WPS7892

Policy Research Working Paper 7892

Grow, Invest, Insure

A Game Plan to End Extreme Poverty by 2030

Indermit S. Gill
Ana Revenga
Christian Zeballos

WORLD BANK GROUP
Development Economics
Poverty and Equity Global Practice Group
&
International Finance Corporation
November 2016

Abstract

As global extreme poverty has fallen—by one measure, from close to 2 billion people in 1990 to about 700 million today—the world has learned about antipoverty strategies that work. These experiences should inform the final push to end extreme poverty. In the 1960s and 1970s, when close to half of the world was living in extreme poverty, the approach that worked best consisted of two sets of complementary measures: encouraging broad-based growth that is labor using, and investing in education, health, and family planning. When extreme poverty rates came down—first in East Asia and then in other parts of the developing world—it became clear that the two-point strategy to make economies *grow* and enable people to *invest* in human capital needed a social assistance supplement to help people with disadvantages so severe that they could not benefit from economic opportunities and better social services. This two-and-a-half-point strategy has been working well over the past quarter century, and the end of extreme poverty is in sight. But more people are now at risk of slipping back into poverty because of economic, natural, and health-related hazards. To end extreme poverty by 2030, the approach now needs three complementary components: economic growth, investments in people, and measures to *insure* against setbacks to families, nations, and regions due to disabilities, recessions, disasters, and disease. In countries that have reduced poverty a lot and those that could do a lot better, a winning game plan for putting a quick end to extreme poverty should be based on a three-point strategy: grow, invest, and insure.

This paper is a joint product of the Development Policy Department, Development Economics Vice Presidency, the Poverty and Equity Global Practice Group, and the International Finance Corporation. It is part of a larger effort by the World Bank to provide open access to its research and make a contribution to development policy discussions around the world. Policy Research Working Papers are also posted on the Web at http://econ.worldbank.org. The authors may be contacted at indermit.gill@duke.edu, arevenga@worldbank.org, and czeballos@ifc.org.

Grow, Invest, Insure: A Game Plan to End Extreme Poverty by 2030

Indermit S. Gill,
Ana Revenga,
and
Christian Zeballos*

Keywords: Poverty, Economic growth, Human capital accumulation, Social Insurance

JEL Codes: O20, O40, H41, I38

---

* Indermit Gill (indermit.gill@duke.edu) is at the Duke Center for International Development in the Sanford School of Public Policy of Duke University, Ana Revenga (arevenga@worldbank.org) is at the World Bank, and Christian Zeballos is at the International Finance Corporation (czeballos@ifc.org). At the time of writing, Indermit Gill was Director of Development Policy in the Office of the Chief Economist at the World Bank, Ana Revenga was the Senior Director of the World Bank's Poverty Global Practice, and Christian Zeballos was attending Georgetown University's Global Human Development Program. The authors thank Jim Yong Kim and John Donnelly for their encouragement, and Omar Arias, Kathleen Beegle, Shaohua Chen, Francisco Ferreira, Chorching Goh, Ruth Hill, Martin Ravallion, Nobuo Yoshida and colleagues in the Development Economics Vice-Presidency and the Poverty Global Practice for sharing ideas and information.

Grow, Invest, Insure:
A Game Plan to End Extreme Poverty by 2030

Indermit Gill, Ana Revenga, and Christian Zeballos

In the Republic of Korea, 1965 was a year of reconciliation. On June 22, after years of talks, Korea and Japan signed a treaty of reconciliation. With typical Eastern understatement, it was called the "Treaty on Basic Relations". The details were kept secret by the Korean government for decades. In 2005, it became known that the agreement had involved complete and final compensation to Korea for Japanese colonization of the peninsula between 1910 and 1945. The Japanese had given $800 million in grants and loans in full settlement of the claims. Korea's per capita income was only about $100 at the time, so this was a lot of money.[1] Korea got a lot more help from the United States: economic aid totaled $60 billion over the years, about the same as what the United States has given to Sub-Saharan Africa.

In Indonesia, 1965 was a year of living dangerously. In an Independence Day speech on August 17, 1964, President Ahmed Sukarno had used the Italian phrase *vivere pericolosamente* to describe the coming challenges for his newly independent nation. A year later, with Indonesia engaged in hostilities on its borders with Malaysia and wracked by runaway inflation at home, he called for a socialist revolution. By the end of the year Sukarno was powerless. In a bloody coup, General Suharto had taken over. Over the next three decades, Suharto's New Order government received billions in financial aid from the United States and its allies in the Cold War.

A quarter century later, the World Bank published the 1990 World Development Report on *Poverty*. The report was inspired by progress in Korea and Taiwan, China—henceforth Taiwan— both had by then virtually eliminated extreme poverty. Malaysia and Thailand had made impressive gains in reducing poverty and figured prominently too. The policies recommended in the report were also surely influenced by Indonesia, which had as many people as these four economies combined. Under Suharto's New Order, Indonesia had reduced the incidence of extreme poverty by half.

The 1990 World Development Report distilled these experiences into a simple strategy for reducing poverty: *market-based growth* made pro-poor through an emphasis on agricultural reforms, openness to trade, and fiscal prudence; and *large public investments in education, health, and family planning* implemented in ways to make sure that people in villages—especially girls and women—got their fair share. These would create the conditions in which the poor both had the opportunity to pull themselves out of poverty and the capacities to avail of the opportunities. The report also recommended *modest public assistance programs* as a supplement. It came to be known as the two-and-a-half-point strategy for poverty reduction.[2]

---

[1] Korea had asked for about $365 million—$200 for every survivor, $1,650 for every death, and $2,000 each for the injured. Instead of compensating the victims, the government used much of it for economic development—building schools and clinics, an expressway, a dam, and a steel mill.

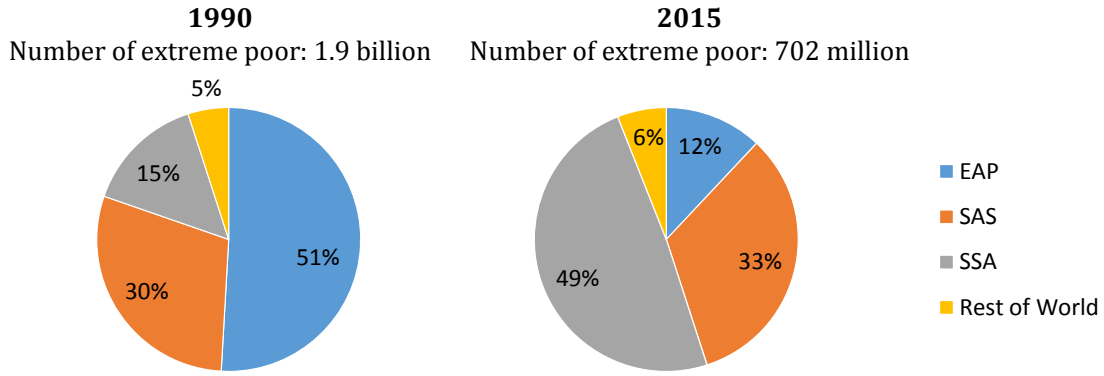
[2] Actually, the 1990 report was not the first World Development Report on poverty. Based on fewer statistics and less evidence, the 1980 World Development Report had proposed a similar strategy. The main difference between the 1980 and 1990 strategies was that the former had almost no discussion of social insurance programs.

Between 1981 and 1996, the number of East Asians living on less than $1.90 a day[3] had fallen from 1.1 billion to 704 million. The strategy was working, at least in East Asia.

In 1999, the World Bank began working on a new World Development Report on poverty. Prompted by setbacks in East Asia due to the 1997-98 financial crisis (especially in Indonesia, where millions were pushed back into poverty) and dissatisfaction with the pace of poverty reduction in the rest of the world, where people living in extreme poverty had stayed at about 1 billion between 1990 and 1999, the report revisited the 2.5-point strategy. WDR 2000 *Attacking Poverty* called for more attention to institutions, participation, and income redistribution. It outlined a new approach based on increasing empowerment, opportunity, and security for the poor.

These have proved to be tougher concepts to translate into policy, so the strategy advocated in the 2000 WDR has been difficult to operationalize. During the next two decades, with the possible exception of Indonesia and the Philippines, East Asian countries have generally stayed with the 2.5-point strategy pioneered in Northeast Asia in the 1960s and 1970s. Even the countries that had been communist—China, Vietnam, Cambodia and Lao PDR—have used the 2.5-point strategy to good effect. Just look at the numbers (Figure 1). In 1990, of the 1.9 billion people living in extreme poverty, about half, 996 million, were in East Asia, 575 million in South Asia, and 288 million in Sub-Saharan Africa. Today, 25 years later, the global sum is estimated to be about 700 million.[4] East Asia has 83 million people living on less than $1.90 a day, South Asia 231 million, and Sub-Saharan Africa 347 million. Put another way, during the last 25 years East Asian countries reduced extreme poverty by more than 30 million—each year!

Figure 1: Where the extreme poor are, by region – 1990 and 2015



With a quarter century of experience, it is reasonable to ask some questions: Does the 2.5-point plan work everywhere? If it does not, what should be done instead? If it does work, have we learned to implement it efficiently in places where the incidence of extreme poverty is as high today as it was in China and Vietnam in 1990, say in Nigeria and the Democratic Republic of Congo? Where it has worked, should the strategy be changed as extreme poverty is reduced to low levels?

---

[3] The international poverty lines of $1.25 and $2.00 were updated to $1.90 and $3.10 in 2015 to reflect improvements in the measurement of purchasing power parity conversion factors. The new lines maintain the real purchasing power of the earlier lines in poor countries, and as such, the revised poverty estimates do not change drastically as a result of this update. See Ferreira et al. (2015) for a detailed discussion on the topic.

[4] This number is statistically projected from the 2012 global poverty figures. The latest actual estimate of global poverty is 897 million people living in extreme poverty in 2012.

This paper provides answers to these questions. The 2.5-point plan has worked reasonably well where it has been implemented. Over the last 25 years, we have learned how to implement it better. We have also learned that it should be refined where there is progress in reducing poverty and where governments have become more capable. Countries that have reduced extreme poverty to low levels should consider expanding social insurance to make it a full third component—to expand the strategy to three full points. But social insurance, the third component of the strategy, has to be changed from a supplement to a full component in ways that strengthen rather than substitute the first two components of the strategy. This is not easy, but it is easier today than it was 25 years ago. We know more about what interventions work and under what conditions, and we now have better technologies to aid these interventions. The lessons learned in East Asia and East Africa, in South Asia and Latin America—in countries as diverse as Bangladesh, Brazil, China, Ethiopia, Ghana, India, Indonesia, Mexico, Peru, Pakistan, Rwanda, South Africa, and Vietnam—will help in deploying the 3-point strategy to put a quick end to extreme poverty.

These are cryptic answers, but they should give the reader an idea of the general conclusions of the paper. It is the details, however, which will be useful in formulating a workable plan to end extreme poverty, by first reducing the number of people living on less than $1.90 dollars to less than 250 million by 2030. This is an ambitious task. Given population growth, it entails engineering a reduction of about 110 million people living in extreme poverty every year for the next 15 years. Even East Asia could only achieve reductions of 53 million a year between 1981 and 1996, the 15 years of quickest reduction in poverty on record. The international community can help, but this task will have to be done country by country—especially in the 30-40 countries that have almost all of the world's extreme poor.

But governments in Sub-Saharan Africa and South Asia should take heart. Korea (with a population of 47 million) and Taiwan (with 23 million) showed that with the right policies at home and some help from abroad, poor post-conflict economies with hostile neighbors where nearly everybody was living in abject poverty could 40 years later become post-industrial economies where almost nobody is poor. For the Koreans and Taiwanese to end extreme poverty in less than four decades must surely rank among the most impressive accomplishments in modern history. Ending global extreme poverty less than 40 years after Korea and Taiwan eliminated theirs could well be mankind's greatest achievement.

1965-1990—East Asia takes the quicker route

For all these reasons, any exploration of the policies needed to end extreme poverty by 2030 should begin in Northeast Asia.

Republic of Korea and Taiwan (China)

In the 1960s, the Republic of Korea (henceforth South Korea or Korea) was still a nation of poor people, ravaged by colonizers, devastated by conflict, and torn in two. By 1990, South Korea had virtually eliminated extreme poverty. Fifteen years later, having weathered a serious economic crisis, it had become an advanced economy. How did Koreans make this miracle? Advocates both of state-led development and market capitalism claim credit for its successful economic transformation, and the debate continues to this day.

Less debatable perhaps is how South Korea ended extreme poverty.

It started with a comprehensive land reform. Between 1946 and 1955, 60 percent of tillable land was bought by the government from large landlords and sold to small farmers. Landownership became more equal—by one measure the Gini index of landownership fell from 0.63 before the reforms to less than 0.50 after. Productivity shot up. Rural families could send their children to school instead of working for larger landowners. At the same time, the government made education top priority, second only to defense. By 1960, literacy was close to universal. By the mid-1980s, more than 90 percent of middle school students were going on to high school. At the same time, more than 1,300 health centers were set up to provide primary care, medical aid, and family planning services. A national health insurance scheme was introduced for urban workers in the 1970s and was then extended to rural areas in the mid-1980s.

After experimenting with import substitution for a decade, in the early 1970s South Korea switched to export-led development. The payoff was immediate. The economy grew by double digits annually and unemployment fell to less than 5 percent. Productivity in agriculture continued to rise, aided by government programs to stabilize rice prices and introduce new technologies. A rural development scheme that helped villagers build roads and other infrastructure was started in 1971. By 1990, the economy was completely transformed: between the mid-1960s and 1990, the share of agriculture in employment fell from almost 60 percent to less than 20, and in industry it increased from 10 to more than 25 percent.

South Korea had social welfare programs, but they were designed to strengthen—not supplant—the family. So, for example, people taking care of their elderly parents got tax breaks and were exempt from military service. A public assistance program was started in 1965, but it covered only about 5 percent of Koreans. Those classified as poor received social assistance but at least until the East Asian Crisis in the late 1990s this was never more than 1 percent of the population.

By 1990, extreme poverty rates at a dollar-a-day were probably below 3 percent. We cannot be certain because South Korea has not had an official poverty line. It has never had poverty targets. South Korea followed what economists have called the 'indirect route' to poverty reduction—the use of resources to accelerate growth and general capacities of the population. At least until the Asian Crisis, it relied little on the direct route to reducing poverty—cash transfers and the public provision of housing, food, and health care targeted specially for poor people.

After the Asian financial crisis, Korea expanded social welfare both to address the social consequences of its rapid transformation and the effects of the crisis. Some changes were also made to institute business-friendly labor regulations. Today the Korean welfare state has five social insurance programs: the Industrial Accident Insurance introduced in 1961, which covers about 45 percent of all workers; the National Health Insurance program that was made universal in 1989; the National Pension Program, which became near universal in 1999 (three separate public pensions schemes cover civil servants, teachers and the military); the Employment Insurance Program started in 1995—those who received unemployment benefits were 33 percent in 1999; and Long-term Care Insurance started in 2008. Korea's social assistance program is now called the Minimum Living Standard Guarantee, an expanded version of the previous assistance program. This provides benefits for people with incomes below the poverty line but prime-aged recipients must enroll in training, public works, or community services.

Taiwan's development and poverty reduction efforts mirrored those of Korea both in their nature and timing. Korea's efforts, e.g., in land reforms, were in part motivated by developments in communist North Korea. China may have motivated Taiwan's reforms even more. Taiwan began with a phased but comprehensive land reform between 1949 and 1963, which involved an organized transfer of ownership to the tillers. By 1965, more than 90 percent of the land was tilled by tenants. Agricultural productivity increased quickly, putting a big dent in extreme poverty.

