer (Or Poorer)?

YPE OF UNTRY & UMBER	1975 GDP per Capita (B)	1997 GDP per Capita (A)	% Ratio of A/B
gh HDI untries (51)	$ 11,459 (10,068)	$ 16,576 (14,069)	+ 140% + (140%)
dium HDI untries (50)	651 (715)	935 (1,048)	+ 140% + (146%)
ow HDI untries (51)	332 (353)	282 (440)	– 80% + (126%)
on-High untries (101)	564 (571)	758 (776)	+ 134% + (136%)

ANSWERS:
1. Yes, if one compares 1989 and 1950, but not 1997 and 1975.
2. Yes, if relatively poor refers to the bottom 129 or regional groups, but not the bottom 35 on the HDI Index.
3. Yes, if one emphasizes health, education, and what money can buy, but not if only per capita income.

Notes:
1. B = Before. A = After. 2. + = A > B. B = B > A.
3. HDI = Human Development Index (combines health, education, and income).
4. Source on regions = Table 1.1. on "Historical Trends in GOP Per Capita" in World Bank. 1991. *World Development Report.* Oxford.
5. Source on country type = Table 6 on UNDP. 1999. "Trends in Human Development and Per Capita Income" in *Human Development Report*.
6. Numbers in parenthesis indicate per capita GDP when the countries are divided into three equal groups.
7. To calculate % change for any row, subtract 100% from the A/B %.

Long versus Short Term

Focusing now on Table 2 entitled, "Are relatively poor countries getting richer or poorer?" There are three "yes, but" answers to that question. Some people do not like "yes, but" answers, but they are realities in meaningful social science and policy analysis. President Truman wanted to hire a one-armed chairperson for the Council of Economic Advisors because Leon Keyserling kept saying on the one hand we should do this, but on the other hand we should do that.

From 1950 to 1989

The first answer is that if one looks at a long time period, one finds that rich countries are indeed getting richer in terms of per capita income adjusted for inflation by using the same base year for both time points. One generation of about 33 years is generally a sufficiently long time period to show results. The left side of Table 2 shows changes for six regional breakdowns from 1950 to 1989.

All six regions are dramatically improving on per capita income. The biggest improvement is Asia moving from $487 per capita income to $2,812 for a gain of 580% followed by East Europe with gains at 260%, Latin America at 180%, and Sub-Sahara Africa at 150%. In fact, over that time period, the developing countries averaged a 330% gain that was higher than the 306% gain of the OECD members which mainly means 17 countries or West Europe. The OECD also includes the United States, Japan, Canada, Australia, New Zealand, Iceland, and Turkey. In spite of those gains, the per capita income for Sub-Sahara Africa is still a low $513 per person. Even Asia is only $2,812 pulled up by rich countries like Japan and the so called economic tigers of Southeast Asia, but pulled down by big countries that are poor on per capita income like China and India.

People who are cynical or overly skeptical about the ability of developing countries to develop might try to explain away the +330% versus the +306% by saying that it is easier to show big gains if one starts at $839 per capita than if one starts at $3,298. In the abstract, it may be easier to show a 100% gain from $1 to $2 than a 100% gain from $1,000 to $2,000. This, however, is not so when dealing with the concrete problem of economic growth. It is much more difficult for a poor country to have substantial economic growth than a rich country because the poor country needs all its income for food, shelter, and clothing, especially food. The rich country can use its surplus (after satisfying those necessities) for training and new technologies which lead to economic growth. If a person only makes $365 a year at $1 a day, they are not likely to have any money left over to buy a computer or to pay for training in computer literacy. Likewise, with a country in which most of the people make less than $365 a year or less than some other low poverty-line figure.

From 1975 to 1999

Turning to the right side of Table 2, we get a different picture with smaller percentages in the column showing the ratio of after to before. That is understandable partly because it only deals with a 22-year period from 1975 to 1997. One would not expect so much change in a shorter time period. For example, the *World Development Report* from which the regional data comes shows per capita income back to 1913 and even 1830. The percentage jumps for that multi-generational data tends to run about 10,000% meaning more than ten-fold increases. For example, the OECD countries went from under $1,000 to over $10,000 from 1830 to 1989. The East Europe countries went from about $600 to $6,000. The Asian countries went from about $300 to $3,000. No data is available for 1830 for Latin America or Sub-Sahara Africa.

During the time period 1975 to 1997, the bottom 30 countries underwent a negative change on per capita income. That does not seem to reflect any long term trend prior to 1980 or subsequent to 1990. The 1980s were an especially bad time period for the impoverished countries of Africa and Latin America. The U.S. and the CIA sponsored death squads to kill off political reformers who could have brought progress to such African countries as Zaire, Mozambique, Angola, and Ethiopia as well as such Latin American countries as Guatemala, Nicaragua, El Salvador, Peru, and Bolivia. Even the richer countries were caught up in Cold War violence which brought down the regional average such as Argentina, Chile, Uruguay, and Brazil. Those are not such rich countries when one looks to the percentage of people who make less than $1 a day. Table 1 shows that Chile, for example, which was the pride of the American right-wing has 15% of its population making less than $1 a day. South Africa with its veneer of Joburg skyscrapers and swimming pools has 24% of its population making less than $1 a day. Fortunately the Cold War is over. Nearly all those countries are recovering, and the negative growth is turning positive.

