

# The Scorecard on Development, 1960–2016: China and the Global Economic Rebound

By David Rosnick, Mark Weisbrot, and Jacob Wilson\*

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Center for Economic and Policy Research

1611 Connecticut Ave. NW Suite 400 Washington, DC 20009 tel: 202-293-5380 fax: 202-588-1356 www.cepr.net

<sup>\*</sup> David Rosnick is an Economist at the Center for Economic and Policy Research (CEPR) in Washington, DC. Mark Weisbrot is the Co-Director and an Economist at CEPR. Jacob Wilson is an International Program Intern at CEPR.

# **Contents**

Introduction	
Two Measures of World Growth and the Effects of China and India	
Economic Growth Since the Last Report	
Approach	9
Economic Growth	9
Mortality and Life Expectancy	10
School Enrollment	17
Miscellaneous Indicators	20
Chinese-Led Growth	23
Conclusion	25
Appendix	28
References	30

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#### Introduction

In his last speech at the United Nations, then President Barack Obama hailed the economic and social achievements of globalization for the developing world. In doing so, he noted:

"Over the last 25 years, the number of people living in extreme poverty has been cut from nearly 40 percent of humanity to under 10 percent."

According to World Bank data, this is true.<sup>2</sup> Like many political leaders, Obama attributes this success as measured by poverty reduction — while simultaneously recognizing various shortcomings — to "globalization," including "the principles of open markets."

But the story behind the numbers is vastly different from Obama's narrative. For the 25 years that he refers to, two-thirds of the approximately 1.1 billion people who were pulled across the extreme poverty line were in China.<sup>3</sup> If we go back a bit further, and look at the period from 1981 to 2010, it is even more a story of Chinese success: about 94 percent of the reduction of extreme poverty was in China.<sup>4</sup>

Not only that, but as noted below, much of the remaining third of the reduction in extreme poverty during the past 25 years was also attributable to China, and it happened in the twenty-first century, when China rapidly became one the largest importers in the world of other developing countries' exports, 5 as well as a source of hundreds of billions of dollars of loans, direct investment, and aid. 6

If the story of globalization's success — never mind its failures — is mainly a story of Chinese globalization, then it must be a very different story than the standard narrative. Chinese global economic integration was not based on the neoliberal reforms and policies that were adopted by the vast majority of low- and middle-income countries since the 1980s. China did not establish an independent central bank or abandon the industrial and development policies of prior decades, as most low- and middle-income countries did. They maintained state control over the banking system, had strict currency controls and a huge role for state-owned enterprises, and until recently the state controlled most investment. Foreign investment was regulated to make it compatible with state development planning. Technology transfer and other performance requirements — conditions

<sup>1</sup> Obama (2016).

<sup>2</sup> There are some disputes about this poverty data and its interpretation. See, for example, Sumdaram (2016) and Reddy and Lahoti (2016).

<sup>3</sup> Hofman (2016).

<sup>4</sup> Olinto, et al. (2013).

<sup>5</sup> IMF DOTS (2017a).

<sup>6</sup> Cooper (2016).

attached to foreign investment to make sure that the host country gets some benefit from foreign investment, such as the use of locally produced inputs, or the hiring of local managers<sup>7</sup> — were common and are still an issue of contention with the United States today.<sup>8</sup>

The story that actually happened has quite different implications for what we can learn from history about economic policy than does the standard narrative. Of course, much of the Chinese model would not apply to most low- and middle-income countries because China was transitioning from a planned to a mixed economy. (The comparison with other transition economies is still relevant, since China sustained the fastest-growing economy in world history for decades during its transition, while Russia and most other former Soviet states went through serious depressions and of course never came close to China's performance when they recovered). But in any case there would still be a lot to learn from the Chinese experience, possibly more than from the prevailing orthodoxy in most of the rest of the developing world.

It is not only political leaders and journalists that seem to conflate Chinese globalization with the experience of most of the world, in evaluating the economic and social progress of recent decades. A number of economists have done the same.

Richard Baldwin, in his 2016 book "The Great Convergence: Information Technology and the New Globalization," presents a comprehensive theory of globalization that portrays the global integration since 1990 — as distinguished from previous periods — as driven by advances in communications technology. For Baldwin, these advances, which drastically lowered the cost of moving ideas, reversed a centuries-long trend of "The Great Divergence" — where the gap between rich and poor nations, in terms of manufacturing output, increased. He writes:

From 1990, the trend flipped; a century's worth of rich nations' rise had been reversed in just two decades. Their share [of manufacturing output] is now back to where it was in 1914. This trend, which might be called the "Great Convergence," is surely the dominant economic fact of the last two or three decades.<sup>9</sup>

He is referring to the share of world manufacturing belonging to the G-7 countries, which fell from 65 to 47 percent from 1990 to 2010. He notes that these 18 percentage points were gained by just six countries (China, South Korea, India, Poland, Indonesia, and Thailand), while the rest of the world stayed roughly the same at about 28 percent.

<sup>7</sup> KPMG (2017).

<sup>8</sup> Donnan (2017).

<sup>9</sup> Baldwin (2016a), p1.

However, more than 80 percent of the convergence went to China, with the rest being shared by the remaining five countries — including India and Indonesia, home to more than 1.6 billion people. Therefore, the "Great Convergence" in manufacturing is, at least so far, primarily a Chinese phenomenon.

Clearly, the lumping together of China with other groups of low- and middle-income countries can obscure, if one is not careful, how narrowly distributed the gains from globalization have been, by country; although Baldwin notes that even six countries is a surprisingly small group. But most importantly, since China's economic policies during this period were so different from most of the developing world, the standard aggregation makes it difficult to get even a cursory look at the net effect of the most widespread policy changes of the era.

One way to get a first look at what the net effect of what such widely adopted policy changes might have been is to compare the era of neoliberal reforms with that of prior decades. We first did that in 2001, and found a sharp drop-off in the rate of growth of GDP per capita for the vast majority of low- and-middle-income countries for the last two decades of the twentieth century, as compared with the prior two decades (1960–1980). There was also a broad decline in the rate of progress on health and some social indicators, including life expectancy, infant and child mortality, adult mortality, and educational attainment.