While the population more than doubled between 1950 and 2000 (the population is about 23 million today), massive investments in education, health, and family planning resulted in declining fertility, rising school attainment, and greater longevity. An aggressive policy to attract foreign direct investment (FDI) resulted in Taiwan becoming a major exporter by the 1990s. By 2005, agriculture was just 3 percent of GDP and the island was home to a third of the world's computer industry. Despite minimal spending on social welfare, extreme poverty appeared to have been eliminated.

Because statistics on poverty have only been maintained since 1981, it is impossible to be sure. Even today, Taiwan's social welfare spending is less than 4 percent of GDP, less than half the ratio in South Korea and one-fifth the average in the OECD. Welfare recipients are fewer than 2 percent of the population and get less than $150 a month.

Malaysia and Thailand

Malaysia followed South Korea and Taiwan with a lag of about a decade. Malaysia is unusual in East Asia in that it has had an official poverty line since 1970, when the New Economic Policy was introduced as a response to social unrest. Steps to increase agricultural productivity and attract manufacturing-related foreign direct investment were accompanied by programs to provide health, housing, and other services in rural areas. As in other countries, rural poverty rates are higher in Malaysia: three times as high as those in urban areas. The civil unrest had its roots in ethnic disparities. At independence, almost 90 percent of the Malay population was rural, compared with about 70 percent for Indians and 50 percent for the Chinese. The policy objective was as much the reduction of ethnic inequality as poverty, as much national unity as economic progress.

It turns out that Malaysia's record in reducing poverty is more impressive than in eliminating ethnic inequalities. In peninsular Malaysia, rural poverty rates fell from 58 percent in 1970 to 19 percent in 1990; urban poverty from 21 to 7 percent. In 1970, the poverty rates were about 65 percent among Malays, 40 percent among Indians, and 25 percent for the Chinese. In 1990, the official poverty rates for Malay, Indian, and Chinese groups were 21, 8, and 6 percent, respectively.

After 1990, somewhat more attention was paid to the alleviation of "hard core" poverty. Poverty rates using the national line fell from about 50 percent in 1970 to less than 3 percent by 2005, despite a setback in 1997-99 due to the financial crisis. This decline in poverty was largely the result of annual economic growth rates that averaged 8 percent in the 1970s, 6 percent in the 1980s, and 9 percent in the first half of the 1990s, and a successful effort to provide basic services such as education, health, housing, and sanitation in rural and urban areas, and in lagging and leading states.

While Malaysia's record of poverty reduction is impressive, it is not as stellar as that of Korea and Taiwan. With more natural resources and better initial conditions, Malaysia took a decade longer to end extreme poverty. Malaysia's task was complicated by ethnic heterogeneity; in Taiwan, by contrast, 95 percent of the population is Han Chinese. But

there are other reasons as well: a weaker bureaucracy, non-transparency in monitoring the effects of development programs on poverty, and an overemphasis on heavy industry at the expense of investments in agriculture and rural development. It may also be because Malaysia chose to redistribute assets differently, eschewing land reforms that would have benefited rural Malays and preferring programs that favor Malay ownership of new companies.

Thailand, Malaysia's neighbor to the north, was at the same time engaged in poverty reduction efforts of its own. Unlike the others, Thailand had never been colonized and had no hesitation in adopting policies to integrate into the world economy. It began by becoming the world's biggest exporter of rice, a position it held for more than three decades until surpassed recently by India and Vietnam. In the 1970s and 1980s, Thailand became an important part of the East Asian production networks for garments, computers, and automobiles, attracting FDI and generating exports. Tourism has also become a big part of its economy. Its export to GDP ratio has climbed to 75 percent. But despite an outward-oriented strategy based on exporting commodities and cyclically sensitive services such as tourism, Thailand did not have even one year of negative output growth between 1958 and 1996—a four-decade run during which GDP growth averaged 4 percent. Productivity growth was 80 percent of the increase in value added in agriculture between 1980 and 2002. Agriculture still accounts for almost 40 percent of employment.

During this time, Thailand taxed agriculture—especially rice and rubber—heavily, extracting more than 40 percent of value added during the 1970s. But spending on infrastructure and services made up for some of this. Malaysia had taxed agriculture half as much.

Thailand's education and health systems have not been as efficient in reaching rural areas. Its approach to social protection has been minimalist. But its family planning programs—one of the most effective public-private partnerships ever—are viewed by many as best practice. Fertility fell from 6 births per woman in the mid-1960s to less than 2 by 1996, a pattern that is similar to China's. Between 1981 and 1996, the $1.90-a-day extreme poverty rate fell from 19.6 to 2.3 percent. Despite being late in addressing weaknesses in rural education and health, $1.90-a-day poverty has been less than 1 percent since 2010. Thailand should be famous for ending extreme poverty.

Instead, it is infamous for starting the East Asian financial crisis in 1997. The eight years before the crisis were actually the best for poverty reduction. Using the official poverty line, the number of persons living in poverty fell by 11 million, from 18 million to 7 million. During the crisis, the ranks of the poor increased to about 8 million; that is, the crisis reversed less than 10 percent of the poverty reduction during the eight-year economic boom preceding the bust. Today, Thai exports span all sectors: agriculture (especially rice), industry (including garments, light manufacturing, and food processing), and services (especially tourism). It is difficult to think of a more labor-intensive set of economic activities.

In effect, Thailand compensated for weak social services and frugal welfare programs with perhaps the most pro-poor economic growth pattern in all of Asia. This meant that consumption poverty fell across the country. But it has led to a growing education backlog. In the mid-1990s, for example, fewer than half of Thai children aged 12-18 had completed some junior secondary education (grades 7-9). This was closer to a third in the poorer Northeast. Even today, Thailand does poorly in education, ranking behind even Lao PDR in some measures.

By contrast, Thailand's health outcomes—maternal and child mortality, for example—are among the best in the developing world. Since the crisis, Thailand has introduced a national health insurance scheme, and it appears to have been a big success.[5] It is called the "30 baht scheme"—visits to the doctor are supposed to cost less than a dollar. The scheme costs the government about 4 percent of GDP, but the coverage is nearly universal.

Indonesia

Despite these astounding successes in the neighborhood, it is Indonesia that gets much of the attention. This is understandable. Its population is as much as those in Korea, Taiwan, Malaysia, and Thailand combined. At $3.10-a-day, there are as many poor people in Indonesia as in the rest of East Asia outside China. In addition, its performance in the three decades before the crisis was spectacular.

The formula was essentially the same: labor-using growth and investments in human capital. Green Revolution technology and investments in rural infrastructure led to higher and higher farm productivity for a quarter century: agricultural total factor productivity growth on farms was 2.5 percent annually between 1968 and 1992. Later, high commodity prices helped farmers, and 40 percent of workers in rural areas escaped poverty while staying in agriculture. This dynamism spilled over to nonfarm rural jobs, which opened another pathway out of poverty for millions. Using Indonesia's national measure, poverty fell from 56 percent to 11 percent between 1968 and 1996.

Economic growth between 1967 and 1987 averaged almost 5 percent; between 1988 and 1997 it went up to 6 percent. Indonesia's literacy rates climbed from less than 60 percent to more than 90. The country also achieved virtually universal primary school enrollment. In the three decades since 1968, life expectancy increased by 20 years. Fertility rates fell from 6 to 3 births per woman.

But Indonesia was getting more attention for rampant corruption than for rapid poverty reduction. Indonesia got even more attention when the financial crisis triggered political upheaval, and poverty rose by a third. A massive restructuring of governance took place as democracy took hold. Social services were decentralized, but it was not done well. Geographic and social disparities in the quality of education, health, and sanitation widened. Under pressure to stem the increases in poverty after the crisis, Indonesia expanded social protection programs. The growth rate fell by about a third—from 6 percent before democracy to about 3.8 percent after. But it is the poverty rates that are most disappointing. Extreme poverty has been coming down since the crisis, but at a discouragingly slow pace. It took Indonesia more than a decade to get back to the poverty rates before the crisis.[6] In 2011, there were 33 million Indonesians living on less than $1.90 a day.

---

[5] The program was introduced in 2001. No individual would be required to pay more than 30 baht (about US$0.84 at the time) per visit for either outpatient or in-patient care, including drugs. Some costly procedures are not covered—cosmetic care, obstetric delivery beyond two pregnancies, organ transplant, chemotherapy, and renal dialysis. Each person must register with a public health unit—a health center or community hospital—and use it as a primary point of contact before getting a referral for secondary care at a provincial hospital.

[6] In 1996, Indonesia had revised the method for calculating poverty. While the old method yielded a headcount of 11.3 percent for 1996, the revised figure was 17.6 percent. By 1999, poverty had climbed to 23.4 percent. Seven years later, the poverty rate was 17.8 percent. Any way you look at it, Indonesia took more than ten years to get back to pre-crisis poverty rates.

By 1990, with the exception of the Philippines—where at 30 percent, extreme poverty rates at $1.90-a-day were essentially unchanged in the fifteen years before the East Asian crisis—the larger countries in the region had all engineered impressive reductions in poverty. China and Vietnam were latecomers to economic reform and poverty reduction, but they were making quick progress. Between 1981 and 1990, China's extreme poverty rate at $1.90 a day had come down from 88 to 67 percent, Vietnam's from 71 to 61 percent. At the time, though, these stories had not been told.

In any case, until the 1980s, poverty reduction was almost exclusively an East Asian phenomenon. In South Asia, only Sri Lanka had made a dent in poverty, halving extreme poverty from 19.3 to 9 percent. In India and Pakistan, the ranks of the poor had swelled by millions; in conflict-ridden Bangladesh and Nepal the stories were even more dismal. In Latin America, the only poor country that had made any progress was tiny Costa Rica, which had reduced extreme poverty at $1.90-a-day by half. Brazil, where more than 15 percent of the population lived on less than this, was the biggest disappointment. In Sub-Saharan Africa, extreme poverty rates had gone up in most countries between 1981 and 1990. In the Middle East and North Africa, led by the Arab Republic of Egypt and Morocco, poverty rates were cut from 8 to 6 percent. It would be fair to say that before 1990, only East Asia had made progress in reducing poverty at a pace that is remotely consistent with what is needed to get to 3 percent by 2030.

WDR 1990—The two-and-a-half-point strategy

While the high-performing East Asian economies—Korea, Taiwan, Malaysia, Thailand, and Indonesia—were becoming expert in getting rid of poverty, development experts were debating how best to do it. There were two competing views: the indirect route to reducing poverty, and a more direct one.[7] The direct approach requires redistribution within a country unless the funds come from donors. The indirect or growth-oriented route can also involve policies that help the poor, but the emphasis is on increasing their capacity to earn with the assets they already have. The distinction is one of creating income versus providing consumption.

The popular view has swung back and forth. In the 1950s and 1960s the indirect approach was in fashion. In the 1970s, as the ranks of the poor swelled, proponents of the direct approach began to be heard. But by the 1980s, because of the success with the indirect approach in East Asia and the lack of success in the rest of the world, the indirect approach was in fashion once again.

Perhaps the clearest and most practicable treatment of poverty is the 1990 World Development Report *Poverty*. WDR 1990 provided a systematic account of the experience of countries that had engineered big reductions in poverty during 1965-1987 and, based on their experience, proposed a strategy for reducing poverty. It reflected the consensus of the times, and emphasized the indirect route. Countries that

[7] Bhagwati (1988) provides a summary: "With the amelioration of poverty as the target, the policy instruments designed to achieve that target can be divided into two main classes: (i) the indirect route, i.e., the use of resources to accelerate growth and thereby impact on the incomes and hence the living standards of the poor; and (ii) the direct route, i.e., the public provision of minimum-needs-oriented education, housing, nutritional supplements and health, and transfers to finance private expenditures on these and other components of the living standards of the poor." Bhagwati makes it clear that effective antipoverty policy would likely involve a mix of these two approaches.

made the most progress had done so with a strategy with two equally important elements:

> "The first element is to promote the productive use of the poor's most abundant asset—labor. It calls for policies to harness market incentives, social and political institutions, infrastructure, and technology to that end.
>
> The second is to provide basic social services to the poor. Primary health care, family planning, nutrition, and primary education are especially important.
>
> The two elements are mutually reinforcing; one without the other is not sufficient."

During 1965-1987 in countries like Brazil and Pakistan growth had raised incomes but governments had failed to provide social services. In Morocco and Sri Lanka, primary education and health indicators were impressive but the ranks of the poor had swelled instead of shrinking because income growth had been anemic. But in Indonesia and Malaysia, where both parts of the strategy were implemented, the number of poor people had been cut in half, along with impressive improvements in health and education and other social indicators.

The best evidence in favor of the strategy came from Taiwan and Korea. Between 1965 and 1987, Korea's infant mortality fell from 62 to 24 per 1,000 births, the fertility rate fell from 4.9 to 1.8, and life expectancy at birth rose to more than 70 years. Secondary school enrollment for girls rose from 25 percent in 1965 to 86 percent in 1987, and for boys from 35 to 88 percent. Rigorous implementation of this two-part strategy—made potent by a swift reform that transferred more than half of all cultivated land to poorer households—had slashed extreme poverty to under 3 percent by 1990. Taiwan's story is similar.

The 1997-98 crisis would convince the Koreans that these two elements needed a complement: social insurance. The 1990 WDR had anticipated this.

> "Even if this basic two-part strategy is adopted, many of the world's poor—the sick, the old, those who live in resource poor regions, and others—will continue to experience severe deprivation. Many others will experience temporary setbacks owing to seasonal variations in income, loss of the family breadwinner, famine, or adverse macroeconomic shocks. A comprehensive approach to poverty reduction, therefore, calls for a program of well-targeted transfers and safety nets as an essential complement to the basic strategy."

The 2.5-point strategy proposed by the WDR can be seen as a policy package to increase the incomes and the assets of the poor, and to provide basic insurance to the poor against bad luck or the vagaries of the economy. It can also be seen as a public-private partnership: private initiative would increase the incomes of the poor, a blend of public and private actions would help them add to their assets, and government-sponsored safety nets would aid the most destitute and unfortunate. For the countries that had put this approach into practice in the 1970s and 1980s, it proved to be a winning game plan. During the next 25 years, as global extreme poverty rates continued to fall, it would display its durability (Figure 2).

Box 1: The 1980 WDR's two-point strategy

In 1973, just as the East Asian nations were starting to create what would be called an economic miracle two decades later, the World Bank's president, Robert McNamara, was expressing concern about what was happening all over the developing world:

"The basic problem of poverty and growth in the developing world can be stated very simply. .... Despite a decade of unprecedented increase in the gross national product of the developing countries, the poorest segments of their population have received relatively little benefit. Nearly 800 million individuals—40 percent out of a total of two billion—survive on incomes estimated (in U.S. purchasing power) at 30 cents per day in conditions of malnutrition, illiteracy, and squalor. They are suffering poverty in the absolute sense....

The data suggest that the decade of rapid growth has been accompanied by greater maldistribution of income in many developing countries, and that the problem is most severe in the countryside. There has been an increase in the output of mining, industry, and government—and in the incomes of the people dependent on these sectors—but the productivity and income of the small farmer have stagnated.

One can conclude that policies aimed primarily at accelerating economic growth, in most developing countries, have benefited mainly the upper 40 percent of the population and the allocation of public services and investment funds has tended to strengthen rather than to offset this trend."