It might also be noted that in the short run, even rich countries sometimes have negative growth rates. For example, during the period 1975 to 1997 negative growth rates were experienced by Kuwait, Czech Republic, Bahrain, United Arab Emirates, Venezuela, Estonia, Belarus, Lithuania, Lybia, Latvia, Kazakhstan, Saudi Arabia, Brazil, St. Lucia, Armenia, Ukraine, Iran, Guyana, and Albania. All those are in the top 100 on the U.N. Human Development Index, which measures health, education, and per capita income. Many of them are oil countries suffering from a drop in the price of oil. Many others are East Europe countries suffering from the transition from communism to capitalism. Indeed the biggest negative growth during those 22 years consists of the few especially unlucky countries that were both dependent on oil and were part of the Soviet sphere, such as Azerbaijan, Kazakhstan, and Iraq. Those three countries all underwent double digit negative growth, and none are in Africa and Latin America.

Even the United States has known negative growth in 1991, 1982, 1975, 1974, 1958, 1954, 1949, 1947, and double digit negative growth in 1946. This data is available in Anthony Quain, *The Political Reference Almanac* (Keynote Publishing, 1999) at page 763. The United States has especially known embarrassingly low economic growth below 6% for almost every year since World War II. This is embarrassing because the U.S. certainly has a big enough surplus after feeding, clothing, and housing 250 million people to be able to invest in economic growth. This is especially so if China (with over a billion people, and a dictatorial political system) can have 13% real growth as of 1990.

Dividing the Countries into Groups

The U.N. Groupings

The second answer to the question (whether relatively poor countries are getting richer) is yes, if "relatively poor" refers to the bottom 96 countries, but not the bottom 35. Those 152 countries are the ones for which the U.N. *Human Development Report* has data on the right side of Table 2. That is almost like stacking the deck to prove that the poor are getting poorer. One would be highly suspicious of the meaningfulness of the data if the countries were arranged in the order of their growth rates with the highest at the top and the lowest at the bottom. Suppose further that there are 152 countries (as we have on the right side of Table 2), and 151 are showing positive growth, with the 152nd showing negative growth. Could one conclude from such grouping that the poor are getting poorer because the bottom one has negative growth?

Of course not. It would practically be a tautology or a statement that is true by definition of "relatively poor". If we define relatively poor as being at the bottom of an economic list, then the odds are very high that the bottom country or countries will have negative growth given the temporary factors of the Cold War, falling oil-prices, the collapse of the Soviet Union, the droughts, and other flukes and glitches.

The right side of Table 2 does not make a category of the bottom country. Instead it makes a category of the bottom 30 countries which reduces sampling error and those temporary elements. Also the countries are not arranged in terms of economic growth, but in terms of the partly related U.N. Human Development Index which includes per capita income and things that money can buy like health and education.

More Objective Groups

It is quite possible that if we divide the 152 countries into three groups of about 50 apiece, then the bottom or poorest third will show a positive growth rate. That is exactly what happens on the right side of Table 2, as indicated by the numbers, the dollars, and the percentages that are in parentheses. The total of 152 countries does not divide into exactly equal thirds. We put the top 51 in the first third, the middle 50 in the second third, and the bottom 51 in the third third. There are actually 174 countries in the U.N. table, but sufficient information is available on only 152.

That information shows the top one-third or 51 had an after/before ratio of +140%. The middle 50 had an A/B ratio of +146%. The most interesting figure is the +126% for the bottom or poorest third. That +126% A/B ratio means a +26% growth rate or % change, since % change or (A-B)/B equals (A/B)-1. Thus the poor countries or low HDI countries are getting richer not poorer, and 126% does not differ much from 146% or 140%.

One can also have other groupings of the data. Other groupings, however, will produce the same results as the numbers in the right side of Table 2 if one somehow puts China and India into the middle category. One will get the same results as the numbers shown in parentheses if one puts either China, or India, or both in the bottom category. This is so because the 1975 averages, the 1997 averages, and the after/before ratios are all weighted by the population of the 152 countries in the analyses. China and India have such huge populations that they greatly influence whether the bottom line of their categories will be negative like the -80% or positive like the +126%. More specifically, China had a per capita GDP of $109 in 1975 and $564 in 1997 for a whopping +517% A/B ratio. Likewise, India had $251 in 1975 and $465 in 1997 for a +185% ratio.

In the U.N. grouping of 41 high HDI countries , 83 medium, and 30 low, both China and India are excluded from the low, leaving behind the poorest countries with the lowest economic growth. In the more objective grouping of three equal thirds, India goes in the bottom third bringing the bottom up to +126.