The methodology for the comparison is relatively simple. We would expect diminishing returns in terms of growth rates, as developing countries would typically grow faster than high-income countries. And we would also expect diminishing returns in the case of health indicators; e.g., it would presumably be more difficult to advance 10 years in life expectancy from a starting point of 70 than of 50. In order to adjust for diminishing returns, we compared groups of countries that began at a certain level of per capita GDP in 1960, with those that started at the same level of per capita GDP in 1980 — rather than simply looking at what happened to growth rates for the same group of countries over time. The same methodology was applied to comparisons of health and social indicators. Of course, in some regions the growth collapse of the 1980–2000 period was so profound that it was obvious even without controlling for diminishing returns, or looking at country averages. In Latin America, for example, regional per capita GDP grew by 91.5 percent from 1960 to 1980, but just 5.7 percent from 1980 to 2000.

We returned to the comparison, including all countries for which there was data, five years later and found mostly similar results.<sup>12</sup> But by 2011, a noticeable rebound had occurred, both in GDP per

<sup>10</sup> See Baldwin (2016a) and (2016b).

<sup>11</sup> Weisbrot et al. (2001).

<sup>12</sup> Weisbrot, Baker, and Rosnick (2005).

capita and in progress on some of the major health and social indicators. Some possible reasons for the rebound were discussed in our 2011 paper<sup>13</sup> and elsewhere,<sup>14</sup> and are noted below. This paper updates the prior comparisons with the latest data from additional years of the twenty-first century.

# Two Measures of World Growth and the Effects of China and India

There are many ways in which we may examine growth of economic activity in the world. One way would be to treat the world as a single economy: we may total the gross domestic product of every country, divide by the total population, and observe how fast this grew each year. A second approach would be to simply average per capita growth rates among countries; rather than treating the world as a single economy, this would describe the average experience across countries. Finally, we might also weight such per capita growth rates by population to observe the experience of the average person.

From a policy perspective, the second of these — looking at the averages across countries — makes the most sense. Each country represents a distinct observation with different economic policy choices. We would not want to say that countries followed successful policies of development because "China and Honduras" grew rapidly any more than one would want to say "Bill Gates and I are rich"; rather, we would want to say countries have a mixed record with large-economy China succeeding and small-economy Honduras less so. True, China's policy affected a much larger share of the world's population and of the world's economy; but it still represents one policy experiment, as does Honduras'. <sup>15</sup>

It may be that these measures do not much differ. Briefly, then, we will compare the first two approaches. We will then examine the effect of removing China and/or India from the analysis so as to observe their impact on each measure. Obviously, removal of one or two countries will have little effect on the unweighted average growth across countries. However, these countries represent a significant fraction of the world economy and therefore their exclusion may have a noticeable effect on the world's growth when the world is taken as a single economy.

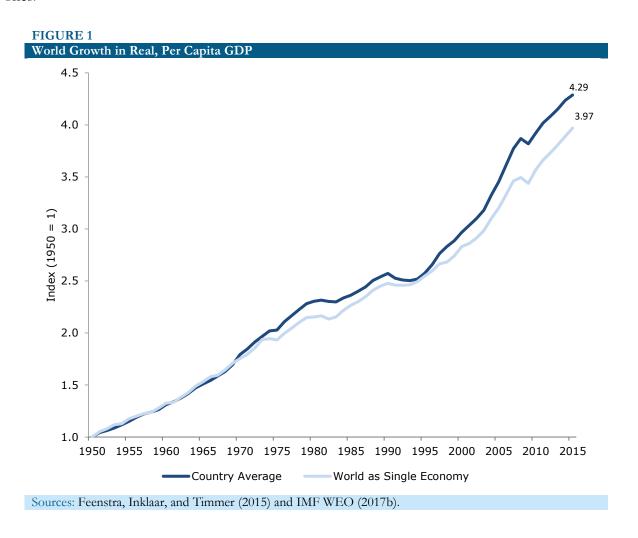
In **Figure 1**, we have linked year-to-year growth rates to create per capita GDP measures indexed to 1950. The "Country Average" line is based on the simple average of country growth rates, so China and Honduras are equally weighted. Over the 65 years from 1950 to 2015, this measure suggests that per capita GDP has risen by 329 percent (indexed value of 4.29) — a bit under 2.3 percent per year. The other data takes the world as a single economy, and indicates a 297 percent increase (or little more

<sup>13</sup> Weisbrot and Ray (2011).

<sup>14</sup> Weisbrot (2015), Chapter 3.

<sup>15</sup> Certainly, development policy is not the only factor in a country's economic growth.

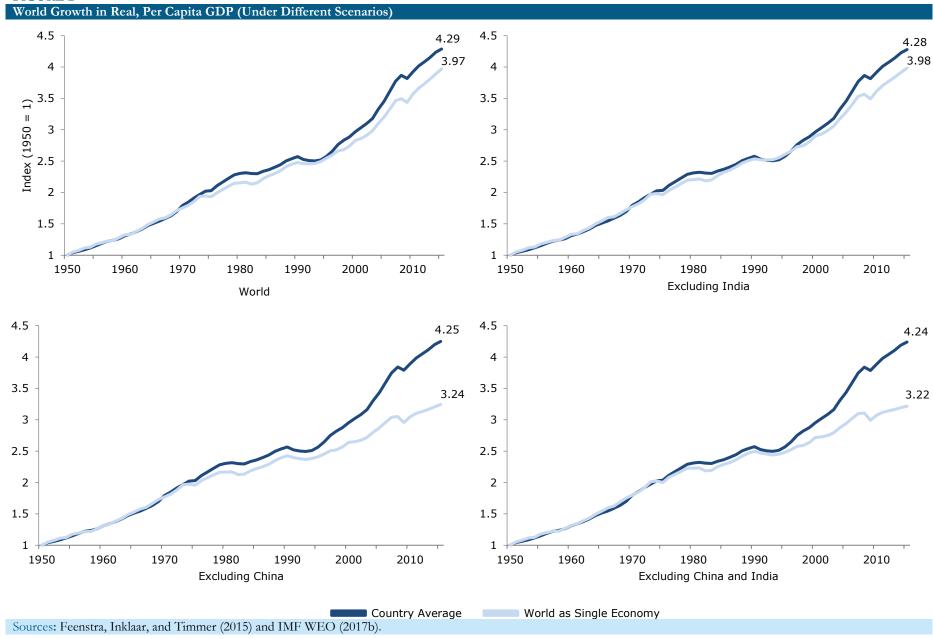
than 2.1 percent per year). This measure weights larger economies more heavily, and therefore indicates that overall, growth has been a little slower in larger economies in comparison to smaller ones.