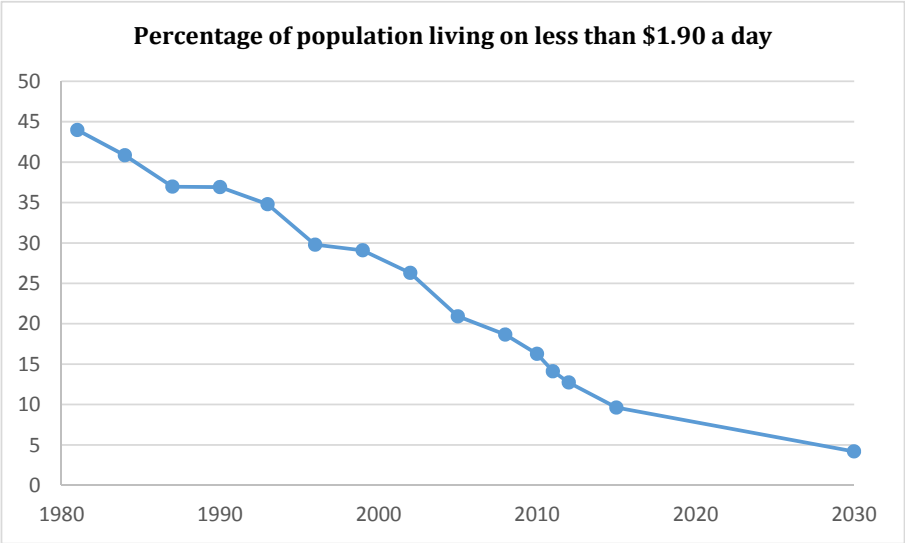
Reflecting McNamara's emphasis on the living standards of the bottom 40 percent of people in developing countries, the 1980 WDR took a good look at poverty and human development since the Second World War with the data it could muster. It essentially recommended a strategy with two important elements: policies to foster growth, especially in rural areas, and complementary policies for human development.

Compared with the 1990 WDR, it had one major difference: the implied unimportance of social insurance programs. WDR 1980 had exactly two paragraphs on transfers and subsidies (page 45). It concluded that while in industrialized countries the mainstay of antipoverty policy is income transfers and social insurance programs, the scope for such programs in developing countries is limited. The alternative approach was to subsidize goods and services that are especially important for poor people, such as food and fuel. This could help the poor raise their health and longevity, but such subsidies involved leakages to the non-poor and could be costly. In essence, the report discouraged developing countries from relying much—if at all—on such transfers and subsidies.

A subtler difference lay in the 1980 WDR's emphasis on fertility and population policies. Figure 5.6 on page 69 of the report, titled "Policy and Poverty" laid out the relationships between five principal aspects of economic development: Income, Nutrition, Fertility, Education, and Health. The WDR referred to the debate on family planning, and concluded that socioeconomic progress and family planning both affect fertility and are mutually reinforcing. Ten years later, WDR 1990 would make a similar judgment. But, influenced by the experiences in China and India, it recommended that the principal objective of family planning programs should be improved maternal health and mortality, not reduced fertility.

Sources: McNamara (1973) and World Development Report 1980.

Figure 2: Global extreme poverty since 1980



Source: Global Monitoring Report 2015/16 (World Bank)
Note: Numbers until 2012 are estimated and numbers for 2015 and 2030 are projections.

Post 1990 —Poverty reduction goes global

Between 1965 and 1990, poverty reduction was almost exclusively an East Asian phenomenon. Since then, it has gone global. The next quarter century saw continued progress in East Asia led this time by China, but more than a dozen countries in South America, South Asia, and Africa also began to rapidly reduce the ranks of people living in extreme poverty. The most successful ones, such as Vietnam, relied on the proven 2.5-point plan: a strategy that emphasized economic growth generally initiated by improvements in agriculture, big investments in education, health and family planning, and well-chosen social assistance programs.

Along the way, there has been innovation. Most noticeably, development specialists have discovered ways to design large-scale social assistance programs in ways that reinforce policies to foster labor-using growth and investments in human capital. There have been numerous experiments, and some of them have been successful. The especially promising experiments are new ways to provide cash transfers, such as *Progresa*[8] in Mexico and *Bolsa Familia* in Brazil, extending unemployment insurance to rural workers through programs such as the National Rural Employment Guarantee Scheme in India, and social assistance for the very poor such as China's *Dibao* and Ethiopia's Productive Safety Net Program. The costs of these programs range from 0.5 to 5 percent of GDP.

What some countries have also experienced is the effect of natural disasters—of droughts and disease, and storms and tsunamis. A major contributor to Ethiopia's success in cutting the extreme poverty rate by more than half may just be good fortune: clement weather conditions during the last decade. Bangladesh has been trying to help

[8] Mexico's *Progresa* program was later renamed *Oportunidades* and, more recently, *Prospera.* For simplicity, its original name is used throughout this paper.

people find better ways to cope with cyclones and climate change. In the 1990s and 2000s, the AIDS epidemic led to more than 33 million untimely deaths—about 22 million in Sub-Saharan Africa—along with untold human suffering and big economic losses. One estimate is that growth fell by between 2 and 4 percentage points during the peak of the epidemic in Southern Africa. The Avian Flu and Ebola viruses did considerable damage too. In making sure that calamities and pandemics do not reverse hard-won gains in reducing poverty, much more will have to be done between now and 2030.

Between 1990 and 2012, the largest reductions in the numbers of people living on less than $1.90 a day happened in China, Indonesia, and Vietnam in East Asia; India, Pakistan, and Bangladesh in South Asia; Brazil and Mexico in Latin America; and Ethiopia, Ghana, South Africa, and Tanzania in Sub-Saharan Africa. These 12 countries accounted for 1.1 billion of the 1 billion global drop in $1.90 dollar-a-day poverty between 1990 and 2012.[9] Several of these experiences are assessed below.

China and Vietnam

The biggest story in economic development and poverty reduction since 1990 is, of course, the People's Republic of China. The reforms under Deng Xiaoping completely transformed China (and, in due course, the world) and are now the stuff of legend. When it comes to big, quick and sustainable poverty reduction, these reforms have no peer. In 1981, 88 percent of all Chinese lived on less than $1.90 a day; in 2012, that ratio is less than 7 percent. In 1981, almost every Chinese person lived on less than $3.10 dollars a day; in 2012, the number is less than 20 percent. The magnitudes are stunning. In 1981, 880 million people lived on less than $1.90 a day. By 1990 it was less than 760 million, and by 2012 it was less than 100 million. What makes these numbers impressive is that between 1981 and 2012, China's population grew by a third—from a billion to more than 1.35 billion.

Between 1990 and 2012, the absolute number of extreme poor has been reduced by an annual average of 30 million a year. What made China so successful? The quick answer is that since 1980, China has implemented the 2.5-point strategy almost as well as Korea and Taiwan. Economic growth has been both rapid and labor-intensive—initiated by agricultural productivity increases, disciplined by a growing openness, and facilitated by investments in infrastructure; investments in human capital have been aided by efforts to reduce fertility and, more recently, by targeted transfers. But the pace of poverty reduction has waxed and waned over time, and these fluctuations provide valuable lessons for others.

Everyone seems to agree that the metamorphosis started in 1978. But then the narrative diverges. One version emphasizes China's sudden openness to trade—the special economic zones along the coast that attracted foreign direct investment and the domestic investments in infrastructure in and around these favored areas. The other version highlights the transformation of Chinese agriculture.

There were no sweeping purchases and redistribution of land, as there had been in Korea and Taiwan (the land had belonged to the State since the late 1940s). While there had been investment in rural infrastructure such as canals, agricultural productivity

[9] The ranks of the poor swelled in many countries. In six countries—Nigeria, Democratic Republic of Congo, Madagascar, Kenya, Malawi, and Angola—the increase in people living on less than 1.90 dollars a day between 1990 and 2015 added up to 100 million.

growth was measly—just 2.5 percent annually between 1952 and 1977. But starting in 1979, almost all farmland was allocated to individual farmers. The old tenure system—in which rural households worked to fulfill a quota for the collective—was changed to allow households to sell produce above a reduced quota in local markets. The reform was accompanied by liberalization of markets for farm outputs and inputs.

The results were phenomenal. Agricultural productivity growth tripled to 7.4 percent per year between 1978 and 1994. The annual disposable income for an average rural resident increased three-fold from 134 yuan in 1978 to 398 yuan in 1985. China was an agrarian economy at the time. Unsurprisingly, poverty fell dramatically. In fact, much of the poverty reduction in China can be traced to productivity growth in agriculture.

After the initial reforms in the early 1980s, though, agriculture moved down as a policy priority in the mid-1980s, as the focus shifted to urban areas. Still, township and village enterprises (TVEs) were established close to rural populations, and they absorbed the growing labor surpluses. In 1990-95, as the economy grew by almost 9 percent per year, the incomes of the poor rose just 1 percent annually. Poverty reduction slowed considerably in the decade after 1985.

China's farm policies were supplemented by the "open door policy" of trade liberalization and foreign direct investment. By 1990, China's average import tariff was 40 percent, less than half those of Bangladesh and India. In 2001, China joined the WTO and tariffs fell below 10 percent. In 1970, imports and exports added up to 5 percent of GDP; today it is ten times that as a share of GDP that is ten times larger than it was in 1970. One study estimates that more that 90 percent of goods and services are intermediated through competitive markets in China today.

China had one advantage over many countries with high poverty rates today: its human capital. Even in 1980, China's education and health levels were quite good. Life expectancy at birth was 66 years, compared to Brazil's 63 and India's 56. Its literacy rate was 66 percent, closer to Brazil's 75 than India's 41 percent, but its GDP per capita (adjusted for purchasing power) in 1981 was less than $550, compared with Brazil's $7,000 and India's $900. While the extreme poverty rate in China at $1.90 a day was 88 percent compared with Brazil's 24 percent and India's 49 percent, it was not because of China's human capital.

China's human capital stock was good enough for the hundreds of township and village enterprises to begin profiting from the liberalization of the economy. Unlike the large state owned enterprises, TVEs did not receive credit subsidies, so they used more labor and less capital. Employment in these enterprises grew by more than 100 million between 1978 and 1996; their share in China's value added increased from 6 percent of GDP to 26 percent.

In the 1980s, the extreme poverty rate in China was high even compared with poor countries—in 1981, only Cambodia, Burkina Faso, Mali, and Uganda had higher poverty incidence. But health and education standards were much better. In 1990, for example, under-five mortality was 54 per 1,000 births compared to 87 for middle-income countries, and life expectancy was almost 70 years, compared with 65 for middle-income countries. Adult literacy was 78 percent, much higher than the middle-income country average. China has since increased life expectancy to 75 years and adult literacy to 95 percent, and the average schooling level is now 9 years. A 2006 revised education

law made compulsory education free of charge by 2008. The gross secondary enrollment ratio has tripled from 31 percent to more than 90 percent. [10]

Employees of state owned enterprises always had access to medical care. In 1978, for example, more than 80 percent of the urban labor force was covered by the *danwei* system for state-owned enterprises. But even 25 years later, the proportion of rural people who had medical insurance was less than 13 percent. In 2003, the subsidized new Cooperative Medical Service was established. Within a decade, 97 percent of the farming population was covered.

China's efforts to improve education and health policies were made easier by relatively high levels of female literacy in the 1970s—literate mothers are a huge plus. But China has not relied just on female education to bring population growth down to manageable levels. China's family planning programs—nicknamed the one-child policy—were enforced widely between 1971 and 1980, and more strictly between 1980 and 2010. These programs have been controversial. What is not debatable is the quick decline in fertility between 1970 and 1980, from almost 6 to less than 3 births in both rural and urban areas. Studies have also found that the effects of family planning policies were greater for less educated women. Over time, increases in female education and wages were combined with penalties on having more children than allowed, leading to declining fertility even in the poorer provinces and among both the majority Han and ethnic minorities. By one measure, China averted 200 million births because of the one child policy, though this number is disputed. What is not disputed is that the policy enjoyed considerable support among the people.

China has transformed its traditional social relief system into a modern social assistance program. In 2008, about 23 million urban residents and 43 million rural residents were covered by a minimum livelihood guarantee scheme known as the *dibao*, paying 15-20 percent of the urban disposable income. Since by the late 2000s, extreme poverty rates in China were almost in single digits, this meant sizeable coverage, though by a social assistance scheme that might be frugal by OECD standards, especially in rural areas. Nevertheless, the *dibao* has helped to reduce extreme poverty, and not create major disincentives to work.

Over the years, China has also adopted multiple social insurance mechanisms, the most important of which are medical insurance, pensions, and unemployment and injury insurance for urban workers. A contributory pension system covers about 220 million urban residents; unemployment and injury insurance covers workers in larger urban enterprises. In 2009, a pilot program for rural pensions was initiated.

It would be fair to say, however, that the mainstay of the Chinese poverty reduction strategy has been rapid economic growth—first in agriculture triggered by better incentives and the liberalization of product markets, and then in manufacturing made possible by openness to trade and stable macroeconomics. China has always had a high savings rate, and steady increases in household incomes led to rapid increases in the

---

[10] Life expectancy in China is nine years longer than in India—a country that in 1980 had a higher GDP per capita than China. China has 66 percent more nurses and midwives and 160 percent more doctors than India. In China, the literacy rate for women aged 15-24 is 99 percent compared to less than 75 percent for India. The infant mortality rate per 1,000 live births is 12 in China, less than a third that of India. By 2005, China had reduced the extreme poverty rate to 19 percent, just twice Brazil's 9.6 percent and almost half of the 34 percent poverty rate in India.

savings available for investment. In 1994, a value-added tax was introduced, giving the central government a healthy revenue base. The Chinese economy has grown rapidly and steadily. With the exception of the period of unrest in the late 1980s, growth rates averaged almost 10 percent in the 1990s and 2000s.

But there has been a lot of variation around this average. While economic growth rates have been high and largely steady, the pace of poverty reduction has waxed and waned. This variation points to the importance of agriculture and rural development as the most potent way to reduce poverty. Poverty reduction was quickest in the first half of the 1980s and the mid-1990s, both of which were times of rapid agricultural productivity growth and/or high prices of farm products. Growth of agricultural output is estimated to be four times as potent in reducing poverty in China as the growth in industry and services. Absent China's relative neglect of agriculture and rural infrastructure, and policies that restrict mobility such as the *hukou*, the pace of poverty reduction might have been twice as fast.

It would then have been similar to what actually happened in Vietnam. Between 1990 and 2012, the number of Vietnamese people living on less than $1.90 a day has been reduced from 40 million to less than 3 million. Poverty at $3.10 a day is less than a quarter of what it was in 1990, falling from 55 million to 12 million. Despite its (brief) communist past, Vietnam's policies beginning in the late-1980s were uncannily similar to those of Korea and Taiwan.

The move to a market economy began with the *Doi Moi* (renovation) program of 1986. In 1988, the government introduced the Land Law. By 1990, more than 80 percent of the country's farmland was effectively privatized. The reform was initially similar to China's household responsibility system, involving land allocations and production quotas but no rights to transfer or sell their allocated land. But Vietnam soon abandoned production quotas and allowed a private market in agricultural output. A 1993 Land Law introduced official land titles and allowed for transactions through which usage rights could be legally transferred, exchanged, mortgaged, and inherited.

All this added up to one of the most radical land reforms: Vietnam went from communist collectives to family farms in less than a decade. The effect on poverty was immediate and immense. Between 1992/93 and 2004, the extreme poverty rate in Vietnam fell from 49 percent to 27 percent, and then to 3 percent by 2012. As a point of comparison, in China the extreme poverty rate fell from 88 percent in 1981 to 67 percent in 1990 and 32 percent in 2002.

Agriculture's share in GDP fell from about 30 to 20 percent during this time, though annual agricultural growth rates have averaged nearly 4 percent. Vietnam's trade has burgeoned to more than 150 percent of GDP, diversifying to include manufactures such as garments and electronics, farm products such as coffee and rice, and crude oil.