If we still more logically divide the 152 countries into two equal categories of 76 apiece, then the bottom category includes both China and India. The bottom category then shows a substantially higher % change in per capita GDP growth than the top half does. More specifically, the bottom half which now includes both China and India had a 1975 per capita GDP of $356 and a 1997 per capita GDP of $556 for an A/B ration of +156%. The top half which now excludes China and India had a 1975 per capita GDP of $7,289 and a 1997 per capita GDP of $9,712 for an A/B ratio +133%. With that kind of information, it is rather difficult to say the poor people of the world are getting poorer unless one wants to exclude one-third of the world who happen to live in China and India.

Quality of Life versus Income

The third answer in Table 2 on whether relatively poor countries are getting richer involves going beyond per capita income into health and education. This is based on the idea that mere income is not as good a measure of the quality of life as income plus health plus education. The three are included in the U.N. Human Development Index.

Health is measured by average length of life. Education is measured by average years of schooling. Income is measured by determining the gross domestic product and dividing by the number of people. The gross domestic product or GDP measures income earned from the output of goods and services within the borders of a country, regardless whether the income is claimed by residents or by foreigners. The gross national product or GNP is equal to income earned from domestic output, plus investment receipts and worker remittances coming to residents from abroad, and minus income earned domestically but accruing to foreigners. GDP is the more commonly used measure in the UN data and in other data. It tends to inflate the income of developing nations because the GDP includes income from Chile's phosphate mines and Saudi Arabia's oil wells received by foreigners. No harm is done in the tables of this article because we consistently use the GDP measure.

The three dimensions of health care, education, and material possessions make poor people of today almost richer than kings in medieval times. Material possessions or assets may also be more important than per capita income. There are many farmers in central Illinois who claim to have negative incomes because their expenses exceed their income from corn and soybeans. Yet their farms may be worth $1 million or more.

Health Care

On health care, during the middle and dark ages, kings lived to about age 35. The English Common Law provided that if such propertied people died without a will, the property went to their children who were likely to be minors rather than to their wives who were likely to be able-bodied adults. Now when poor people die, they have children who are able-bodied adults and wives who are feeble widows. Thus the property laws change or should change to reflect this changing biology. The children of kings died of polio, diptheria, whooping cough, measles, mumps, chicken pox, small pox, and other diseases that even poor people in developing countries are now being immunized against. Medieval children of kings were frequently stillborn or died of infantile diarrhea which has greatly diminished, even among poverty stricken children in developing nations due to modern but simple medical knowledge.

For more specific data on health comparisons, one might note that in the generation between 1960 and 1994, life expectancy in developing countries increased by more than one third from 46 years to 62 years, according to the 1997 *Human Development Report* of the UN Development Program. There probably has never been such a gain in a prior generation. During the same time period, the infant mortality rate in developing countries dropped by more than one half from 150 deaths per thousand live births to only 64. Maternal mortality rates also fell by nearly one-half worldwide.

Education

On the matter of education, the average school child or adult from an impoverished developing nation is more likely to have an education that includes elementary principles of physical science and biological science that were unknown to medieval kings. The literacy rate may now be higher in the poor parts of rural China, India, and Africa than the literacy rate was among average people in medieval Europe.

For more specific data on education comparisons between 1970 and 1995, the literacy rate in developing countries rose from 43% to 70%. Females advanced twice as fast as males in both literacy and school enrollment, although starting further behind. Enrollment in the primary grades rose in developing countries from 48% to 77%.

Material Possessions

Likewise, on the matter of material possessions, poor people may not have impressive balance sheets with lots of assets, but they frequently have access to a television set somewhere, movies, bus transportation, and a telephone. I have been impressed by communal generators for electricity in central Africa. Electricity, of course, was unheard of among the richest people of Europe and America until the late 1800s. Likewise, so was indoor plumbing which I saw in impoverished squatters' shantytowns in Namibia, Africa, but not at the Versailles palace in Paris.

Is the Inequality Gap Getting Bigger or Smaller?

Table 3 provides useful information on whether the inequality gap is getting bigger or smaller. A simple and meaningful way of measuring the inequality gap between the rich and the poor on a country-by-country basis or a region-by-region basis is by comparing the richest fifth of the population of each country with the poorest fifth as to what percent of the gross domestic product each fifth receives. Thus in a highly equal society, the richest fifth of the population would receive 20% of the GDP, and the poorest fifth would also receive 20%. The difference between the two percents would be no difference or the minimum possible. In a highly unequal society, the richest fifth of the population would get 100% of the GDP, and the poorest fifth would get nothing or 0%. The difference between the two percents would then be 100% or the maximum possible.

The Before Data

Looking at the data on the left side of Table 3, we see that as of 1960, the top fifth of the population in every country gets a lot less than 100% of the GDP, but a lot more than 20%. Given the seven regions listed at the left, the top fifth averages 47% of the GDP of their respective regions. We also see that as of 1960, the bottom fifth gets a lot more than 0% of the GDP, but a lot less than the 20% of an equalitarian society. They average 6% across the seven regions. The average difference between the top fifth and the bottom fifth in the seven regions as of 1960 is 41 percentage points.