This is not overly surprising as economies may be larger due to a larger population or to a higher level of development; and we would expect less-developed countries to grow more rapidly. It is perhaps more surprising that the gap is not wider.

In **Figure 2**, we consider the removal of China and/or India. In the upper left, we have the world — as complete as data allows. The graphs to the right exclude India, and the graphs in the second row exclude China. As the figure shows, the effect of excluding India is very small — very slightly narrowing the gap between the measures of per capita GDP growth by just two-hundredths of a percentage point.

FIGURE 2



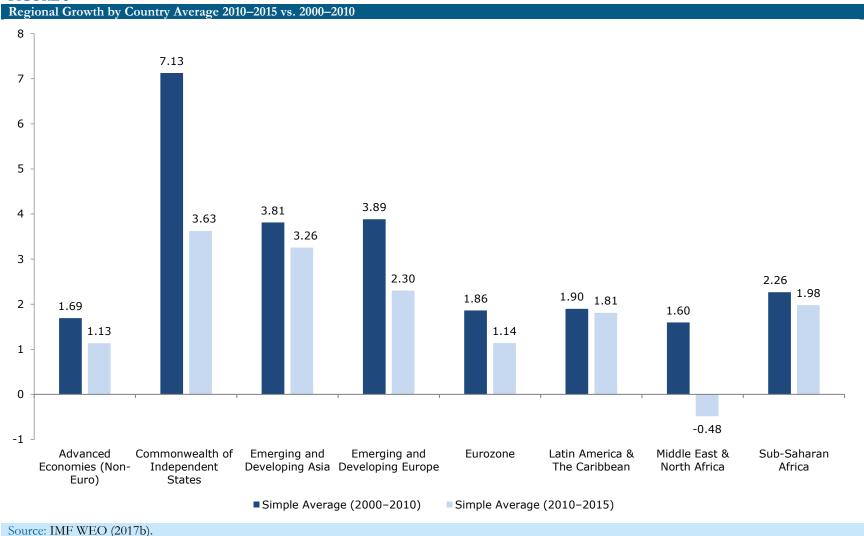
On the other hand, excluding China from the calculation greatly reduces growth in the world economy. On the whole, per capita GDP growth in the non-China world has slowed since the 1970s. Yet, as the other measure indicates, countries have — on average — resumed growth since the 1990s. That recent non-China growth has been lower when more heavily weighting large countries suggests that China has been a significant outlier among large economies. We will take this into account in more careful analysis later.

# **Economic Growth Since the Last Report**

In the aggregate, world economic growth was nearly unchanged in 2010–2015 when compared to 2000–2010 — at 3.9 percent annualized, compared to 4 percent, respectively. <sup>16</sup> However, a much higher decline can be seen when averaging countries' growth as compared to aggregating the world as a single economy. The average rate of growth fell from 2.8 to only 1.8 percent per capita per year, with every region slowing, from 2010 to 2015. **Figure 3** shows this comparison for the country average, by region.

<sup>16</sup> IMF WEO (2017b).

FIGURE 3



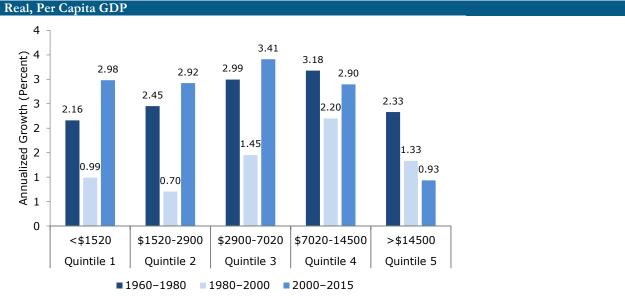
# **Approach**

In the figures that follow, we describe worldwide progress by initial level and period. The world consists of all countries observed up to three times each — beginning in 1960, 1980, and 2000. <sup>17</sup> These country periods are pooled, then divided into quintiles; the quintile groups are only then separated by initial year of observation. Each figure shows the growth in the unweighted average for each of the 15 groups (i.e., five quintiles for each initial starting year). Within each quintile then, all observations are of similar initial level regardless of the time period. This allows a simple comparison of progress across time without undue concern for diminishing returns.

#### **Economic Growth**

**Figure 4** shows economic growth for each quintile of worldwide income. The quintiles are defined by start-of-period gross domestic product (GDP) per capita in 2011 international dollars, adjusted for both inflation and for purchasing power parity (PPP). Growth in per capita GDP, however, is based on each country's national accounts adjusted only for inflation.





Sources: Feenstra, Inklaar, and Timmer (2015) and IMF WEO (2017b).

As Figure 4 clearly shows, average growth in per capita GDP slowed considerably over 1980–2000 in comparison to 1960–1980. This slowdown occurred across the full range of incomes. For quintiles 1 through 4, growth increased again in the 2000–2015 period. There is nothing special about the dates

<sup>17</sup> For more explanation see Weisbrot and Ray (2011).

selected here. If we were to cherry-pick, we might find that 1980–1995 was an especially poor period: the latter half of the 1990's looked more like the 2000s than the 1980s. And including the 1970s in the first period ensures that we are not using a baseline that has extraordinarily favorable circumstances: the decade contained two major oil shocks that led to world recessions, as well as high inflation. If the fifties were included, the baseline period would have been stronger.