Vietnam has not relied much on social assistance programs. Social assistance in Vietnam including the government's flagship National Targeted Program for Poverty Reduction (NTPPR) covered just 1.2 percent of the population in 2008. Temporary antipoverty programs cover more people, such as the roughly 4 million pupils receiving fee exemptions, 4 million households receiving government loans, and 2 million people receiving help with business development and training. Total spending was just 0.2 percent of GDP, with benefits equivalent to less than 20 percent of the minimum wage—less than a third of the poverty line.

These are magnitudes reminiscent of Korea and Taiwan during the 1980s. Like Korea at a similar stage, Vietnam has also struggled recently to maintain macroeconomic stability. But looking back at its record of poverty reduction between 1990 and 2015, it is clear that Vietnam is already one of the world's most successful developers.

India and Bangladesh

Peace and independence came later to Vietnam than to the countries in Northeast Asia. It was only in the 1970s that hostilities between the United States and North Vietnam ceased. Within a decade of consolidating the country, Vietnam had started to engineer the fastest decline in extreme poverty ever seen so far. At the time that the conflict ended in Vietnam, South Asia was suffering its last major war. In 1971, East Pakistan became Bangladesh; there has not been a war between India and Pakistan since. A decade or so later, poverty reduction on the subcontinent began in earnest.

In India, this was initiated by a pickup in economic growth. Unlike China, where 1978 is seen as the year in which reforms were initiated, in India it is harder to pin the watershed. What is clear is that extreme poverty rates began to fall in the mid-1980s, but the total number of extreme poor began to decline only around 2000. The number of Indians living on less than $1.90 a day increased from about 400 million in 1981 to about 440 million in 2002. Since then, India has seen a big reduction in these numbers—to about 275 million in 2011 and less than 240 million in 2012.[11] Indeed, between 2008 and 2011, India was the biggest contributor to global poverty reduction—cutting the number of extreme poor by almost 120 million.

There are many reasons why India's poverty reduction has been slower and late in coming when compared with China. Three top contenders are India's relatively slower economic growth; its patchier performance in improving agricultural productivity; and critically, lower levels of and greater inequalities in human capital, especially with regard to the education of girls, the health of women, and the access to services for disadvantaged groups.

After a struggle with fiscal and trade deficits, low investment, and high inflation rates in the late 1980s, India managed to institute macroeconomic stability by the mid-1990s. Economic growth was aided by regulatory reforms triggered by the 1991 balance of payment crisis. Between 1995 and 2004, growth in GDP was averaging about 5 percent. Between 2005 and 2014, with the exception of 2009, it averaged more than 8 percent.

With China-like growth rates, China-like poverty reduction should have followed. But India has not done nearly as well in making its growth pro-poor. One reason for this is the relative neglect of agriculture. India's land reforms happened soon after independence in the 1950s, but were uneven across the states. Land redistribution was less extensive than the reform of tenancy laws, and studies have found both to be associated with increases in agricultural productivity and poverty reduction. Indeed, the benefits of the Green Revolution went mainly to states that implemented the new tenancy laws.

In general though, agriculture was not accorded the priority it should have in a country where, even in recent years, more than half of all people depend on farming, and almost

[11] At $3.10 a day the magnitudes are much greater though the trend is the same. $3.10-a-day poverty rose from about 570 million in 1981 to peak at almost 780 million people in the early 2000s, and has been coming down steadily since.

one of every four rural residents still lives in extreme poverty. The economic reforms of 1991 largely neglected agriculture, excluding policy areas such as rural infrastructure from the list of priorities. Agriculture's share in GDP has been falling rapidly since—from about 33 to 13 percent between 1990 and 2015—but the share of agriculture in employment has barely budged. Until 2005, the employment in agriculture grew in absolute terms. It is only since the mid-2000s that agriculture's share of total employment fell below half, and the numbers began to decline. Urban growth helped to reduce rural poverty in the early years, but the effectiveness of this indirect channel has weakened over time.

One reason for this may be India's lagging health and educational services, especially in rural areas. While China had an extensive infrastructure for social service provision at the start of its reforms, in India the access to education and health was unequal. Despite an improvement in the overall levels of education and health, it has remained that way. Health spending by both state and central governments has remained low, and indicators of access such as immunization rates have actually deteriorated in some states. States that have increased access to public education and health have done better in reducing poverty: a study estimates that increasing social sector spending by one percentage point of GDP leads to at 0.5 point reduction in poverty.

Fertility rates have been slower in coming down. In 1965, China and India had identical fertility rates of about 6 births per woman. By 1990, while China's fertility rate was down to 2.5, India's still was about 4. The difference can be attributed to slower improvements in the education and wages of women. India's family planning programs have had their share of controversy, but they have been credited with more than 150 million averted births.

India has had a long history of direct interventions to reduce poverty, including food and fuel subsidies, subsidies for agricultural inputs such as fertilizers and electricity, subsidized credit programs, and large-scale workfare schemes. The general consensus is that food, fuel and fertilizer subsidies have been fiscally burdensome—by one measure, costing more than 10 percent of GDP—and least cost-effective: while some of the poor have benefited, most of their benefits have gone to the non-poor. Far more effective has been the big workfare program introduced in 2006: the National Rural Employment Guarantee Scheme, which guarantees each rural household 100 days of unskilled wage work each year. The NREGS has been shown to increase consumption, the intake of proteins, and the accumulation of assets. With improved implementation, schemes like the NREGS can be effective in alleviating rural poverty in ways that reinforce the growth of agriculture and nonfarm employment. It is equally clear that general subsidies for food and farm inputs cannot. A better way would be to provide targeted cash transfers, but this requires administrative capacity that the government is still acquiring.

In short, India's approach during the last 25 years cannot be described as an application of the 2.5-point poverty reduction strategy. While economic growth has accelerated, agricultural productivity has not kept pace. While education and health indicators have improved, inequalities in access have widened. And while India has implemented innovative social assistance schemes to help the poor, it has not aggressively reallocated resources into these programs and out of less cost-effective general subsidies for fuel, food, and farm inputs. As of 2012, close to 230 million Indians still live on less than $1.90 a day, and more than 650 million on less than $3.10 a day. To eliminate extreme poverty by 2030, economic growth has to become more pro-poor, and social services have to be made to work for poor people. In India, it is not yet time for large-scale expansion of social insurance.

In neighboring Bangladesh, the poverty reduction strategy looks a lot more like the 2.5-point plan. Starting in the 1990s, extreme poverty has come down. In 1990, almost 75 million Bangladeshis—more than half of the country's population—lived on less than a $1.90 a day; as of 2012, it is less than 58 million. How did Bangladesh get almost a million people out of extreme poverty every year between 1990 and 2012? The answer lies in a combination of economic growth spurred by trade and investments in rural infrastructure, a big effort to improve the education of girls and maternal health, and interventions to improve family planning and access to credit, especially in rural areas. Compared with India, Bangladesh has relied less on big social assistance programs.

In the 1990s, GDP growth averaged about 5 percent annually. During the last decade, aggregate growth rates have averaged more than 6 percent. Real output per person has increased by almost 4 percent annually between 1990 and 2015. Agriculture's share of the labor force has fallen slowly from about 52 to 45 percent. Its share of GDP has fallen faster, as output in industry and services has grown twice as fast as in agriculture. But the rate of growth of agricultural output accelerated around 1990. Between 1965 and 1990, agricultural output grew by only about 1.6 percent annually. Between 1991 and 2011, it grew more than 3.8 annually. While farming output per person has not increased rapidly, output per unit of land has grown rapidly, aided by greater use of fertilizers, better varieties of rice, and improved irrigation. For example, rice yields increased from about 2.6 to 4.2 tons per hectare. Since more than 80 percent of Bangladesh's extreme poor depend on agriculture, the effects of higher yields on poverty were immediate.

The government made rural roads a priority; more than 2,500 kilometers have been improved. In addition, 630,000 rural homes were connected to the national grid while more than 750,000 households in remote rural areas have installed solar systems. Studies show that improved connectivity raises female employment by 50 percent, increases the share of farmers' nonagricultural assets sizably, and doubles the poverty reduction rate. For a population that is still 66 percent rural, high economic returns to improved rural connectivity should be unsurprising.

Growing trade and industry have been absorbing the labor being released as agriculture slowly modernizes. Exports of goods and services have risen from about 10 percent of GDP in 1990 to about 33 percent today. Labor-intensive manufactures such as garments have been the mainstay of Bangladesh's exports. They have also been a source of employment for increasingly educated women.

Bangladesh has also made remarkable progress in girls' education. Today, 98 percent of girls are enrolled in primary school, and the enrollment of girls in secondary schools has risen from 1.1 million in 1991 to over 6 million today. Assisted deliveries have helped reduce maternal mortality rates by 40 percent in just the last decade. 90 percent of Bangladeshi children receive vitamin A supplements and over 80 percent are vaccinated, and infant and child mortality have fallen by more than two-thirds since 1990. During this period, fertility rates have fallen from more than 4 births per woman to about 2.2, close to replacement levels. Annual population growth has fallen from more than 2.5 percent in 1990 to less than 1 percent today. The evidence from a well-evaluated family planning intervention in Bangladesh indicates that while such programs can help in increasing awareness of methods available to women, they have to be complemented with policies to increase the education of girls and the labor market prospects of women. Bangladesh appears to have done both, and has the results to prove it.

Bangladesh's geography makes it vulnerable to natural disasters and climate change. Bangladesh suffered 80 serious droughts, floods, storms, or earthquakes in 1993-2002

and 55 in 2003-2012, and accounted for more than half of all deaths from storms during the 1990s and 2000s. In 2009, for example, more than 50 percent of households recalled being hit by climate or health related shocks, but fewer than 2 percent reported social safety nets as one of the top four ways to deal with them. Saving and borrowing was much more important. Microfinance institutions had more than 34 million members in 2010. Evaluations have shown that long-term membership in these programs helps smooth consumption in light of shocks. Consumption is twice as stable for Grameen Bank borrowers as for others. In an economy as vulnerable to shocks as Bangladesh, organized microfinance through public-private partnerships such as the Grameen Bank should be seen as an important part of a comprehensive poverty reduction strategy.

The government spends about 1.5 percent of GDP on social protection, though this ratio can be as high as 2.6 percent in some years. There are many social assistance programs, but less than a third of people under the national poverty line receive benefits. Access to microfinance appears to be more effective in helping households cope with shocks.

Ethiopia and Ghana

Ethiopia has also been subject to the vagaries of the weather. Many of us grew up with images of Ethiopian famine and starvation. During the last decade, Ethiopia has had better weather. It has also instituted better policies. With economic growth rates topping 10 percent, poverty reduction has accelerated since 2000. The extreme poverty headcount ratio at $1.90 a day was 47 percent in 2002. By 2012, it was 29 percent. This achievement puts Ethiopia as one of the top performers in reducing poverty.

What accounts for Ethiopia's stellar performance and what are the big tasks ahead? The short answer is rapid economic growth especially through higher productivity in agriculture; quicker progress in education and health, especially that of women; and minimal but well-designed income support for the very poor—the Productive Safety Net Program, the largest such scheme in Sub-Saharan Africa.

Growth has increased and become more stable during the last decade. Between 1990 and 2004, growth averaged about 5 percent and there were four years of negative growth. Since 2004, growth has averaged more than 10 percent and has been remarkably steady. Ethiopia has also done better than other countries in Sub-Saharan Africa in converting growth into poverty reduction. Its success comes from a combination of good agricultural policies, investments in rural infrastructure, and a decade-long run of clement weather. Agricultural prices have been high, which have brought adversity for the most poor, but with an overall positive influence on poverty. Ethiopia has made large investments in roads, and this has helped improve access to markets.

Improved health (especially antenatal services for women) and education services during the last fifteen years have resulted in life expectancy increasing from 52 to 63 years, and stunting has fallen from 56 to 44 percent. In 2000, Ethiopia's contraceptive prevalence rate for modern methods was only 6.3 percent, which was the lowest in Eastern and Southern Africa. By 2011, the rate was 27 percent, and the fertility rate had fallen from 5.5 to 4.8. But despite a massive reduction from 70 to 50 percent of the share of people without any education, educational attainment remains low. And while fertility rates are falling, they are still greater than 4.

In 2005, the government introduced the Productive Safety Net Program (PSNP), aimed at helping poor households in food insecure areas. The government spends about 1 percent of GDP on the PSNP, which combines a public works scheme with an

unconditional cash transfer. Food insecure households with able-bodied adults are paid to work on public works projects, while those without able-bodied adults are given cash transfers. The program has been shown to increase agricultural input use, thus increasing output and helping to reduce poverty. Households that had access both to the PSNP and agricultural support packages were, according to Gilligan et al. (2009): "more likely to be food secure, to borrow for productive purposes, use improved agricultural technologies, and operate their own nonfarm business activities. For these households, there is no evidence of disincentive effects in terms of labor supply or private transfers." Research also shows that the PSNP directly reduces poverty.

The pattern of poverty reduction has varied over the years. Between 1996 and 2000, the impact of growth on measured poverty was small. Between 2000 and 2005, both urban and rural poverty fell impressively. Between 2005 and 2011, rural poverty continued to fall (by 20 percent) but urban poverty appeared to stall, and the severity of poverty actually increased. Ethiopia will have to remedy some deficiencies in its poverty reduction strategy but it is clear that even if it continues to implement the economic policies that it has during the last decade, it will be a major contributor to the global poverty reduction during the next decade.

As Ethiopia engaged in significant efforts to reduce poverty, another success story was emerging in West Africa. During the past 25 years, Ghana made substantial progress in poverty alleviation. Between 1990 and 2012, the share of the population living under $1.90 a day decreased from 61 to 13 percent. This represented a decrease in the number of people experiencing extreme poverty from 8.9 to 3.3 million. At $3.10 a day, the number of poor also declined, from 12.5 million to 7.9 million during the same time period. Ghana's strong economic performance allowed the country to reach middle-income status in 2010. These achievements took place despite a period of rapid population growth, which saw the country's population increase by 73 percent – to 25.4 million – during the same period.

Consistently high economic growth rates, especially in agriculture, played an important role in reducing poverty. Annual GDP growth hovered around 4 percent during the 1990s and steadily rose until reaching average rates of almost 8 percent from 2006 onward. The performance of the agriculture sector was particularly noteworthy: with average annual growth of 5 percent during the past 25 years, Ghana is among the top five countries in the world with the fastest agricultural growth over this period. The resurgence of cocoa production was perhaps the most significant development in this sector. An early world leader in cocoa, Ghana experienced a protracted decline in production throughout the 1960s and 1970s. Nevertheless, beginning in the 1980s, the government made an effort to reverse this trend. By the early 2000s, production had broken all records and Ghana became the third leading producer of cocoa in the world. The improvement in the welfare of cocoa farmers was also unmistakable: using the national poverty line, the poverty rate among these farmers decreased from 60 to 24 percent between 1991 and 2005.

How did Ghana revitalize its dwindling cocoa sector? First, it achieved macroeconomic stability and removed economic distortions, such as the overvaluation of its currency. Second, the government introduced reforms that brought a greater role for private markets along the cocoa value chain. Specifically, reforms eliminated the monopsony power of Ghana's cocoa marketing board (COCOBOD), which had previously acted as the sole buyer in the market, and allowed new purchasers to compete and offer better prices to farmers. Reforms also created a private market for the distribution of inputs. Finally, targeted public programs were conducted by COCOBOD with the purpose of boosting farmers' productivity. Key programs include a rehabilitation project that

replaced infected trees with new high-yield varieties and a free mass spraying program to protect against cocoa diseases.

Another important pillar of Ghana's poverty reduction strategy was improved education. This enabled the poor to avail of the new opportunities that emerged in the nonfarm economy as Ghana's agricultural sector continued to modernize. To this end, the government gradually increased education expenditure from 2.8 percent of GNI in 1991 to 6.9 percent in 2004 and maintained an average of 5.8 percent from 2005 onward. With more financial resources available to improve education, the government focused on building school infrastructure, providing free school uniforms and textbooks, and instituting a school feeding program to provide meals at public primary schools. In 2005, Ghana also instituted a capitation grant scheme, eliminating school fees for basic education across the country.