Contrary to some mythology, the richest countries had the smallest gap in 1960. They still have the smallest gap in 1990 although other regions are catching up with regard to narrowing the gap between the top fifth and the bottom fifth. Using these regional categories of the World Bank, the richest regions are categories, (2) Europe and Central Asia, and (7) industrial and high income developing economies. They have top minus bottom differences of only 26 and 25 percentage points, respectively.

The worst regions from the perspective of a wide inequality gap are (3) Latin America and Caribbean and (6) Sub-Sahara Africa, both at 59 percentage points. They both give the top fifth the highest percent of the GDP at 62% and the bottom fifth the lowest percent of the GDP at 3%.

The After Data

Looking at the right side of Table 3 regarding the 1990 data, the rank order of the regions has not changed on (1) the percent going to the top fifth, (2) the percent to the bottom fifth, or (3) inequality difference. Of more importance, however, is the

Table 3. Is the Inequality Gap Getting Bigger (Or Smaller)?

Region	1960 Top Fifth	1960 Bottom Fifth	1960 DIFFERENCE	1990 Top Fifth
1. East Asia & The Pacific	46 % of GDP	B 6% of GDP	= 40 %	44 % of GDP
2. Europe & Central Asia	36	10	26	38
3. Latin America & Caribbean	62	3	59	53
4. Middle East & North Africa	49	6	43	45
5. South Asia	44	7	37	40
6. Sub Sahara Africa	62	3	59	52
7. Industrial & High Income Developing Economies	31	6	25	40
Region	1960 Top Fifth	1960 Bottom Fifth	1960 DIFFERENCE	1990 Top Fifth
Average	47	6	41	45
Least Unequal (Most Equal)	20	20	0	20
Most Unequal (Least Equal)	100	0	100	100

Region	1990 Top Fifth	1990 Bottom Fifth	1990 DIFFERENCE	1990-1960 CHANGE
1. East Asia & The Pacific	44 % of GDP	B 7 % of GDP	= 37 %	B 3 %
2. Europe & Central Asia	38	9	29	+ 3
3. Latin America & Caribbean	53	4	49	B 10
4. Middle East & North Africa	45	7	38	B 5
5. South Asia	40	9	31	B 6
6. Sub Sahara Africa	52	5	47	B 12
7. Industrial & High Income Developing Economies	40	6	34	+ 9
Region	1990 Top Fifth	1990 Bottom Fifth	1990 DIFFERENCE	1990-1960 CHANGE
Average	45	7	38	B 3
Least Unequal (Most Equal)	20	20	0	ANSWER: No, except in 2 and 7.
Most Unequal (Least Equal)	100	0	100	

Notes: 1. Source of data = Table 2.6 on “Income Shares of Lowest and Highest Quintiles, 1960’s-1990’s” in World Bank. 1977. *World Development Indicators.*

fact that in every region, the top fifth is getting a smaller percent of the GDP *except* in the industrial and high income developing countries. In every region, the bottom fifth has remained practically constant with no change greater than 2 percentage points. Two percentage points, however, practically means a doubling when a region goes from 3% to 5% in Sub-Sahara Africa.

One should especially compare the 1990 difference column with the 1960 difference column in order to answer the question of the inequality gap getting bigger or smaller. For the middle regions of Asia and the Middle East, the 1990-1960 change has remained close to constant although narrowing. For the poor regions of Africa and Latin America, the gap has narrowed by 12 and 10 percentage points, respectively. For the industrial and high income developing economies, the gap has widened by 9 percentage points. Thus the answer to the question about the inequality gap getting bigger is that it is getting smaller in five out of the seven regions. The two regions where the gap is getting bigger overlap by both containing Europe.

Other Inequality-Gap Data

There are other ways of measuring inequality gap. We could talk about the health-care gap. That is lessening even more than the income gap because even the poorest of children and people are benefitting to some extent from modern public health measures like safe drinking water. We could talk about the education gap. That is also lessening more than the income gap because the poor people of the world are becoming more illiterate.

Some people for whatever reasons like to make a big thing out of the fact that the top fifth of the world has about 93% of all the Internet connections and the bottom fifth has less than 1%. Leftists may use this kind of data to show the poor are being discriminated against. Rightists may use this kind of data to show the poor are incompetent or inferior.

In reality, Internet connections may be important to learning about matters of health, education, business, politics, etc., but they are less important than children being immunized and being taught to read and write. In win-win thinking, we do not have to choose between health, education, and Internet connections. We can have all three through more effective public policy that relates to public health, literacy crash courses, and community or village access to devices like a computer, a freezer, a safety deposit box, a silo, a tractor, a television set, a VCR, and other collectively-owned devices.

Which Combinations Prevail?

Looking back across Table 2 on whether the poor are getting richer or poorer, and Table 3 on whether the inequality gap is getting bigger or smaller, we can see there are many possible combinations. A "combination" in this context has three elements and each element has at least three positions:

1. Are the poor getting richer, poorer, or holding constant?

2. Are the rich getting richer, poorer, or holding constant?

3. Is the inequality gap getting bigger, smaller, or holding constant?

With three variables and three positions on each variable, we could have 27 combinations or 3 X 3 X 3. There is no need to list out all 27 combinations since there are only five worth discussing. Those five are pictured as scenarios 2 through 5 in Table 4.