The slowdown in per capita GDP growth in the second time frame is quite large, especially over a 20-year period. For example, a country starting out in the second quintile in 1960 would, on average, increase its per capita income by 62 percent over the ensuing two decades; in 1980, the corresponding increase would be just 15 percent.

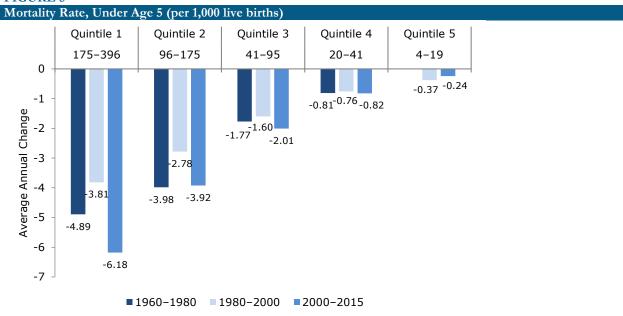
# **Mortality and Life Expectancy**

There is a very high cross-country correlation between life expectancy, and other measures of health, with income, although there is controversy over the causal relationship. <sup>18</sup> This relationship also shows up in our examination of the changes in per capita GDP growth rates and the rate of improvement in health indicators.

Patterns of progress in child mortality are little changed from those observed in the previous edition of this report, as can be seen in **Figure 5**. For those in the bottom two quintiles (96–396 deaths per 1,000 live births), mortality rates have fallen more rapidly in 2000–2015 after a notable slowdown in the 1980–2000 period.

<sup>18</sup> See Deaton (2013) and Weil (2015).

FIGURE 5



The pattern is less clear in the upper quintiles as diminishing returns take hold.

Adult mortality rates, likewise, have fallen much more rapidly in the last 15 years — following a disastrous two decades.

At the upper quintiles, mortality rates have fallen slower over time — albeit from low levels. There is some acceleration in the most recent period that is especially sharp among males, as can be seen in **Figure 6**. For males in the fourth quintile, mortality rates fell by 2.3 per year over 2000–2015 compared to 1.1 per year over 1960–1980. Among those in the fifth quintile, (77–186 deaths per 1,000 adult males), mortality rates had fallen by only 0.5 per year from 1960 to 1980, but 2.0 per year from 2000 to 2015. Thus, despite diminishing returns, where mortality rates were already low, progress for this group has been comparable to those in the middle back in the 1960s and 1970s.

FIGURE 6

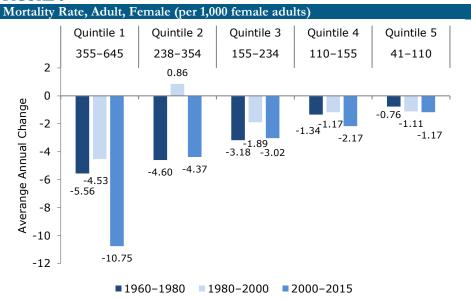
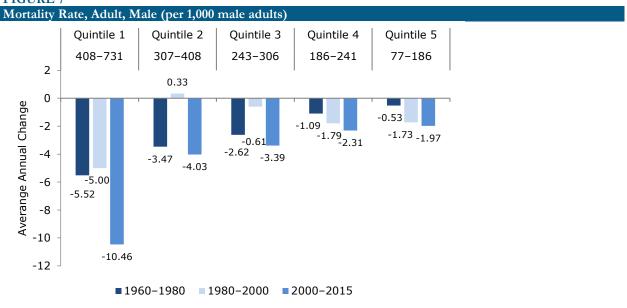


FIGURE 7



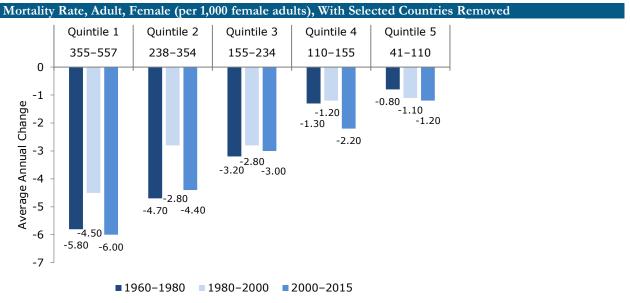
Source: World Bank (2017).

In the first quintile, mortality rates fell rapidly from 2000 to 2015. Much of this, however, is likely a bounce back in Sub-Saharan African countries, which saw mortality rates skyrocket during the 1980–2000 period. In particular, the second quintiles for both females and males regressed in the 1980–2000 period. As discussed in the previous report, this unusual result is in great part due to the HIV epidemic — against which considerable progress has been made since that time period. Of 192 countries, only 16 have a period with an average increase in adult female mortality rates of at least

three per year. All 16 countries that lost that much ground are located in Sub-Saharan Africa and did so over 1980–2000. Fourteen of those 16 were in the second quintile — the exceptions being middle-quintile Zimbabwe and Botswana. All 16 began 2000 in the bottom quintile and all bounced back in the most recent period.

If we reanalyze with these 16 countries removed, we still observe a noticeable slowing of progress in the 1980–2000 period, especially in the second quintile. But we see neither the extreme failure nor the exceptional bounce back. For example, we see the reanalyzed numbers for females below, in **Figure 8**.

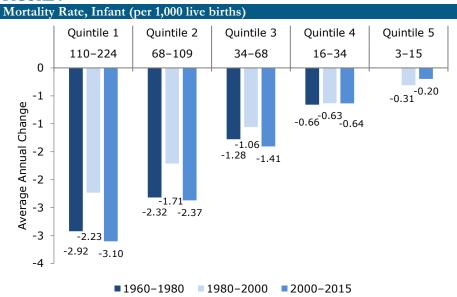
FIGURE 8



Source: World Bank (2017).