Education outcomes improved a lot as a result of these investments. The primary net enrollment rate nearly doubled from 45.2 percent in the early 1990s to 89.3 percent in 2013. The share of young people who are able to read and write in English increased from 17 percent in the early 1990s to 81 percent in 2012. This meant that, over time, the labor force became more educated: between 1991 and 2012, the proportion of workers with schooling rose from 59 to 76 percent. The provision of education was also aided by urbanization; as a result, the greatest improvements in educational outcomes can be found in the main cities of Accra and Ashanti. It is hard to overstate the importance of improved employment opportunities for poverty reduction – a study by Azevedo et al. (2013) estimates that growth in labor incomes accounted for almost 50 percent of all poverty reduction in Ghana between 1998 and 2005.

In recent years, Ghana has also introduced noteworthy social assistance and insurance programs that seek to support the poor and vulnerable, while strengthening human capital accumulation. In 2003, Ghana introduced the National Health Insurance Scheme (NHIS) law, mandating universal enrollment in public insurance. By 2012, 36 percent of Ghanaians were actively enrolled in these schemes. The NHIS is financed through subsidies, and a combination of taxes and premiums. Nevertheless, vulnerable populations, such as children, the elderly and the indigent, are exempt from these payments. The program is credited with increasing the utilization of health services, especially among women.

A second program, known as the Livelihood Empowerment against Poverty (LEAP) cash transfer, was introduced in 2008. This provides unconditional cash grants to households with elderly and disabled individuals, and a conditional transfer to households with orphan or vulnerable children subject to meeting school attendance and health visit targets. From a small pilot with 1,654 beneficiaries, this program has expanded to cover 74,000 households by 2013. Impact evaluations suggest that LEAP has had a positive impact on school enrollment and attendance figures.

To date, social assistance programs have remained small-scale and under-utilized, reaching a limited number of beneficiaries and accounting for 1.4 percent of GDP. Going forward, as poverty continues to decline and become more concentrated among specific populations, targeted social assistance programs should play a greater role in the government's poverty reduction strategy. While the northern regions in Ghana have experienced improvements in poverty and human capital, they continue to lag behind the rest of the country, highlighting the need for geographically-targeted interventions and more equitable investments in health and education. Finally, Ghana will need to address renewed concerns about macroeconomic stability and inflation in order to preserve the gains it has made.

Brazil and Mexico

Between 1990 and 2012, the number of people living in extreme poverty in Brazil fell from almost 31 million to less than 5 million. At $3.10 a day, poverty has been reduced from 54 million to 18 million. That millions are still living in abject poverty in a country that reached upper middle-income levels almost 50 years ago is testament to an ineffective development strategy. But the progress during the last two decades has lessons for countries in Asia and Africa. It shows that for countries that have reduced poverty to low levels, a combination of macroeconomic stability with more effective social policies can help end extreme poverty. But it also shows that without higher growth rates, it is difficult to sustain this progress. What exactly has Brazil done well, and what will it have to do better?

First, between 1994 and 1997, Brazil stabilized its economy. Inflation had stayed above 100 percent annually since 1982 going up to 2,500 percent in 1993. It was brought down to less than 10 percent by 1998. Between 1993 and 2004, using the national poverty line, the share of people living in poverty dropped by a third, from 33 to 22 percent. Brazil's experience with inflation is a reminder for others that poor macroeconomic management is one of the most anti-poor things a government can do.

Second, Brazil invested in agriculture. Brazil's support for agricultural research has helped both large and small farms. Despite the publicity that mega-farms have received, more than 80 percent of rural Brazilians continue to till small farms. Their productivity has grown due to better seeds and farming techniques made available by EMBRAPA, Brazil's agricultural research agency. But it is also clear that small farmers need more assistance than they have received and this has led to rural poverty remaining high, prompting an exodus to cities. Extreme poverty is evenly distributed between rural and urban areas in Brazil, unlike Asia and Africa where it is largely a rural phenomenon. While in China it was agriculture that led poverty reduction, in Brazil this role is played by services. Periods during which the service sector grows faster are associated with faster poverty reduction.

Third, Brazil has improved education and health services during the last two decades. Spending on education as a share of GDP doubled between 1994 and 1995, and has been maintained at about 5 percent ever since. Healthcare spending has averaged close to 9 percent of GDP, and coverage has been improving since the reforms in the early 1990s. Combined with social assistance programs that urged poor families to take advantage of these services, these investments have resulted in much better outcomes. Secondary school enrollment has increased from 50 percent to more than 80 percent in less than two decades. Life expectancy at birth is now 74 years, up five years since 1990. Maternal and infant mortality rates fell by about 4 percent every year between 2000 and 2009. These are impressive achievements, which have helped Brazil catch up with neighbors like Chile and Argentina.

The Brazilian government spends about 1 percent of GDP on non-contributory pension schemes for the rural and urban elderly. But Brazil is better known for its social assistance program, *Bolsa Familia*, a conditional cash transfer (CCT) program in which parents get a fixed monthly stipend of about $30 in exchange for enrolling their children in school and for health checkups. It covers 50 million low-income Brazilians, a quarter of the total population, and costs about 0.5 percent of GDP. In its decade of implementation, *Bolsa Familia* has helped to reduce the extreme poverty incidence from 12.7 to 4.9 percent—its contribution is estimated at about a quarter of the total reduction.

Today, with a tax to GDP ratio of 36 percent, rampant corruption, and collapsing public investment in infrastructure, Brazil is again flirting with economic disaster and risks a rise in poverty.

Brazil is not the only upper-middle income country that still has people living in extreme poverty. Its northern Latin American neighbor, Mexico, is facing challenges of its own. There has been unmistakable progress in poverty reduction over the past decades. Between 1981 and 2011, the share of people living under $1.90 a day fell from 23 to 3 percent. This has meant a reduction in the number of people experiencing extreme poverty from 16.8 million in 1981 to 3.5 million in 2011. But the progress has not been consistent. This trend masks instances when poverty reduction efforts have languished, including reversals during the mid-1990s and, most recently, in the 2011-2015 period. As such, Mexico's story is illustrative not only of effective actions against poverty, but also of problems that can occur when the 2.5 strategy is not fully implemented.

Mexico's inconsistent performance in poverty alleviation reflects, in part, fragilities in economic growth. Until the late 1990s, Mexico suffered various forms of macroeconomic instability and mismanagement. The 1980s were marked by a severe debt crisis—a result of large fiscal deficits, excessive debt accumulation (of about $100 billion), and a rapid decline in the price of Mexico's oil exports. As creditors demanded repayment, Mexico undertook a fiscal adjustment, resulting in curtailed imports and investment. Between 1982 and 1988, economic growth was virtually zero. The poverty rate had also risen from 23 percent in 1981 to 27 percent in 1984. In 1989, an agreement known as the Brady Deal was finally reached with Mexico's creditors, slashing Mexico's debt by $12 billion in discounted value terms. Debt relief brought many benefits: investment resurged, growth re-bounded to 4 percent, and the extreme poverty rate decreased to 9 percent by 1993.

But these results were short-lived. Mexico was headed into a new crisis in 1994. Mexico's reforms in financial markets liberalization combined with a fixed exchange rate regime led to a rapid accumulation of foreign capital inflows. While capital accumulated, institutions that provide oversight did not keep up. Between 1989 and 1992, portfolio investments grew from zero to $18 billion. Foreign direct investment grew from $2 billion to $4 billion per year after reforms. Nevertheless, investor confidence began to erode following bouts of political instability, declining foreign exchange reserves, and considerations by the government to abandon the peg. The investor panic that followed was severe: in two days, $5 billion was withdrawn. The result was a deep recession and an increase in the extreme poverty rate from 9 percent in 1993 to 14 percent in 1996. Mexico soon regained stability, but it was only in 2002 that poverty decreased to pre-crisis levels.

After the 2000s, growth became consistently positive, albeit slow. Between 2002 and 2015, Mexico's GDP grew at an average rate of 2.4 percent. During this time, the rural poor have been able to diversify their incomes by taking part in the nonfarm economy, though productivity remained slow among smallholders. In urban areas, slow productivity growth constrained the availability of employment opportunities in productive, labor-intensive sectors, such as manufacturing. Instead, the poor relied increasingly on the informal and self-employed sectors of the economy. While the introduction of NAFTA led to an initial export surge, low productivity has constrained export growth. Several factors hampered Mexico's productivity, including inadequate investments in infrastructure, lack of competition, inefficiencies in the labor market and a costly business environment. Despite these challenges, poverty reduction continued, aided by rapidly expanding social services, transfers, and remittances. While the

extreme poverty rate decreased to 3.8 percent by 2008, progress might have been faster with greater growth.

With the establishment of the Law of Social Development in 2003, Mexico increased the attention to social policies and service delivery. As part of the law, the government strengthened the decentralization of resources and responsibilities to municipalities, and committed to not reduce social spending in real terms in any year. As such, education spending more than doubled from 2.4 percent of GDP in 1991 to 5 percent from 2009 onward. Health expenditures also increased, albeit more slowly, from 2.1 percent in 1995 to 3.3 percent in 2014. Following decentralization, access to social services increased, especially in poor rural areas. The infant mortality rate (per 1,000 live births) fell from 35.4 in 1991 to 11.3 in 2015. Life expectancy increased from 71.2 to 76.9 years. Completion rates in primary school grew from 86.4 percent in 1991 to 102.8 percent in 2013, while in secondary school, completion rose from 57.3 to 80.1 percent.

These efforts were complemented with social assistance programs that specifically targeted the poor. The most renowned of these is *Progresa*, a conditional cash transfer (CCT) program for poor families who receive support as long as they maintain investments in health and education. Intended to replace inefficient and badly targeted subsidies, this CCT was designed with clear targeting criteria and a big data collection effort. Initially a small program with 300,000 rural beneficiaries, *Progresa* grew to cover as many as 5.8 million families (over 20 percent of the population) in both rural and urban settings by 2011, distributing over $4.5 billion in transfers. In 2014, the program was renamed *Prospera* as it introduced new components which link beneficiaries to vocational training opportunities and financial services. *Progresa* has been subject to rigorous impact evaluations, which found positive impacts on long-term consumption, food intake, school enrollment, and health visits. Since its launch, Mexico has continued to develop a culture of evaluation in social programs by establishing a National Evaluation Council and budget laws to integrate the results of evaluations into budgeting decisions.

It is clear that social assistance programs have helped Mexico achieve gains in poverty reduction during a time of slow economic growth. It is also clear that poverty is hard to end when all components of the 2.5-point strategy are not implemented together or in ways that complement each other. The sustainability of social investments and insurance rely on the resources generated through growth. In recent years, Mexico's growth has remained fragile and, not surprisingly, the number of people living under $1.90 rose from 3.5 million to 6.4 million between 2011 and 2015.[12] Efforts to boost productivity and employment in labor-intensive sectors will be crucial for ending poverty in Mexico.

A quarter century of global poverty reduction

Looking back at what has happened during the last two decades, the 2.5-point strategy appears to have withstood the test of time.

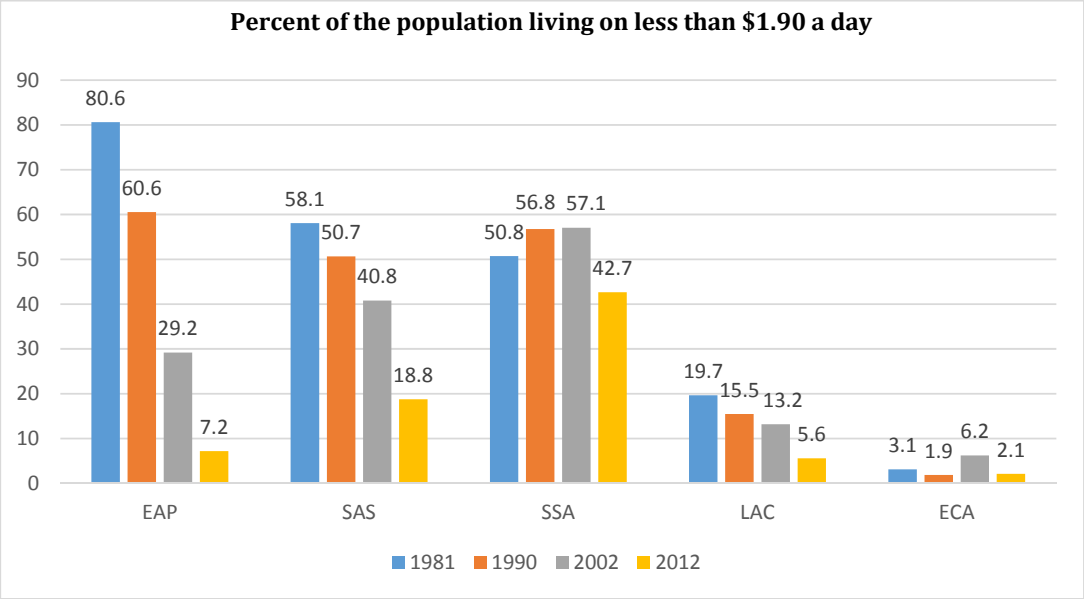
In 1990, at about 50 to 60 percent, extreme poverty rates were essentially the same in East Asia, South Asia, and Sub-Saharan Africa (Figure 3). Mainly because of China, extreme poverty in East Asia was halved between 1990 and 2002, and more than halved again by 2012. Today, just about one of every ten East Asians lives in extreme poverty, down from almost six of every ten in 1990. In South Asia, mainly because of India, extreme poverty rates have fallen but not so much—from just over half in 1990 to about

[12] The poverty estimate of 2015 for Mexico is projected following the methodology of PovcalNet.

a fifth. In Latin America, since 2000, the same strategy—complemented by expansions in social insurance—has led to extreme poverty being cut in half. In Sub-Saharan Africa, extreme poverty rates have stayed much the same and the ranks of the extreme poor have doubled because the population has doubled. In 2011, 24 of the 25 countries with the highest extreme poverty rates were in Africa (the exception was Bangladesh).

Many East Asian countries implemented the 2.5-point strategy to varying degrees but with considerable success. Most notably China, with economic growth rates of close to 10 percent, land reforms that improved the incentives for and the productivity of farmers, and sizeable investments in education and health, has reduced poverty below $1.90 a day from 88 percent in 1981 to 6.5 percent in 2012. Openness to trade and investments in infrastructure have led to the growth of labor-intensive manufacturing. Vietnam's more comprehensive land reforms made its policies even more like those of Korea, and cut extreme poverty from 49 percent in 1993 to less than 4 percent in 2012.