The first scenario is the prevailing situation as of about 1960 although it may partly still prevail. That situation involves many poor people living below a minimum level of decency, and rich people being substantially better off. For the sake of simplicity, the inequality gap for that starting point is given as two units. We know from Table 3 that the average inequality gap between the rich and the poor as of 1960 can also be expressed as about 41 percentage points.

The Poorest Countries

From that starting point in somewhat random order, the countries of the world have moved in three directions since 1960. The first direction relates to the poorest countries of the world. In those countries the poor may be getting poorer and the rich are getting richer. This is the Marxist perspective, and it is the reality of countries below China and India in poverty. As mentioned in discussing the right side of Table 2, if China and India are included in the category or group of poor countries, then the category shows a positive increase in per capita income since each country is weighted by the size of its population. If, however, China and India are excluded by only dealing with countries below China and India, then the category shows a negative increase in per capita income meaning those bottom poor countries are getting poorer. Using the U.N. figures, those 30 countries dropped from a per capita income of $332 to $282, although the time period was shorter and possibly less meaningful than starting with 1950 or 1960.

Why did those countries get poorer? The reasons previously given relate to the fact that those were the African and Latin American countries that were most abused by the United States and the Soviet Union during the Cold War. They also had the worst colonial exploitation prior to the Cold War by Portugal in the cases of Angola and Mozambique, and by American corporations in the cases of Central

TABLE 4. Five Scenarios for Change in the Status of the Poor and in the Inequality Gap

1. Starting Point	2. Marxist Perspective & Partial Reality for Poor Countries	3. Revenge Perspective	4. Reality for Medium Countries	5. Reality for Rich Countries
Unlimited Maximum Rich 2 Units Minimum Level of Decency Poor	Rich 4 Units Poor	Poor Rich	Rich 1 unit Poor	Rich 3 units Poor

Evaluations:
1. Scenarios 1, 2, and 3 are undesirable because an economic class is below the minimum level of decency.
2. Scenarios 1, 2, and 5 are undesirable because the inequality gap is too likely to cause high divisiveness.

America. Those Cold War and colonial factors are now receding, and there should be an upturn, although some might say those countries have inhospitable hot climates. Human beings are, however, capable of being productive in hot climates with or without air conditioning, such as in equatorial Indonesia. One might argue that equatorial countries may have to be more productive first in order to be able to afford air conditioning. Being more productive tends to mean adopting technologies, training, competition, and free trade, which is occurring in those poor countries but not fast enough.

It is good social science to try to explain variations across places or over time. That includes variations between poor countries and rich countries, or variations between countries in the recent past and the same countries in the present. Explaining causation is different than assigning blame. Causation emphasizes social forces, and blame emphasizes individual or collective responsibility. Both perspectives are less useful than emphasizing remedies. They include ways of enabling poor people or poor countries to earn more income, and ways of decreasing an overly large and possibly expanding inequality gap. Emphasizing remedies in this context tends to mean emphasizing public policies that relate to economic, technology, social, political, international, and legal matters. They will be discussed further toward the end of this article and especially in the sequel article to appear in the Spring 2000 issue of *Developmental Policy Studies*.

Scenario 2 quite possibly distorts the growth of the inequality gap in the poorest countries. The poor may be getting poorer in those poorest countries, and the poorest countries may be getting poorer relative to the rich countries. Table 3, however, shows that the middle classes between the top fifth and the bottom fifth are doing better. This is so because the top fifth has dropped 10 percentage points between 1960 and 1990 regarding the percent of the GDP in Sub-Sahara Africa. That 10 percent has not gone to the bottom fifth which only rose from 3 percent to 5 percent of the GDP. It therefore must have gone to the middle groups in Sub-Sahara groups in Africa. The same thing is true in Latin America where the top fifth dropped 9 percent while the bottom fifth went up only 1 percent. What this tends to show is that the world (including Africa and Latin America) is moving from a Marxist economic-class structure with a few rich people at the top and lots of poor people at the bottom to a more diamond-shaped class structure with a few rich people at the top, a decreasing few poor people at the bottom, and an increasing bulge in the middle.

The Middle Countries

The second direction is the most common direction. It is shown by Scenario 4. It is the reality for the medium HDI countries on the right side of Table 2 and the middle third of the 152 countries on the left side. In those countries, both the poor and the rich are getting richer. The U.N. figures in Table 2 show a 140% increase from $651 GDP per capita to $935. Table 3 further shows that the inequality gap has come down in those middling regions of Asia, Latin America, the Middle East, North Africa, South Asia, and Sub-Sahara Africa.