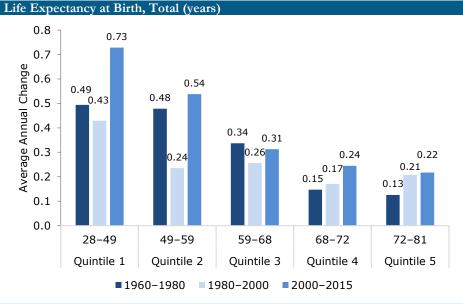
The rate of progress in reducing infant mortality also shows a sharp decline for 1980-2000, in the first three quintiles, with a rebound in the twenty-first century. This can be seen in **Figure 9**.

FIGURE 9



As go mortality rates, so must follow life expectancy. For life expectancy at birth, we again see diminishing returns: improvements in life expectancy are more pronounced in countries with lower initial life expectancy. However, we still observe that 1980–2000 was a period of relatively slow progress on this front at the bottom. If life expectancies had increased at the 1960–1980 rate, then people in second-quintile countries in 1980 would have enjoyed an additional five years of life on average by 2000.

FIGURE 10

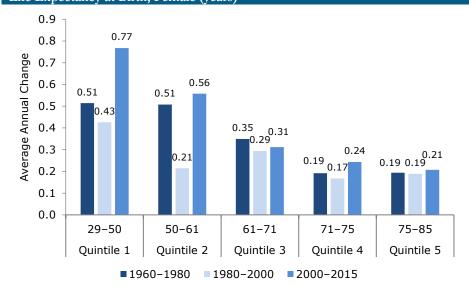


Source: World Bank (2017).

Again, much of this very sharp decline in the second quintile is due to HIV/AIDS. The only significant fall in life expectancy (as opposed to a fall in the rate of improvement of life expectancy) reported outside of 1980–2000 Sub-Saharan Africa was in Cambodia (from 41.2 years of life in 1960 to only 27.7 in 1980; this was obviously related to the war and political violence there). Cambodian life expectancy also bounced back quickly, reaching 58.4 years in 2000 and 68.5 in 2015.

The story is similar when separating males and females, as can be seen in **Figures 11 and 12**. In the second quintile, we see a sharp falloff in progress (1980–2000), especially in female life expectancy gains, and then a rebound. After gaining 1.3 years over the 20 years from 1960 to 1980, male life expectancy at birth for the fifth quintile rose 3.4 years during the last 15 years (2000–2015).

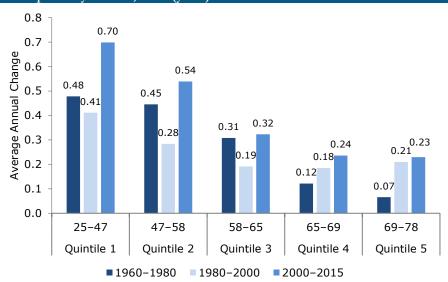
FIGURE 11
Life Expectancy at Birth, Female (years)



Source: World Bank (2017).

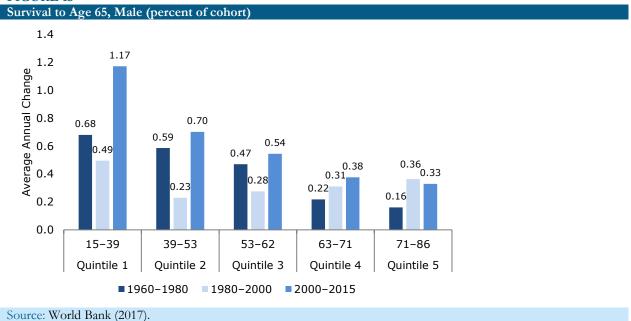
FIGURE 12





Finally, these results are reflected in the closely related odds of survival to age 65. In 2015, males in the top quintile were nearly 7 percentage points more likely to survive to age 65 than they would have had progress proceeded at the 1960–1980 pace. As with gains in life expectancy, we see the pattern of slowing progress and resurgence in the bottom three quintiles of survival rates.

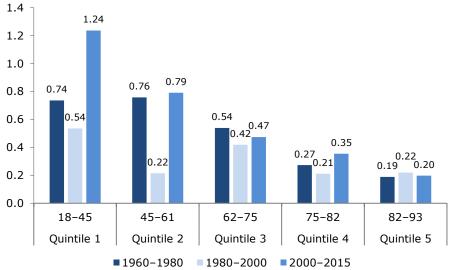
FIGURE 13



The Scorecard on Development, 1960–2016: China and the Global Economic Rebound

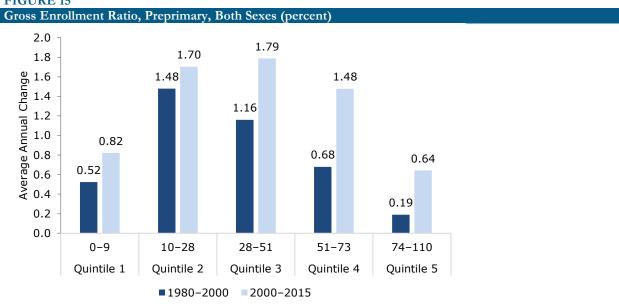
FIGURE 14





#### **School Enrollment**

FIGURE 15



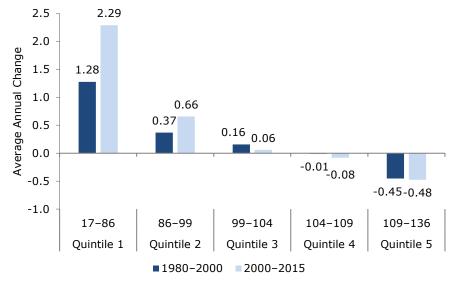
Source: World Bank (2017).