Figure 3: Extreme poverty rates since 1980, by region



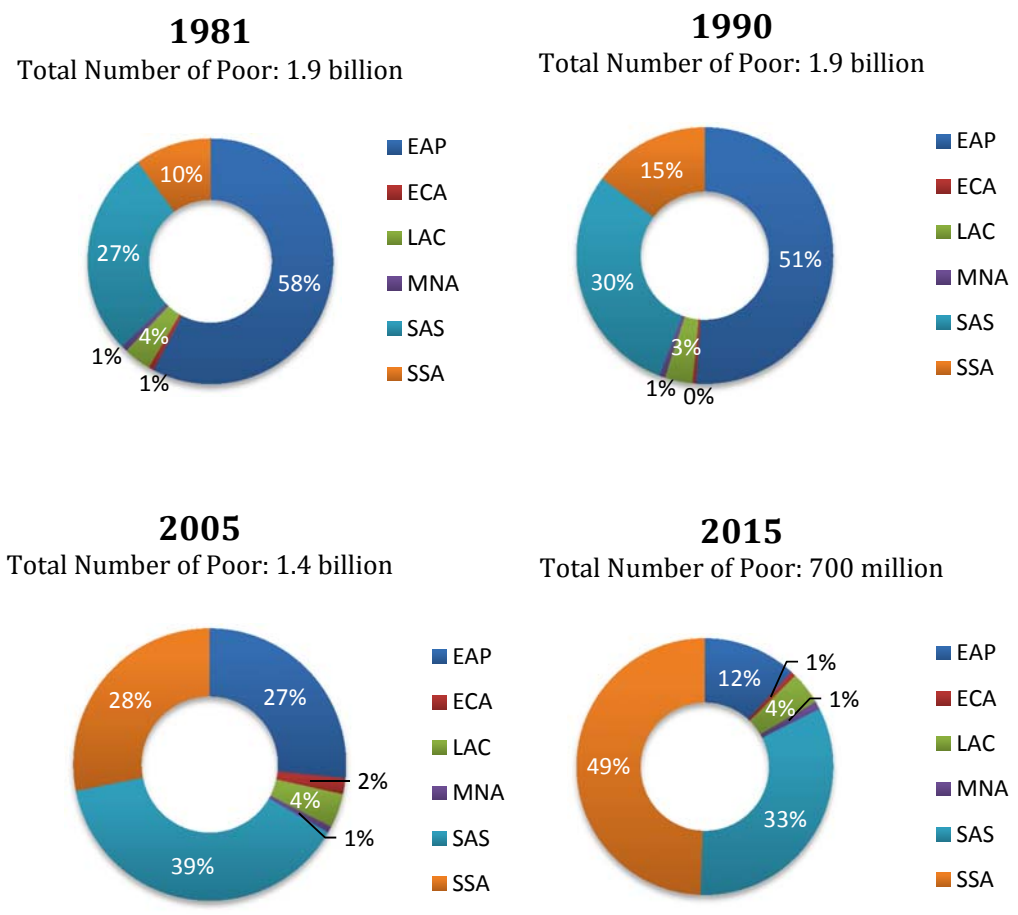
In South Asia, led by a growing trade in services, India's GDP growth rates of between 6 and 7 percent have helped it reduce the extreme poverty rate from 47 percent in 1994 to less than 20 percent in 2012. This is less impressive than East Asia, in large part because of the relative neglect of agriculture and rural infrastructure. It is also because of primary health care shortfalls, and secondary enrollment ratios that barely reach 50 percent.

Even in Africa, countries that have emphasized broad-based growth (with special attention to agriculture) and investments in human capital (especially health and education) have halved extreme poverty during these two decades. In Ethiopia, with annual growth rates of more than 10 percent since 2005, headcount poverty rates were almost halved between 1990 and 2010 (from more than 60 percent to less than 40 percent). Primary school enrollment ratios have increased from less than 25 percent to more than 80 percent, and rural access to safe water is getting close to 50 percent. Ghana has done well too. Annual GDP growth has hovered around 8 percent since 2006. Under-five mortality rates decreased from 54 to 19 deaths per 1,000 live births between 1998 and 2014. Children today are expected to live two more years than children who

were born ten years ago. Extreme poverty rates have fallen from 61 percent to 13 percent between 1990 and 2012.

The number of people living under $1.90 a day fell from almost 2 billion in 1990 to about 700 million in 2015—a fall in the global headcount ratio from more than 40 percent to less than 10 percent.[13] Besides their numbers, the geographic distribution has changed. Back then, more than 80 percent of the world's extreme poor were in East and South Asia. Today, 82 percent live in South Asia and Sub-Saharan Africa. This is familiar stuff (Figure 4).

Figure 4: Distribution of the world's extreme poor ($1.90 poverty line)



Source: Global Monitoring Report 2015/16 and PovcalNet in August 2016.
Note: All numbers for MNA region are projections.

Less appreciated perhaps is that, much as it was in 1973 when President McNamara announced the World Bank's goal of reducing absolute poverty, 70 percent of the world's extreme poor still live in rural areas. This is despite the fact that half the world is now urban, up from a third back in the 1970s. In 2020, half the people in the

[13] The 2015 figures for global extreme poverty are statistical projections. The most recent estimate of the global extreme poverty rate is 12.7 percent for 2012.

developing world will be urban. But it is likely that about two-thirds of the extreme poor will still be living in villages. For the rapid elimination of poverty, a quicker urbanization will be necessary. But it will not be sufficient. Even in 2030, 40 percent of the developing world's population will likely be rural. Global extreme poverty cannot be cut to 3 percent unless rural poverty rates are reduced to single digits.

This is likely to happen in many developing countries, but not in those mired in conflict or fragility. By 2020, more than half of the world's extreme poor will be in conflict-affected countries or relatively fragile states. With the exception of Afghanistan, all such countries will be in Sub-Saharan Africa.

2015-2040—A three-point strategy to end extreme poverty

The record of poverty reduction in the 1990s and 2000s validates the broad elements of the strategy proposed in the 1990 WDR. But with the reduction of global extreme poverty from more than half of the world's population to less than a fifth, and with the profile of the global extreme poor changing rapidly, the strategy—if it is to reduce extreme poverty to less than 3 percent by 2030—has to be refined. Our contention is that the third component—social insurance—should not be just a supplement to the first two components, but a full complement. But for this to make the strategy more potent rather than less, social insurance has to be designed and implemented in ways that make the three components of the strategy mutually reinforcing. Experiments in public policy and advances in information technology during the last 25 years have provided the knowhow needed to do this well.

There are three reasons for adopting a 3-point strategy.

1. *The need for social assistance in every country***.** With poverty reduction, those left in poverty are increasingly those that are hardest to reach—people living in remote areas, ethnic minorities, or other disadvantaged groups who face multiple obstacles. Even in dynamic East Asian economies and wealthier Latin America, there remain obstinate pockets of poverty seemingly resistant to the policy cocktail of labor-intensive growth and investments in human capital. For them, additional instruments are needed. This was the supplement recommended in the 1990 World Development Report, but we now know how to design social assistance in ways that helps economies grow and aids investments in human capital. Think of conditional cash transfers.

2. *The utility of social insurance in successful developers*. The 3-point strategy may be most needed in countries that have reduced extreme poverty to low levels. Here the challenge becomes one of how to protect these gains. Take Indonesia. By 2011 it had reduced poverty to 33 million people, about half the number in 1999. But over twice as many people (some 73 million) were vulnerable to falling back into poverty—they were living on more than $1.90 a day, but less than $3.10 a day. And many do indeed slip down into poverty due to poor weather, ill health, or unemployment; surveys show that one of every other poor person in Indonesia was not poor the year before. Social insurance becomes a necessary third component to policies that enable labor-intensive growth and investments in human capital, but it has to be designed to complement (or at least not eviscerate) the first two. If designed in ways that discourage the use of labor—for example, if social insurance is financed by taxes on labor use—it will weaken the first component of the strategy by making economic growth less labor-intensive even when labor is abundant.

Think Italy and Spain since the crisis. If social insurance takes up so much of the government budget that not much is left for education and infrastructure, then it will not help in ending poverty. Think Brazil since 2002.

3. *The imperative of protection against pandemics and disasters*. A 3-point strategy is also desirable in developing countries that are most vulnerable to pandemics and large-scale natural disasters. These also tend to be the poorest countries, with the lowest capacity to respond to such massive shocks. These events cause enormous human and economic loss, reversing progress in poverty reduction. A number of trends suggest these risks will feature prominently in the future. Rising temperatures and climate change set the stage for greater frequency and severity of extreme weather events. Greater openness among countries can also facilitate the spread of disease through travel and trade. These risks call for policy makers to take actions that increase their countries' preparedness to shocks and enable a swift response in event of a crisis. Global risks require global cooperation.

What does the three-point strategy look like? First, as in the WDR 1990 strategy, it requires that economies *grow in ways that raise the labor incomes of the poor.* This means increasing labor productivity in *agriculture*, which employs a large fraction of the poor. It means investing in the right *infrastructure* to support labor-intensive growth. And it means opening up to *trade* to make sure countries build on their strengths and use their resources efficiently. But none of this can happen if there is no foundation of *macroeconomic stability* to build on.

Second, the 3-point strategy requires that countries *invest in the human capital of the poor* by providing access to key human development inputs such as *education*, *health, and population* programs, safe *water and sanitation*. This is particularly important for children, as their opportunities early in life greatly determine their future lives as adults. Moreover, improving opportunities for the poor is not just about the coverage of services, but also about quality of services. It is not enough to get kids to school: teachers need to show up; textbooks need to arrive; and kids need to be taught in a way where they learn. Health clinics need to be staffed with trained personnel, and able to provide adequate services if people are going to use them. All this requires a foundation of effective, accountable and transparent service delivery mechanisms and institutions – in other words, effective *governance*.

Third, the 3-point strategy requires programs *that insure and protect people from the worst of destitution and from falling (deeper) into poverty when hit by shocks*. These programs can help families avoid irreversible losses and prevent them from having to make decisions, such as pulling a child out of school, with costly long-run consequences. But they have to be designed in ways that complement the first two points. They need to be consistent with labor-intensive growth and they need to support investment in the human capital of the poor. After twenty years of learning from the use of social protection programs in developing countries, we now know how to so this. There are three different sets of programs that are needed:

- Non-contributory *social assistance programs* (or social safety nets) targeted to the chronic or extreme poor to protect them from destitution and promote investments in their children's human capital.
- *Social insurance* programs aimed at protecting a broader segment of the population from falling back into poverty as a consequence of shocks. These may be individual shocks, such as illness or unemployment or the risk of poverty in old age, or more systemic shocks, such as droughts or economic crises.

- *Global insurance* mechanisms that can help countries cope with the impact of massive natural disasters that affect more than one country (such as the 2004 Indian Ocean Tsunami) or pandemics (such as SARs or more recently the Ebola epidemic).

In order to make effective use of these programs, governments need to develop information systems that permit the timely collection and analysis of relevant data. Information systems enable governments to obtain a thorough and dynamic understanding of poverty, making it possible to identify populations experiencing chronic forms of poverty, as well as those that are vulnerable to risk. This is essential for the effective implementation of social assistance and social insurance programs. Information systems also enable governments to monitor for potential pandemics and natural disasters, identify areas that are at high risk, and take preventative action in response to these global shocks. As a summary, Box 2 lists the components, priorities, and prerequisites of the 3-point strategy.

Box 2: Components, priorities, and prerequisites of the three-point strategy

1. Grow—Policies to foster labor-intensive growth
   Objective: Promote productive use of labor
   Priorities: Agriculture, Trade, Infrastructure
   Prerequisite: Macroeconomic Stability

2. Invest—Policies to catalyze investments in human capital
   Objective: Deliver basic social services
   Priorities: Education, Health & Population, Water & Sanitation
   Prerequisite: Good (enough) Governance

3. Insure—Policies to reduce vulnerability to risk
   Objective: Help the destitute and protect the vulnerable
   Priorities: Social Assistance, Social Insurance, Climate Action & Pandemic Response
   Prerequisite: Information Systems

Grow—Policies to foster labor-intensive growth

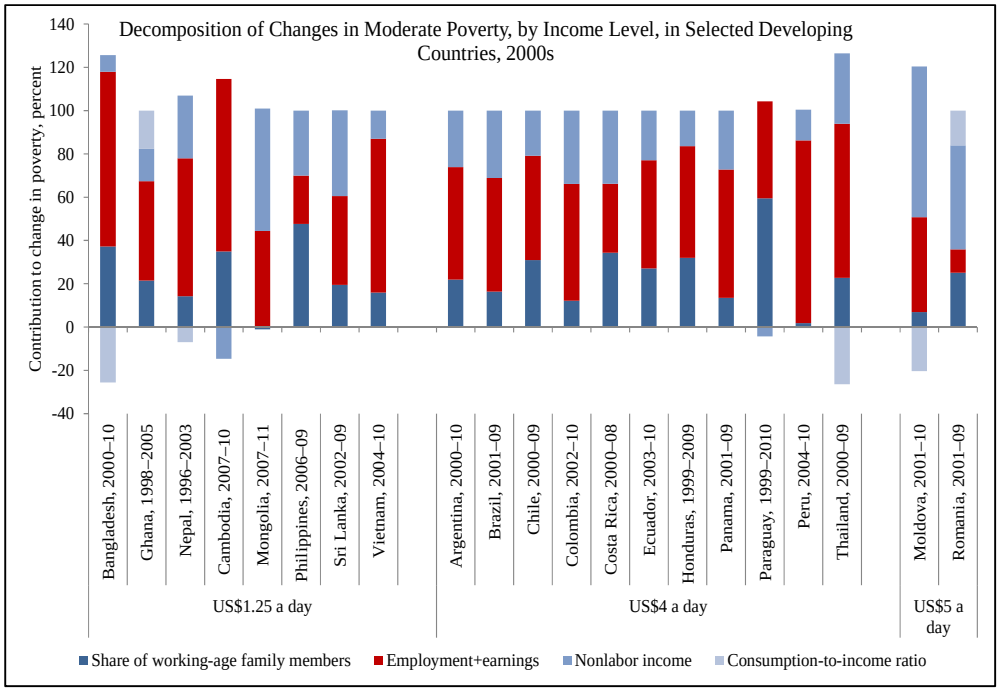
The most important driver of poverty reduction is growth in labor incomes. This was clear from the experience of the East Asian tigers in the 1970s and 1980s, and it is clear from the experience of most developing countries during the 1990s and 2000s. A study of successful poverty reduction episodes in developing countries during the 2000s, for example, finds that labor income growth—due to the combined effect of growth of employment and earnings—accounted for more than 50 percent of the poverty reduction in the majority of the countries studied (Figure 5). In some cases, such as Peru, it accounted for more than 80 percent of all poverty reduction during the 2003-2013 decade. If poverty is to be reduced at the rate needed to reach the 3 percent target by 2030, governments need to institute policies that, first and foremost, lead to higher labor incomes for poor people.

Raising the labor incomes of the poor requires the same true and tested approach that was used in China, India, Vietnam, Thailand, and other countries that have reduced poverty: foster agricultural growth through the combination of good policies and investments, encourage economic discipline through openness to trade, and build the infrastructure needed to increase productivity and facilitate access to markets.

Agriculture. Despite growing urbanization in developing countries, poverty continues to be a largely rural phenomenon. Three-quarters of the poor in developing countries are located in rural areas.[14] Among the 3 billion rural inhabitants in developing countries, 86 percent rely on agriculture for their livelihoods. Consequently, this sector has a critical role to play in poverty alleviation efforts. The 2008 World Development Report found that GDP growth in agriculture is at least twice as effective in reducing poverty as non-agricultural growth.

Agricultural productivity increases are not only a source of economic growth but also catalyze the development of related industries—accounting, in some cases, for about a third of the GDP—and the broader nonfarm economy. The linkages between agriculture and industry illustrate the importance of agricultural growth as a labor-intensive process. Productivity growth in agriculture keeps food prices from rising, resulting in low wages that contribute to the competitiveness of non-agricultural sectors. Agricultural growth is also known to generate multiplier effects on the rest of the economy. It is not surprising that the most successful development stories begin with agriculture.

Figure 5: Rising labor income is the main driver of poverty reduction



Source: Figure 1.1 (page 3) in Inchauste and J. Saavedra-Chanduvi, (2014); using Data from SEDLAC, various years; FAO n.d.; and national household surveys

At the same time, the state of agricultural modernization varies greatly across countries. Accordingly, in order to leverage the agricultural sector for labor-intensive growth and poverty reduction, it is important to tailor policies to align them with a country's context. The 2008 WDR provides a useful typology:

[14] The 2008 World Development Report *Agriculture for Development* calculates poverty based on an international poverty line of $1.08 in 1993 purchasing power parity dollars.