That analysis of the inequality gap in Scenario 2 leads to redefining or at least rephrasing the inequality gap. We have been talking about the gap as the difference between the rich and the poor, or the top fifth versus the bottom fifth. This is not sufficient because it dichotomizes into rich and poor without considering the important middle class. What may be needed is to divide each country or region into the top third, middle third, and bottom third. In a totally unequal society, the top third would get 100% of the GDP, the middle third 0%, and the bottom third 0%. In a totally equal society, all three thirds would get 33%. In a typical society, the top third may get 50% or more as is inferred from Table 3 where the top fifth gets a bit less than 50%. The bottom third would get 10% or more as inferred from Table 3 where the bottom fifth gets less than 10%. The middle third would then get the difference or about 40%. The distribution of money is skewed upward, but the population is increasingly skewed toward the middle like a hill-sloped curve.

This new perspective involves three classes of high, medium, and low, rather than two classes of rich and poor. For Scenario 2, poor countries are getting poorer and possibly so are poor people in those poor countries. The rich countries are getting richer and so are the rich people in both the poor countries and the rich countries in terms of absolute dollars, as contrasted to the percentage of GDP. What Scenario 2 fails to reveal is that there may be fewer poor people as of 1990 in those countries because they have moved into at least the lower middle class. This is a key item from Table 1 on which we do not have data earlier than 1990 for the percent of the population that is earning less than $1 a day.

At this point, it might be helpful to note that narrowing the equality gap is useless or worse if it means equalizing downward by having both the rich and the poor get poorer, Scenario 3 is referred to as the revenge perspective. It involves taking from the rich in the starting point and giving to the poor, but now they are both equal at about the minimum level of decency. There is a need for some inequality gap, although not necessarily as big as Scenarios 1 or 2. Some inequality may be necessary to provide poor, middle, and rich people with incentives to work harder to become middle class, rich, or richer.

It might also be helpful to note that when we talk about the poor becoming richer or the rich becoming richer, we are talking in terms of dollar income, health-longevity, education, and what money can buy. We are not talking about a percentage of a total pie, which is almost a meaningless measure. Suppose a society consists of two people. One earns $2 a year. The other earns $18 a year. It does little good for the one poor person to move from 10% up to 20% or even 100%, since the total pie is so small. It makes a lot more sense for the poor person to move down to only 5% from 10% if the total pie is now $1,000. Five percent of $1,000 is $50 which is 25 times $2, and almost triple what the rich person was previously getting. Thinking in terms of percentages of a given pie tends to lead to win-lose thinking, rather than win-win thinking. Whatever one side gains, the other side loses when the two percentage add to 100%. If the rich formerly had 90% and the poor had 10%, then if the poor get 60% and the rich go down to 40%, there may even be a lose-lose situation if the economy collapses, as in Scenario 2.

Win-win thinking emphasizes developing ideas for increasing the total pie, not so much ideas for increasing the percentage that goes to poor people from a relatively low fixed pie. If the total pie has a radius of one, all one has to do is increase the radius by a little more than 40%. Then if each person gets 50% of the new pie, they will then have more than if they had 100% of the old pie since the area of any pie or circle is 3.14 times the radius squared. A radius of 1 squared is 1. A radius of 1.41 squared is 2 or double the pi and the pie.

This works even better with doubling the gross domestic product because exponent is not a constant. The GDP at any point in time equals the GDP at any prior point in time multiplied by $(1+r)^n$, where r is the annual GDP growth rate, and n is the number of years. The factor $(1+r)^n$ becomes 2 or a doubling factor when r is just a little more than a 6% growth rate and is just a little more than 8 years of two presidential terms. Thus with good public policy directed toward new technologies, widespread training, more competition, and free trade, we could double the national pie. We would thereby provide more for both rich and poor, or any other two conflicting groups, even though each group only gets 50% of the new pie. That would be more than 100% of the old pie, or the old GDP.

Before going further, we should answer the question why the inequality gap is getting narrower in the middling countries (which are most of the countries of the world), as compared to the gap of a generation ago shown in the starting point-scenario. There are multiple answers, but they may all fit into two categories. The first category of answers is that relatively low-income groups which had formerly been discriminated against are now demanding and obtaining more equal opportunity and more merit treatment. This includes discrimination based on ethnic affiliation, sex, disability, and age. Ethnic affiliation includes race, religion, and ancestral nationality. In the American context, that means Blacks, Asians, Catholics, Jews, Latinos, Southern Europeans, Eastern Europeans, and others. Sex discrimination includes discrimination on the basis of gender or sexual orientation. Relevant disabilities include physical and mental. Age discrimination includes the failure to provide merit treatment and job facilitators to the elderly or the young. Even economic class discrimination has lessened as a result of training and job facilitators to people on public aid or displaced by productivity downsizing, immigration, free trade, or other reasons. This enables them to raise their incomes and thereby lower the inequality gap.

The other big category for explaining the narrowing gap is that the rich are more willing to make concessions because they feel more secure as of the last half of the 20th century than they did in the first half. The threat of a depression seems to have ended with the collapse of the Soviet Union although possibly long before. The second half of the 20th century has involved great prosperity in West Europe and the United States. That has increased the willingness to make concessions to internal poverty and to impoverished developing nations. Some leftists might say that this great prosperity has increased guilt feelings that manifest themselves in being willing to provide more merit treatment. Some rightists, on the other hand, say that a rich capitalist is capable of recognizing that merit treatment is good for efficient, productive business. Regardless of the motivations, the inequality gap is lessening, as indicated by all the minus signs on the right side bottom line of Table 3.