Gross enrollment ratios in preprimary education rose more rapidly over 2000–2015 in comparison to the two decades prior. The increase came across all quintiles, but in the fourth quintile we see the

largest improvement in progress — from 0.7 percentage points per year to 1.5 percentage points per year for countries with initial enrollment between 51 and 73 percent. Over the 15 years, this increased progress represents an additional 12 percentage points of preprimary enrollment.<sup>19</sup>

For primary education, enrollment rates improved more rapidly in the lowest quintile — where initial enrollment rates were less than 100 percent, as can be seen in **Figure 16**. Among quintiles three through five, initial enrollment rates exceeded 100 percent — which is possible because the denominator is the population of primary school age. To the extent that older students are also enrolled, this raises rates; as primary education becomes universal, the base becomes limited to students of primary school age and gross enrollment rates must fall.





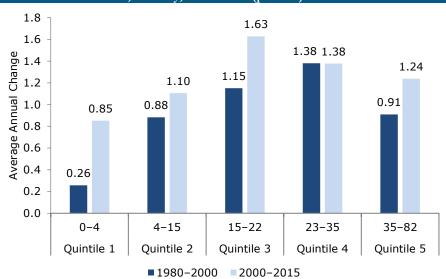
Source: World Bank (2017).

Progress in increasing gross enrollment in tertiary education has been less even. Quintile three showed the most rapid progress in increasing overall gross enrollment rates, followed by the fourth and fifth quintile.

<sup>19</sup> There are comparatively fewer observations for data on education than for other indicators cited throughout this report. For a further discussion on education and data availability, see United Nations (2015).

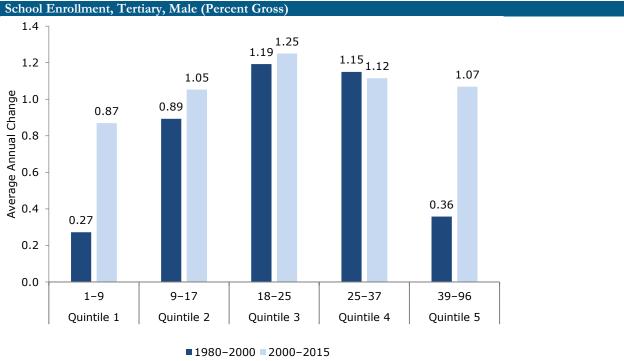
FIGURE 17





This story over time is a little more clear, however, when breaking out enrollment rates by sex. For males, enrollment rates improved most rapidly in the middle quintile, as can be seen in **Figure 18**. But rates in the first and fifth quintiles increased their rates of improvement considerably, when compared to 1980–2000.

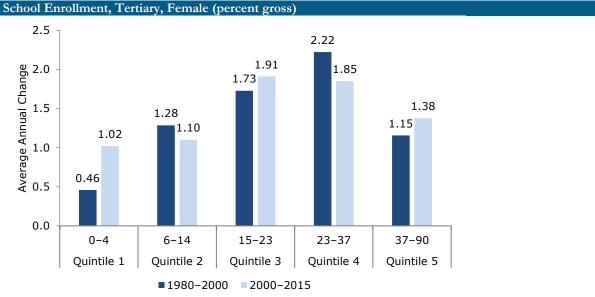
FIGURE 18



Source: World Bank (2017).

For females in the second and fourth quintiles however, enrollment rates if anything rose faster during the 1980–2000 period than in 2000–2015. For the 1980–2000 period, there is data for only one country in the fifth quintile. By 2000, however, an additional 15 countries moved into the fifth quintile after experiencing rapid increases in the prior period.

FIGURE 19



Source: World Bank (2017).

Overall, female enrollment in tertiary education has been increasing at a faster rate than for men, especially in the top three quintiles. In virtually all developed countries, female enrollment is now greater than male enrollment. In Sub-Saharan Africa and Southern Asia, however, enrollment rates have not increased at as high a rate overall, nor have female enrollment rates increased significantly faster than those of males. <sup>20</sup>

#### **Miscellaneous Indicators**

Progress in immunization of one-year-olds has slowed particularly among the lowest quintiles, as can be seen in **Figure 20 and 21**. Diphtheria, pertussis, and tetanus (DPT) immunization rates in the first quintile (1–42 percent) rose by an average of 3 percentage points per year between 1980 and 2000, but have risen only 1.7 percentage points per year since then. Likewise, immunization rates for measles among the first quintile rose more slowly — 2.3 percentage points per year compared to 3.0 in 1980–2000.

<sup>20</sup> United Nations (2015).

FIGURE 20



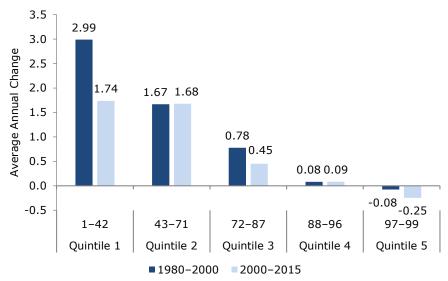
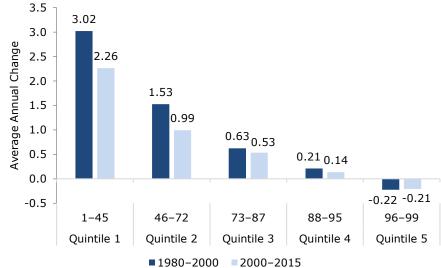


FIGURE 21





Source: World Bank (2017).

However, the slowdown of the last 15 years is more modest than it initially appears. The first quintile covers a very wide range of immunization rates, and some of the decline reflects movement from the first to second deciles, which can be seen below in **Figures 22 and 23**. For measles, the first decile progress in immunization may have accelerated.