- In *agriculture-based countries*, agriculture is a significant contributor to an economy, accounting for 29 percent of GDP and 65 percent of the labor force, on average. In these countries, a majority of the poor (about 70 percent) are concentrated in rural areas. This group of countries accounts for 417 million rural individuals located predominantly in Sub-Saharan Africa.
- In *transforming countries*, the significance of agriculture in an economy is diminished, representing 13 percent of a country's GDP and 57 percent of the labor force, on average. Nevertheless, poverty continues to be highly rural, accounting for 82 percent of the poor. The rural population in these countries amounts to 2.2 billion individuals, who are mostly located in South East Asia and the Middle East and North Africa.
- In *urbanized countries***,** agriculture plays an even smaller role in the economy, contributing, on average, to 6 percent of GDP and 18 percent of the labor force. In these countries, poverty is mostly urban; however, a considerable fraction of the poor (about 45 percent) remain in rural areas. The rural population amounts to 255 million individuals, located mainly in Latin America and the Caribbean and Europe and Central Asia.

For agricultural-based countries, agriculture must act as the principal engine of economic growth. Consequently, the policy objective for these countries is to boost the agricultural productivity of their smallholder farmers. Experiences across countries reveal a range of lessons for doing this. First, it is important to expand access to assets, which act as the main determinant of participation in agriculture for rural inhabitants. This includes strengthening the functioning of land markets, ramping up investments in irrigation, and enhancing the delivery of health and education for rural areas. Korea, Taiwan, and Ethiopia took such steps to great effect. Second, improve the functioning of markets. This includes reducing transaction costs to facilitate farmers' access to markets, improving the efficiency of input delivery mechanisms, bringing credit markets to rural areas, and supporting producer organizations to achieve greater market power. Ghana's success with cocoa illustrates how valuable market-oriented reforms can be. Third, agriculture has to be moved to the top of the policy agenda. Burdensome taxation of agriculture (as in Thailand) limits its potential, while greater R&D investments (as in Brazil) are required to develop new technologies that boost productivity.

In transforming countries, the objective is to facilitate the re-allocation of surplus labor from agriculture into other activities to reduce rural poverty. There are many pathways that are available to the rural poor to escape poverty, including employment in the rural nonfarm economy, movement toward higher value agricultural activities, and rural-urban migration. Several actions can be undertaken to unlock these pathways. Fostering a vibrant nonfarm economy is at the center stage of any strategy. Experiences highlight the important role of connecting rural areas to urban economies by reducing transaction costs, through investments in infrastructure or the provision of market information services. China has been successful in this regard through the establishment of township and village enterprises, which brought industry closer to rural populations. At the same time, maintaining agricultural productivity is important for the emergence of related industries, including food processing and transport. Finally, additional interventions can support people as they exit agriculture. Labor policies that restrict movement from the farm to towns and cities (such as China's *hukou*) should be avoided. Instead, investments on education and vocational training could be emphasized to equip farmers with the skills to access nonfarm employment opportunities. Safety nets, such as modest pensions, can also play a role by encouraging the transfer of land ownership.

For urbanized countries where agriculture has been largely modernized and poverty has become mostly urban, agriculture continues to play a valuable role in reducing the entrenched poverty that remains in rural pockets. The policy goal for urbanized countries is to connect the rural poor to the opportunities that have been unlocked by the modernization in food markets. On the one hand, rural farmers have the opportunity to become suppliers to supermarkets; this involves helping producer organizations meet the scale and the standards required by modern food markets, and helping smallholders participate in such organizations. On the other hand, the rural poor can opt for wage employment opportunities at large-scale agribusinesses that cater to domestic or export markets. Chile has benefited from just such an approach, taking advantage of an export boom in agro-processing to create jobs and decrease poverty.

Trade. Agricultural productivity ignites a process of economic growth and industrial development that offers countries new opportunities for augmenting income growth through trade. The most successful development examples since 1965, especially in East Asia, relied heavily on trade through labor-intensive, export-oriented manufacturing. This would not have been possible without a prior revolution in agricultural productivity that kept food prices in check and wages competitive. It is no surprise that rapidly-growing economies in East Asia, including Korea, Taiwan, and China, implemented policies to boost agricultural productivity through various forms of land reform, which preceded their industrial revolutions. These conditions helped set the stage for effective trade strategies that proved to be a fundamental ingredient of their successes with economic development and poverty reduction.

There are several mechanisms through which trade contributes to economic development. Exports are a crucial source of foreign exchange and, hence, are necessary for the purchase of valuable imports, such as new technologies and inputs, which boost a country's overall productivity. Openness to trade also increases domestic firm productivity through the competition that stems from bringing in more imports, as well as the competition that exporters face in foreign markets. The opportunity to reach large export markets, in turn, leads to economies of scale, specialization in production, and innovation. These effects set the stage for firm-level efficiencies, growth, and ultimately, employment generation.

The experiences over the last 50 years provide us with several valuable lessons on successful trade strategies. First, it is clear that the impressive performance of East Asian economies rested on the development of effective export platforms. These platforms often took the form of enclaves within an economy, creating an appropriate enabling environment for foreign multinational companies and exporters. Reducing production costs is an imperative for competitive exports and enclaves offer a convenient way of doing so, as it is typically easier to improve infrastructure, increase security, and reduce red tape within a narrowly defined area. China was active in pursuing this approach to trade, creating special economic zones along the coast, leading to a surge in exports and creating millions of new jobs in the process.

Second, East Asia was also successful in exploiting the synergies between access to world markets and foreign direct investment. Within East Asia, an increasing number of regional trade agreements were negotiated (as many as 24 between the 1997-2007 decade alone), removing restrictions to the flow of foreign investment. This proved to be critical for the formation of regional production networks, in which the bulk of trade became increasingly made up of components to be assembled in a neighboring country, with foreign affiliates playing a substantial role in driving this process. Regional production networks broadened the opportunities for trade that were available to East Asian countries. This was used to great effect in Thailand, for example, where openness

to FDI enabled the country to take part in production networks, spanning industries such as garments and even automobiles. Today, more than half of East Asia's trade takes place within the region.

Third, experience shows that successful trade strategies are also supported by complementary trade policies. Maintaining a stable exchange rate is beneficial for trade as it eliminates currency risk, while avoiding exchange rate overvaluations is crucial for keeping exports competitive. Furthermore, reducing tariffs on imports is also beneficial to exporters, as this keeps the cost of inputs in check. Imports may also embody technological features that result in productivity gains. East Asia was not entirely open to imports at the outset of its export-oriented strategy. For example, during the 1980s, tariffs approached 30 percent in Korea and 50 percent in Thailand. Nevertheless, these protectionist measures were largely reversed in the 1990s to the benefit of exporters.

Finally, export promotion in East Asia was facilitated through a broader framework of institutional support. Most governments that engaged in export-promotion activities relied on a system of export targets and incentives as a means of expanding trade. Rewards – often in the form of preferential access to credit and government subsidies – were distributed through a system of contests to best-performing exporters. These subsidies were often market-tested and government support was granted to the extent that a firm continued to perform well in export markets. Other institutions, such as government boards, were established to facilitate market development in foreign countries in an effort to give greater visibility to a country's exports and boost trade. It is worth noting that some of these actions may not be viable in the current global trade context as governed by the WTO. Nonetheless, the lesson remains that complementary institutions, such as inclusive financial intermediaries, are an important component of an effective trade strategy.

Infrastructure. Investments in infrastructure are critical for facilitating growth in both agriculture and trade. For smallholder farmers that are located in rural areas, infrastructure is vital to reduce the distance to markets. The magnitude of the challenge remains significant to this day, as almost 900 million rural inhabitants in the world continue to lack access to all-weather roads within two kilometers. Similarly, poor infrastructure acts as a constraint on trade through transaction costs. It is estimated that poor infrastructure accounts for anywhere between 40 and 60 percent of transportation costs. Consequently, improving infrastructure is an imperative for countries that seek to initiate and sustain a process of labor-intensive growth. By some estimates, a 10 percent increase in infrastructure spending is conducive to one percent of GDP growth.

What can be done to effectively improve the quality of infrastructure across developing countries? Greater investment is, of course, part of the solution. This entails improving access not only to roads, but also to electricity, water, and information and communication technologies (ICT). For the remainder of this decade, developing countries will need to spend about 7 percent of GDP in infrastructure, according to some estimates, to meet their needs. For Sub-Saharan Africa, the required investment amounts to 15 percent of GDP – a figure that exceeds the annual infrastructure investment of East Asian economies during their period of high growth. With limited public resources, there are opportunities to leverage private sector investment to make up for the gaps in financing through public-private partnerships. Targeting rural areas for infrastructure investments is a particularly sound policy for achieving gains in agricultural productivity, as we saw in the cases of Korea, Bangladesh, and Ethiopia. In addition, it will be important to improve the governance of infrastructure in order to yield the greatest returns to these investments. This means more efficient regulations surrounding border management, streamlined logistics, and reduced red tape. The

governance aspects of infrastructure are significant: import delays, for instance, are equivalent to a tariff of 11.2 percent in Sub-Saharan Africa.

Macroeconomic stability. Macro stability—reflected in low inflation and stable public finances—is a prerequisite for promoting the productive use of labor through economic growth. For agricultural productivity growth, it is essential to implement sound macroeconomic policies that provide the right incentives for farmers to invest in their farms and engage in commercial activities. Moreover, in order to leverage trade in agriculture as well as industry, the macroeconomic environment must also be favorable for exporters. An effective policy package would likely include, but not be limited to: independent monetary policy, low inflation targets, prudent fiscal policy that does not discriminate against agriculture, exchange rate policy that favors stability and avoids overvaluations, and financial development to raise savings and facilitate the flow of capital.

Invest—Policies to catalyze investments in human capital

For individuals and families to escape poverty, they must not only possess physical and human assets, but also be able to use them in ways that yield high returns. Labor is always the most important asset of the poor. The first component of the 3-point strategy highlights the importance of creating income-generating opportunities for the poor through growth. But to avail themselves of the opportunities created by growth, the poor also need human capital in the form of decent education and good health that allows them to participate in productive employment. The poor are frequently in the weakest position to develop their human capital, precisely because of their poverty.

Consider the case of education. The poor may lack the means to make investments in the schooling of their children. Even when school is free, the opportunity cost of sending children to school—their labor at home or in family farms and enterprises earnings—may be too high a price to bear. The poor may also not know the returns to investments in education. They may be disadvantaged due to the inferior quality of educational services that typically affects poor areas and villages. Health matters even more than education. The ability of poor children to go to school and learn is often compromised because they are more likely to be hungry, malnourished or sick due to lack of access to safe water and sanitation.

Eleven years ago, the 2004 World Development Report *Making Services Work for Poor People* noted: "Too often, services fail poor people—in access, in quantity, in quality." Although we have seen an improvement in access to basic services in many developing countries, this statement is, unfortunately, still valid today. Many of the world's poor do not have access to good schooling, or proper health care, electricity, water or sanitation, especially in Sub-Saharan Africa. As such, an imperative objective for policy makers seeking to end extreme poverty is to improve the delivery of basic social services, with an emphasis on education, health, and water and sanitation.

Education. There has been progress in improving access to education services across developing countries in the last 25 years. Since 1990, the number of primary school age children not attending schools has halved. Nevertheless, almost 59 million primary school children age are still out of school. Sub-Saharan Africa accounts for 30 million of them. Rapid population growth creates further strains in expanding the reach of education services, and by some estimates, up to 40 million more African youth may drop out of school in the next decade.

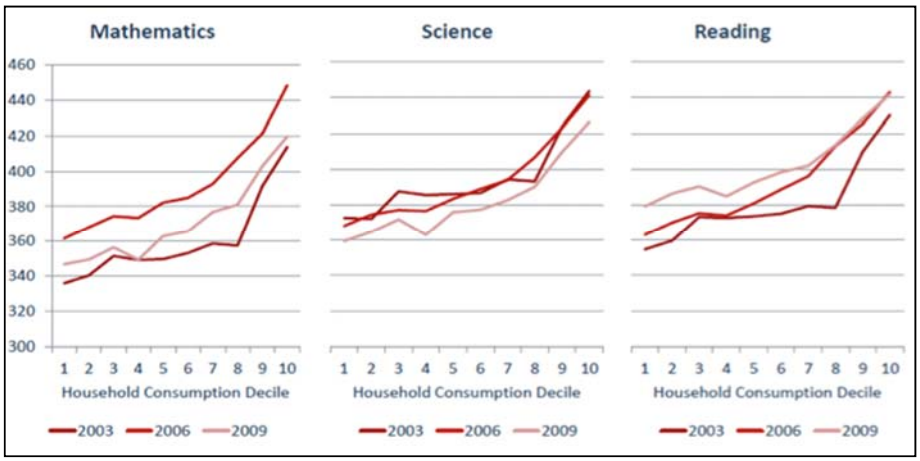
Gender gaps have also persisted throughout the past decades. The global out-of-school rate for primary school is 10 percent for girls and 8 percent for boys. In Sub-Saharan Africa, girls make up 55 percent of the large out-of-school children population. Uneducated girls are also more likely to marry at an earlier age, give birth to more children, and have fewer opportunities to earn an income, thus having a diminished role in household decision-making. This has generational consequences, as their children are more likely to repeat the cycle.

Averages can mask big differences between the rich and the poor. For example, in Mozambique, 60 percent of children in the top 60 percent complete primary school, while only 20 percent of the bottom 20 percent are able to do so.

What can be done to achieve greater improvements in educational outcomes in developing countries? The disparities described above suggest that governments have to invest more to close the gaps in access to education. It is not enough to just improve averages: disadvantaged children—such as girls, ethnic minorities, and families in poor or remote areas—must have the same opportunities to become educated as wealthier families. Malaysia and Bangladesh introduced policies to reduce disparities in education by investing in lagging states and girls' education, respectively. Both benefited greatly from large gains in poverty reduction. It is also increasingly clear that investments are most effective when made in early childhood—for cognition, schooling achievement, and long-term earnings. Investing in education between birth and 3 years of age produces the highest rates of return per dollar invested, exceeding 14 percent in some cases.

To make lasting improvements in education outcomes, it is not enough to address the problem of access to education; it is also critical to focus on issues of quality. Poor countries systematically underperform in learning outcomes in comparison to wealthy countries. Compounding the problem, learning outcomes are consistently weaker among children from poor households in relation to children from wealthier households. In Indonesia, for example, PISA scores are not only weak at the aggregate level, but are also especially low among children in the bottom quintile (Figure 6). The same observation can be made with regard to Latin America and Africa, where large gaps exist in both reading and numeracy skills between children of high and low socio-economic status.

Figure 6: Learning outcomes by quintile in Indonesia



Source: PISA Database

Improvements in the quality of education require a strong emphasis on accountability. That is, teachers and principals must be offered the right incentives for strengthening quality, while also receiving the necessary preparation to develop their skills as well as other inputs to perform their tasks effectively. It is similarly critical for schools to adopt results-measurement systems to assist with management decisions. Investing more resources in schools is part of the solution. However, the quality of spending also matters, and in this regard, parental voice can be a powerful ally. Recent evidence suggests that parental voice can enhance accountability, leading to better learning outcomes. For instance, a recent experiment in Kenya gave Parent-Teacher Associations resources to hire locally-contracted teachers in a subset of randomly selected schools. This intervention led to a clear improvement in learning outcomes as teachers faced stronger incentives to show up and teach well, and the parental involvement improved teacher accountability and school governance. Most countries that have succeeded in greatly improving both access to and quality of education have followed these simple principles.