The Rich Countries

Perspective 5 or Scenario 5 shows the rough reality for rich countries. Those are the countries that are referred to in Table 3 as “industrial and high income developing economies” and referred to in Table 2 as “high HDI countries” or OECD members”. None of them are in Table 1 because none are considered to have more than a sliver of people earning less than $1 a day. In the l999 U.N. *Human Development Report*, those industrialized countries are given a separate

table. In that table, poverty is defined as earning less than $14.40 per day per individual, rather than $1 a day. That means $5,256 a year, rather than $365 a year. Of the top 20 high HDI countries for which there is information, it is interesting to note the U.S. is embarrassingly second from the bottom with 14 percent of its population being below that $14.40 poverty line. Neighboring Canada only has 5.9% of its population below the $14.40-a-day line.

Table 2 shows that the rich countries have gotten richer, with the OECD members having a per capita income that grows 306% from l950 to l989 and 140% from l975 to l997. Table 3 further shows that in those same countries, the inequality gap became substantially bigger. Of the seven regions in Table 3, the industrial and high income developing countries had an inequality gap that increased by 9 percentage points. In roughly those same countries, the top fifth went from 31% of the GDP to 40% between l960 and l990. Those countries fit Scenario 5 of the rich countries getting richer and the inequality gap getting bigger.

We can logically infer that poor people in those rich countries are also rising in per capita income. We infer that from a combination of Tables 3 and 2. Table 3 shows the bottom fifth is receiving 6% of the GDP in both l960 and l990. Table 2 shows that the GDP has gone up substantially. More specifically, it has gone up almost $7,000 per person or tripled between l950 and l980 adjusted for inflation. The population for those countries, however, has not tripled. The bottom fifth shown in Table 3 must therefore be receiving 6% of a much bigger GDP. If so, the poor are also getting richer, although they have to divide that 6% of a bigger GDP among more people, since we are talking about a fifth of a bigger population in l990 than there was in l950 or 1960.

We do know that the rich countries are getting richer, as indicated by the +333% and the +306% in Table 2. We further know the poor countries of Latin America and Sub-Sahara Africa are also getting richer but not at as fast a rate, as indicated by the +180% and +150% in Table 2. The middle is Asia and East Europe, which have middling percentages. Those figures are consistent with the three key scenarios of Table 4. Scenario 5 shows the rich countries rising to the top of the table and the poor countries or poor people being left below the middle. In the poorest countries, the rich have risen above the middle and the poor are still way behind in Scenario 2. For the middling countries of Asia and East Europe (combining Table 2 and Scenario 4), the poor and the rich are both doing well compared to the starting point, and especially well compared to the poorest countries, but not as well as the richest countries.

When it comes to explaining why the gap might be getting bigger between the rich and the poor in rich countries, the main explanation seems to be that this is a figment or a fiction of the ecological fallacy mentioned under the subtitle "Countries versus Individuals". It seems hard to conceive that with all the anti-discrimination legislation mentioned above, that the inequality gap could be getting worse rather than better in the United States and other rich countries. The U.S. is far from perfect in eliminating racism, sexism, ageism, classism, homophobia, and other forms of non-merit discrimination. However, the U.S. has made tremendous gains since the l960s on all those fronts. At the University of Illinois, for example, blacks were not hired to be carpenters, plumbers, or electricians because the University approved the all-white unions refusing to allow black members. The Political Science Department used a point system for fellowships that gave fewer points for women on the grounds that they would probably get married, have children, and drop out of political science. This writer recalls a scene in the Union cafeteria when one white student reported having just beaten up another student. The student listening asked, "Was he white?" The first student said, "No, he was a Jew." Racist, sexist, ethnic, and homophobic jokes were told as if one were discussing the weather.

If the inequality gap has been narrowed in the U.S. as the richest country in the world, then in what sense is the inequality gap getting bigger? The sense is not that there is less equal opportunity between the rich and the poor in the U.S., but there is less equality between rich countries and poor countries in the world. We can see that if we look back at Table 2. It shows that the per capita income in OECD countries has gone up by almost $7,000. The developing region that is showing the most rapid growth is Asia, but its per capita income only went up by $2,500. In other words there was formerly a gap of $2,811 in l950, at $3,298 versus $487. There is now a gap of $7,292 in l989, at $10,104 versus $2,812. Thus the average OECD country is now a lot richer than the average Asia country, whereas in l950 they were richer but not a lot richer.

Why is this gap increasing? The answer is largely that money goes to money in the sense that the especially rich countries have a lot of money to invest on which they receive a good return. The poor and the middling countries do not have so much available to invest, especially compound investments where the profits are plowed back into more investments. The poor countries as of l999 do not have the political clout to put pressure on the rich countries to open up more opportunities the way poor, black, or feminine individuals in the United States have the political power to obtain favorable or merit-treatment legislation.