FIGURE 22



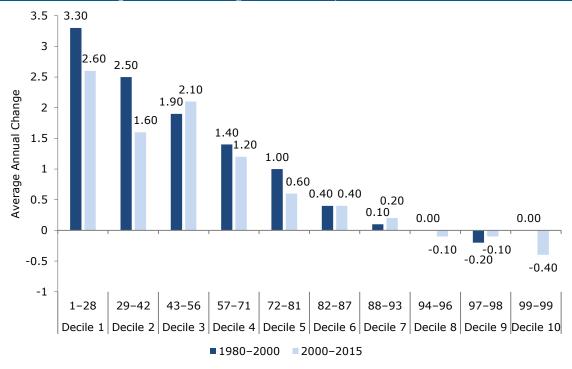
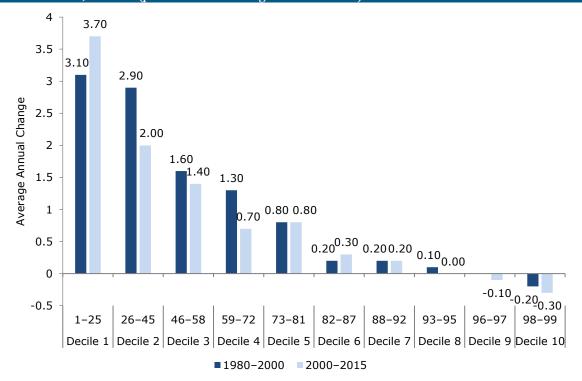


FIGURE 23

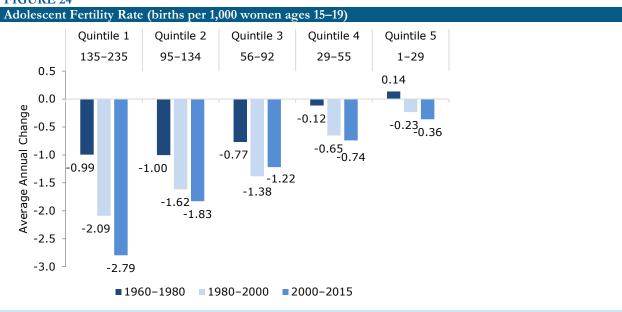




Source: World Bank (2017).

Finally, as can be seen in **Figure 24**, fertility rates among women aged 15–19 have fallen, across the board, more rapidly than they had over 1960–1980.





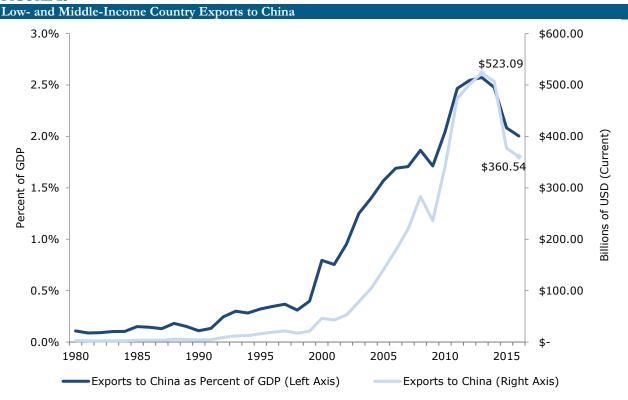
Source: World Bank (2017).

# **Chinese-Led Growth**

As noted above, one way in which China contributed to the twenty-first-century rebound of many developing countries is through its demand for their exports.

From 1990 until its peak in 2013, the share of low- and middle-income country exports sent to China increased from 0.8 percent to 9.7 percent, going from \$4 billion to more than \$520 billion. Measured as a percent of low- and middle-income countries' total GDP, the increase was from 0.1 percent to 2.6 percent, as can be seen in **Figure 25**.

FIGURE 25



Sources: IMF DOTS (2017a) and IMF WEO (2017b).

From 2013 to 2016, coinciding with a growth slowdown in China and falling commodity prices, low-and middle-income country exports to China decreased by about \$150 billion, to 2.0 percent of their GDP. The share of total low- and middle-income country exports going to China fell from 9.7 to 9.0 percent.

In 1990, the share of low- and middle-income country exports to the world's advanced economies was 73.9 percent. By 2013, it had fallen to 54.7 percent. In the last three years, it has increased slightly, to 56.3 percent. As a percent of GDP, low- and middle-income country exports to advanced economies peaked in 2006 at 18.3 percent before briefly dipping during the Great Recession. Still, even as advanced economies return to growth, low- and middle-income country's exports to them, as a percent of GDP, have decreased in recent years to a 20-year low of 12.4 percent.

#### **Conclusion**

Comparing the performance of low- and-middle-income countries in the twenty-first century with that of prior decades, on per capita GDP growth and the rate of progress on various health and social indicators, it is clear that there is still a sizeable rebound from the very unusual long-term failure of the last two decades of the twentieth century. Including the additional six years of data since our last paper does not seem to significantly change this comparison.

There are a number of possible explanations for the rebound. The most obvious is the unprecedented economic growth of China, and its increasing importance to so many low- and middle-income countries. China's increased demand for their exports, noted above, not only provided a direct stimulus to their economies, but in driving up commodity prices it also helped many countries accumulate reserves and avoid balance of payment problems that in the past had constrained their growth — or in some cases led to severe economic crises.

The IMF's loss of power in most middle-income countries may have also contributed to those countries' improved economic performance in the twenty-first century. The IMF's loan portfolio fell from \$105 billion to less than \$20 billion from 2003 to 2007. It bounced back to new highs during the world economic crisis and world economic downturn of 2008–2009, but the vast majority of the new lending went to Europe. The IMF has been an important driver of neoliberal policy reforms and procyclical macroeconomic policies in low- and middle-income countries. The Fund has headed up something of a creditors' cartel for its borrowers in the developing world, in which loans from the much-larger World Bank and other multilateral lending, including from rich country governments, was generally contingent on IMF approval. But the middle-income countries of Asia, Latin America, and other regions mostly avoided borrowing from the Fund after the highly publicized bad experiences of the Asian Financial Crisis in 1997–1999. And the creditors' cartel was also greatly weakened.

During the world economic downturn, the IMF did include procyclical policies in many of its loan agreements in developing countries, but there is some evidence that this was more moderate, or less damaging, than in the past.<sup>22</sup> Irrespective of the role of the IMF, it is clear that the response of low-and middle-income countries to the 2008–2009 downturn was more likely to be countercyclical than in prior downturns. A 2011 study found that 35 percent of developing countries had countercyclical policies for the years 2000–2009, as compared to just 8 percent during 1960–1999.<sup>23</sup> At the same time,

<sup>21</sup> Weisbrot et al. (2009).