What may change is a kind of global free-trade in products, people, and ideas that in time will bring the have-nots up. The capitalists in the United States have been largely won over to the idea that equal opportunity for blacks is good for providing good black customers and black employees. Likewise, in time the foreign ministries , the trade associations, and the big business firms are likely to recognize that promoting peace, democracy, and especially prosperity in developing nations is good for customers, suppliers, and investment outlets for American and European business. Those developing countries are even good as sources of buyers of American treasury bonds. China has now replaced Japan as the leading foreign buyer now that Japan is in a recession and China has so much surplus money from selling to the U.S.

What are the Conclusions and the Policy Implications for All This?

Table 5 is a photographic reproduction of a key table entitled "Racial Discrepancy" which was published in the August 8, l999 issue of the *New York Times*. In an indirect way, it nicely summarizes the findings of this present article in *Developmental Policy Studies*. The *New York Times* table shows that "Despite improvements, black women remain more likely to die in childbirth than white women", as indicated in the summary beneath the title.

This is truly like the half-filled or half-empty bottle. It emphasizes that there is important work to be done, but it fails to bring out that the poor are getting richer and the inequality gap is getting smaller. More specifically, as of l960, whites had more than 20 maternal deaths per 100,000 live births. As of l990, one generation later, blacks were doing better with fewer maternal deaths than in l960. This is like the poor of today being richer than the rich of medieval times. The year l960 is a lot more recent than medieval times. The trend is also downward, such that by l996 blacks are below 20. A cynic might say that the black trend is flattening out, but so is the white trend because there may be limits to how perfect we can be in eliminating maternal deaths.

On the inequality gap, notice that blacks were at about 90 deaths in l960 while whites were at 20. That means out of every 100,000 live births, 70 more black mothers died in childbirth than white mothers did. That is a terrible inequality gap. As of l990, there were about 20 black deaths per 100,000 live births, but only about 5 white deaths. That is an inequality gap of 15 more black mothers dying at childbirth than white mothers. The inequality gap has thus

decreased from 70 to 15 or a -55 deaths on a base of 70. That is a substantial gain in reducing the inequality gap. In this context, whites are analogous to rich people or countries, and blacks are analogous to poor people or countries.

A win-win perspective on optimism and pessimism combines both perspectives. First, one should generally be pessimistic regarding how bad things currently are. Such a position encourages making improvements. Second, one should be optimistic or at least uplifting regarding how much progress has been made over the past generation or more. This also encourages making improvements because knowing that we can improve lifts morale, whereas downward trends are demoralizing.

Third, we should be highly pessimistic about the future if we do not work to achieve improvements through better public policy or other means. Fourth, we should be highly optimistic about how much things can improve in the future if we do work hard at it, especially through public policy. Those last two aspects encourage hard work and the improvement of public policy. All four aspects combine pessimism and optimism in a win-win way.

This four-part orientation is contrary to the conservative position which says that everything is wonderful with regard to race and poverty, implying there is not much room for improvement. This four-part orientation is also contrary to the liberal position which tends to say that the past and present are both horrible because conservative elites run society. Worse than that, conservatives say the poor will always be with us as if anti-poverty is virtually hopeless. Leftists also tend to talk about the economic forces of history bringing about revolutionary change without individual responsibility. Such a Marxist or semi-Marxist philosophy does not lead to working hard to bring about better public policy. Doing so might even be attacked as a cosmetic, band-aid activity that delays the revolution.

The next logical question is what public policies can substantially reduce the percentage of people who make less than a $1 a day? What realistic public policies can enable the poor to become richer even if the rich also become richer? What public policies can lessen the inequality gap, especially if it is based on lack of merit treatment and serves to antagonize and demoralize more than it does to provide an inspirational incentive?

The answers are partly given in three previous articles in *Developmental Policy Studies*. The first is “The Win-Win Productivity Cycle” in the Winter, 1997

issue. The second is “Win-Win Productivity Cycle Books” in the Spring, l998 issue, and the third is “The New Win-Win Developmental or Productivity Cycle” in the Spring, l999 issue. Those articles are summarized on the back cover of *Developmental Policy Studies* since the Spring, l998 issue. The essence of those articles and the flow-chart diagram is that poverty can be reduced and prevented by job facilitators, education, merit treatment, voting facilitators, and medicalizing rather than criminalizing the drug-addiction problem. Job facilitators in turn are stimulated by a rising GDP caused by public policies designed to promote training, new technologies, competition, and free trade.

Those policies that are designed to reduce poverty, promote merit treatment, and promote productivity require more detail than this present article can provide and more details than those previous articles. In view of our l999 space limitations, we will save the details for the first 2000 issue of *Developmental Policy Studies*. That article will be entitled “Reducing and Preventing Poverty through Win-Win Public Policy”. It will hopefully provide useful ideas for promoting economic growth without the alleged side effects of increasing the inequality gap. Having both economic growth and a narrowed (but mildly preserved) inequality gap is a win-win outcome in itself.