<sup>22</sup> Weisbrot (2015), Chapter 3.

<sup>23</sup> Frankel, Vegh, and Vuletin (2011), p. 4.

some of the failed economic policies of the late twentieth century, such as overvalued fixed exchange rates in Argentina, Brazil, Russia, and elsewhere were abandoned.

One factor that seems not to have contributed to the twenty-first-century rebound for most developing countries was the economic growth of the high-income countries. These high-income countries' aggregate real GDP growth averaged 3.1 percent annually from 1980 to 2000, but just 1.9 percent from 2000 to 2017.<sup>24</sup>

Whatever the explanations for the twenty-first century rebound, the striking long-term growth failure of the last two decades of the twentieth century remains unexplained and largely ignored. In the comparison made in this paper, which looks at countries starting out at the same level of per capita GDP in 1960, 1980, and 2000, countries starting out at these levels in later decades should — all other things being equal — show more rapid progress. We would expect this because there is more advanced technology and knowledge available as compared to 20 years prior. The same should be true for advances in life expectancy and other health indicators, because of advances in medicine, science, and public health. And yet the opposite happened in the last two decades of the twentieth century. These decades coincided with a set of neoliberal reforms that were implemented in dozens of low- and middle-income countries: increasing independence of central banks, tighter (and more often procyclical) fiscal and monetary policies, the abandonment of previously employed industrial and development policies, indiscriminate openings to international trade and capital flows, other deregulatory reforms, and increasing protectionism with regard to intellectual property.

Of course, the fact that this long-term economic failure coincided with the widespread adoption of a set of reforms in low- and middle-income countries does not prove a causal connection. But it should at least be cause for concern, and some skepticism about these neoliberal reforms generally, as well as the institutions that have promoted, enforced (the IMF and World Bank) or codified (the World Trade Organization) these reforms in their rules. Both the long-term failure and the rebound of the twenty-first century should be topics of interest to economists.

It is ironic that one of the few developing countries that decidedly did not follow a neoliberal path since 1980 multiplied its per capita income by a factor of 21 by 2017, <sup>25</sup> became the largest economy in the world, <sup>26</sup> and played a major role in pulling dozens of other countries out of their long slump. This history, as we have seen, is somewhat different from the popular narrative that "globalization,"

<sup>24</sup> IMF WEO (2017b).

<sup>25</sup> Ibid., "China: Gross domestic product per capita, constant prices (National currency)."

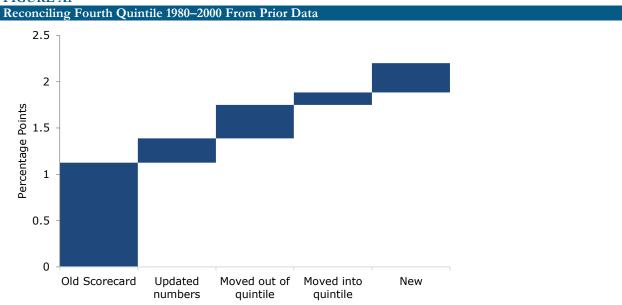
<sup>26</sup> On a purchasing power parity basis, China's GDP was estimated by the IMF at \$23.2 trillion in 2017, versus \$19.4 trillion for the United States. See IMF WEO (2017b), "China: Gross domestic product based on purchasing-power-parity (PPP) valuation of country GDP (Current international dollar)" and "United States: Gross domestic product based on purchasing-power-parity (PPP) valuation of country GDP (Current international dollar)."

as embodied in the way that most low and middle-income countries increasingly participated in the global economy — and the reforms that they adopted — proved successful.

# **Appendix**

In comparison to earlier versions of this report, fourth quintile (\$7,020–\$14,500) growth over 1980–2000 was relatively strong. Growth in this group came in at 2.2 percent per capita per year, compared to only 1.1 percent in the previous editions. At it happens, every change in sample and data contributed to increasing the growth estimate for this group. For one, differences in data for the same country periods as in the previous report added 0.26 percentage points to the estimated rate.

FIGURE A1



Sources: Feenstra, Inklaar, and Timmer (2015) and IMF WEO (2017b).

Removing countries which in this report are no longer seen to be in the fourth quintile raises the growth estimate another 0.36 percentage points. This includes middle-quintile countries such as Lebanon, Jordan, Suriname, Romania, and Guatemala — all of which had been observed to experience negative growth. The level of PPP-adjusted GDP in 1980 for São Tomé and Príncipe has been significantly reduced, putting it in only the second quintile. This removed from the fourth quintile a country that was an especially terrible performer. Slow-growth Brazil, and Argentina, have also been moved to the middle quintile along with relatively fast growth in Saint Lucia, Antigua and Barbuda, and Mauritius. On balance, all such shifts out of the fourth quintile removed a fair bit of poor numbers into other quintiles.

Adding countries that were previously observed but seem to be in quintiles other than the fourth again raised the growth estimate by 0.14 percentage points. These included countries that performed relatively well for the period such as Turkey, Macao, and Oman, and "tigers" such as Ireland and

Singapore. On balance, these did more to raise growth in the quintile than Algeria and Bulgaria's poor performances could lower it.

Finally, including previously unobserved country periods in the fourth quintile raised the estimate 0.32 percentage points. These additions consisted of a few small island nations (Aruba, Montserrat, the British Virgin Islands, and Anguilla) all of which performed well — averaging over 4 percent per capita, annualized.

There is no particular reason why these changes should have all shifted the estimate all in the same direction, and there is no obvious reason to believe that the latest estimate is "better" or "worse" than that of the 2011 report. However, we note that even doubling the estimated growth rate for 1980–2000 does not suffice to close the gap relative to 1960–1980 or 2000–2015. The falloff in growth elsewhere was simply too large.

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