Health. The delivery of basic health services has also seen great improvements during the last quarter century. Under-five mortality rates have dropped by 53 percent from 91 deaths per 1,000 live births in 1990 to 43 in 2015. The pace of progress has also quickened: while the annual rate of reduction in child mortality stood at 1.8 percent in the 1990s, it rose to 3.9 percent in the last 15 years. Several low- and middle-income countries performed remarkably and reduced under-five mortality rates by two-thirds or more. This includes countries such as Ethiopia, Uganda, Tanzania, Bangladesh, and Indonesia. Despite this progress, 5.9 million children still die prematurely. Over half of these deaths are either preventable or treatable through simple interventions.

Children in Sub-Saharan Africa are at highest risk: they are 14 times more likely to die prematurely than children in other developed countries. Within countries, there are big disparities between children in rich and poor families. Under-five mortality rates in the bottom 40 percent tend to be twice as high as the rates among the top 60 percent. In some countries, such as Mali, the difference is even more pronounced: mortality rates for the bottom 40 percent are close to 120 per 1,000 live births, three times the rate of 40 for the top 60 percent.

Addressing the gaps in health outcomes requires, in part, greater and smarter investments in public health services. It is particularly important to expand the coverage of health services such that they reach poor and underserved areas. The private sector and community-based providers can be important partners in increasing coverage. Decentralization, as in the case of Mexico, can be an effective strategy to reach remote areas when coupled with good governance. As with education, investments on health that focus on early childhood should be a priority for policy makers. This is because health deficiencies at an early age carry negative repercussions for an individual in the long-run. In developing countries, as many as 200 million children under five years old are exposed to nutritional and infectious disease risk factors that compromise their development potential. This ultimately hinders their ability to participate in productive employment opportunities.

By itself, greater spending is unlikely to solve the problem. Health systems in developing countries are frequently subject to severe institutional constraints that limit the delivery of quality service. Absenteeism of health professionals is a phenomenon that is, unfortunately, too common in developing countries, ranging from 20 percent in Mozambique to an overwhelming 74 percent in rural Bangladesh in the early 2000s. Evidence from India also suggests that, when doctors show up, they exert a low level of effort. In order to counter these problems, it is essential for public health systems to

align incentives with performance. Experimental research from Brazil suggests that granting greater autonomy to public hospitals – in the form of managerial authority regarding hiring, firing, and wage-setting decisions – has led to improvements on the quality and efficiency of health service provision. Another way to improve providers' responsiveness to users is through user supervision. In Uganda, for example, community-based monitoring improved both the quality and quantity of primary health care services.

Finally, complementary investments in a range of public services are needed. In Malaysia, investments in public hospitals and training of maternal health providers were coupled with additional investments in rural infrastructure and women's education, leading to dramatic reductions in maternal mortality. Family planning programs are also important determinants of maternal health, as both pregnancy and delivery tend to carry health risks in developing countries. In particular, non-coercive interventions that seek to increase household knowledge of and access to contraceptive options—such as the family planning program implemented in Bangladesh—are known to be effective in boosting contraceptive use and reducing fertility rates, thus contributing to improved maternal health. The availability of safe water and sanitation (discussed below) is another complementary public good that has a strong bearing on the achievement of better health outcomes.

Water and sanitation. Investments in improved water sources and sanitation are valuable complements to a government's policies in health and education. Safe water and sanitation provide: health benefits by reducing the incidence of water-borne diseases; education benefits by raising school attendance and completion rates (especially among girls); and economic benefits in the form of productivity gains in the workplace and reduced health care costs. Globally, the use of improved drinking water sources rose from 76 percent in 1990 to 91 percent in 2015, representing a gain for over 2.5 billion individuals. Still, 663 million individuals lack access to improved water sources, with half of them located in Sub-Saharan Africa and one-fifth based in South Asia. Across regions, Sub-Saharan Africa continues to lag behind others as 32 percent of its population relies on unimproved water sources. Within regions, access is highly differentiated between urban and rural households, and is strongly correlated with wealth: in Sub-Saharan Africa, 90 percent of the richest quintile has access to safe water, but only 35 percent of the poorest quintile does.

The progress in sanitation has been slower. Between 1990 and 2015, the global coverage of improved sanitation facilities rose from 54 to 68 percent. However, as many as 2.4 billion people continue to lack access today: these individuals are concentrated primarily in South Asia (accounting for 40 percent of this subset) and Sub-Saharan Africa (accounting for 29 percent). In Africa less than a third of the population has access to improved sanitation facilities. As with safe water, access to sanitation continues to be unequal within countries: in India, the rich are ten times more likely to have proper sanitation than the poor. In many Sub-Saharan African countries, the poorest fifth has near-zero coverage rates, with only a handful of countries (such as Cameroon, Rwanda, and Senegal) having raised coverage rates above 20 percent for the poorest quintile group.

These investments are vital in the poorest countries where the burden of infectious disease remains high. Providing clean water, sanitation, waste disposal and drainage can go a long way to improve health outcomes and reduce early childhood mortality. Increasing piped water in urban Argentina, for example, reduced the burden of diseases associated with unsafe water and reduced child mortality by 8 percent. In the United States, improved access to clean water in the early 20th century led to a reduction in

infant mortality by three-quarters and under-five child mortality by two-thirds. Investments in clean water and sanitation also help support cognitive development of children by providing a disease-free environment, reducing instances of malnourishment and increasing learning. Unlocking these benefits requires devoting greater resources to water and sanitation, specifically in rural areas, which tend to receive less than 10 percent of total financing. More emphasis should also be placed in improving water and sanitation in schools and health centers, where the risk of disease outbreaks is greatest. Finally, governments must adopt monitoring systems, set targets, and develop their human resources to deliver services efficiently.

Good governance. The prerequisite for making effective public investments in health, education, and water and sanitation is good governance. In the absence of adequate governance, the efficiency of government spending is decreased as public resources may be diverted from their developmental objectives toward dubious alternative uses. Good governance enables a government to set goals and monitoring systems to track the performance of investments, and enables policymakers to allocate resources where they are most needed. Governance also needs to be fostered at the level of social service providers. As discussed above, the quality of service delivery is enhanced when providers face the right incentives to do their work well, adopt monitoring systems to track their own performance, collect input from the people they serve, and undertake actions with the goal of achieving improvements in human development outcomes.

The key to better governance is accountability. Mechanisms that strengthen: the accountability of the government to citizens (such as elections); the accountability of providers to government (for example, performance-based contracts); and the accountability of providers to citizens (such as community participation in service provision) can all lead to better governance and more effective investments in human development. The upcoming 2017 World Development Report on *Governance and the Law* assesses the approaches to institute "good enough governance."

Insure—Policies to reduce vulnerability to risk

The first two components of the 3-point strategy focus on generating opportunities for the poor to utilize their most abundant asset – labor – and improving the returns to this asset through investments in human capital. But this is often not enough to end extreme poverty. Too many of the world's poor are stuck in circumstances where they cannot take advantage of the opportunities brought by labor-intensive growth. This includes individuals who are old, sick or disabled; those who are stuck in remote and poor regions; and also individuals who face discrimination due to gender or ethnicity. Even in countries that have managed to greatly reduce poverty through growth, like China and Thailand, deep pockets of poverty remain among minority populations and in remote areas. In Latin America, one out of five people are classified as "chronically poor", a condition that often spirals into intergenerational cycles of poverty. Moreover, countries that have made significant strides in poverty reduction can experience setbacks. Households may face adverse shocks – such as illness, poor weather, or natural disasters – pushing them back into poverty.

As a result, the objective for this third component is to assist the destitute and protect the vulnerable, through an emphasis on three priorities: social assistance, social insurance, and protection against pandemics and large-scale natural disasters. The extent of adoption of these priorities should match a country's specific situation. Social assistance will be most valuable for countries that continue to experience deep forms of chronic poverty; social insurance is most helpful for successful developers as a means of preserving their gains; and finally, protection against pandemics and natural disasters

needs to be employed in regions that are most vulnerable to these shocks.

Social assistance. Direct transfers to the poor in the form of non-contributory social assistance can help all countries end cycles of chronic and intergenerational poverty. This is achieved by: first, ensuring that those who are trapped in poverty and unable to access opportunities in the labor market have the means to meet their basic needs; second, by encouraging households to undertake investments in the human capital of their children such that they are able to exit poverty in the future through productive employment; and third, by helping the poor withstand the setbacks of shocks.

Conditional cash transfers have a proven record in helping to reduce poverty both through their direct impacts on household income, and indirectly by building human capital assets. These programs are particularly attractive as they address both present and future poverty, in a manner that supports the first two components of the 3-point strategy. Rigorous evaluations of early CCT programs, such as Mexico's *Progresa*, show increases on secondary school enrollment (a 24 percent average increase), especially for girls. Participation in *Progresa* was also associated with an increased use of preventive health services, a reduction of 22 percentage points in the prevalence of stunting among children under two years of age, and a reduction of almost 12 percentage points in the prevalence of anemia in young children. Comparable results have been found for programs in Brazil, Colombia, Honduras, Jamaica and Nicaragua. Overall CCTs have been well targeted, with the largest share of benefits generally going to the poor. Compared to other transfer programs, CCTs are better at concentrating benefits among the poorest segments of the population, with the added benefit of supporting human capital investments.

The success of first-generation CCTs in numerous countries (especially in Latin America) has led to a set of second-generation challenges. These range from how to operate CCTs successfully in more complex urban settings to how to link CCT beneficiaries to programs that support their productive integration into the labor market, and how to combine CCTs with psychological support for the chronically poor to help them exit poverty. Programs like *Chile Solidario*, a CCT that links households to social worker services, are experimenting with these diverse angles, with some risk that the increase in complexity and size of the programs may bring about a dilution of focus and effectiveness. Nevertheless, CCTs remain a preferred instrument within the 3-point strategy because they complement and reinforce the impacts of the first two components.

Implementing and managing a CCT requires an adequate level of institutional capacity as well as good service delivery mechanisms. After all, there is no real benefit in encouraging attendance at schools and visits to primary health clinics if these do not exist or are not properly staffed. In poorer countries with weaker institutional capacity, direct cash or near-cash transfers, such as vouchers, may be easier to implement and may still deliver substantial benefits. These transfers can be targeted using self-targeting methods, such as through public works. This is the case, for example, of the Ethiopia Productive Safety Net, which has been shown to have a direct poverty reducing impact.

Alternatively, cash or near-cash transfers can be targeted using proxy means tests (the same method that is typically used for CCTs) or other needs-based mechanisms to identify the poor. Or they can be targeted to specific vulnerable groups, such as the elderly. Non-contributory old age pensions are important poverty alleviation programs in both poor and middle-income countries (as well as in richer countries). Unlike CCTs, these programs do not have the positive spillover of building human capital assets. But

they can be effective in direct poverty alleviation if targeted properly and designed in a way that does not affect the incentives or ability of the poor to work.

Other common social assistance programs include food stamps, vouchers or coupons. These do not grant the beneficiaries the same freedom of choice in how to use a benefit. But they are known to increase food consumption and can also have a self-targeting aspect if limited to certain baskets of food. Unconditional cash transfers (UCTs) or transfers involving 'soft conditions' and 'social marketing' can be another useful alternative, particularly in countries with lower administrative capacity. What does not work well as a form of social assistance are food transfers or food price subsidies, which can be easily captured and often exclude the poor. Even worse are universal subsidies (on food, electricity or kerosene), as they are highly inefficient, costly, and regressive, benefitting the non-poor at least as much as the poor.

Social insurance. Countries that are successful in greatly reducing the number of people living in extreme poverty soon have to face another challenge: preserving the gains in poverty reduction by protecting vulnerable households from shocks that could push them back into poverty. Some of these shocks may be individual in nature. The illness of a family member, especially a working member, is a common cause of impoverishment due to loss of income. Other shocks are more systemic in nature. Macroeconomic crises (such as the financial crisis in 2008-2009) lead to widespread unemployment, pushing many working households into poverty. Droughts and inclement weather conditions create risks to income generation, especially when household earnings are tied to agricultural activities.

During the financial crisis of 2008, many individuals who were affected were not among the ranks of the extreme poor, but rather among those employed in sectors that experienced large contractions. This means typically urban residents, employed in services or manufacturing, who either saw their jobs disappear or their work hours fall sharply. In Mexico, they were part of the bottom 40 percent of the population, but not among those targeted by traditional social assistance programs. This was also true in countries like Indonesia and Thailand. The realization that many families hit by the financial crisis could not be reached through traditional poverty safety nets mobilized many middle-income governments to start thinking about broader social insurance targeted not at the poor, but at broader segments of the population vulnerable to poverty.

Putting in place programs to reach these populations requires a different approach than what is used to target the extreme or chronic poor. The vulnerable and non-poor population is much more diverse than the chronic poor, more likely to be urban and mobile, and their vulnerability to different types of risks also varies depending on their particular situation. Hence, the usual approach is to design programs that target the type of risk, not the type of beneficiary. Designing effective social insurance programs, however, is complex. Benefits need to be designed in a way that does not introduce moral hazard (which encourages potential beneficiaries to engage in more risk behavior than they would otherwise); they need to minimize disincentives (to work effort, for example); and they need to be funded in an adequate and sustainable manner. They also involve supporting the development of domestic private insurance markets, as it is often not feasible for the state to meet all of the insurance needs of its citizens. Addressing the missing market of insurance also results in efficiency gains for the economy, which materialize every year regardless of whether a shock takes place.

Health risks are of prime importance among the risks that often lead to impoverishment. Countries provide health coverage in many ways: some rely on insurance-based

schemes, typically tied to a labor contract. This has the disadvantage of typically making labor more expensive (which weakens the first component of the 3-point strategy), and failing to cover those who are out of work. To make up for these issues, some countries, like Mexico, operate parallel systems: a contributory system of health insurance for formal workers, and a non-contributory scheme for those not covered by insurance. Yet, this introduces its own set of disincentives. Many have argued that the provision of non-contributory benefits, which rival the quality of contributory ones, discourages formalization in the Mexican labor market. As an alternative, other countries have chosen to finance near universal health coverage out of general revenues.

Global experience suggests that expanding health insurance coverage for the poor and near-poor does increase utilization rates. It also reduces out of pocket payments, although it does not eliminate them entirely. How have countries managed to successfully cover their populations, especially those groups who are not under formal employment? One approach has been to finance coverage through general revenues. This is the approach that Thailand took when it implemented its 30 baht scheme, for example. A second approach has been to use donor funding to finance coverage. This is the case of Cambodia, which introduced health equity funds with donor assistance to provide free services at select government health providers and offer access to free maternal care through targeted vouchers. Both approaches are compatible with the first two components of the 3-point strategy by supporting household health without dissuading individuals from working.

Unemployment and macroeconomic crises are another type of risk that can push a family into poverty. Countries that have CCTs or other forms of targeted cash transfer in place can use them to protect the poor from spells of unemployment; but such programs will be less effective when the family affected was not identified as poor prior to the shock. Workfare or labor-intensive public work schemes can provide an alternative. These programs are often a good choice in a post-crisis situation when unemployment is widespread, as in Korea following the 1997 economic crisis and in Argentina following the peso crisis in 1999. They are also useful when infrastructure reconstruction and employment generation are both priorities as in Sri Lanka following the 2004 tsunami. Middle-income countries with good institutional capacity and sufficiently deep private capital and insurance markets can also look to private-public solutions for providing unemployment insurance. Chile's experience with individual Unemployment Insurance Savings Accounts (UISA) is one example. These accounts are managed by private funds but regulated by the public sector with a subsidy for poor workers (from a Solidarity Fund based on risk-pooling). This approach has allowed for greater economic mobility and better protection than the severance pay scheme that was used prior to reform. Countries with lower institutional capacity can opt for a simpler, yet effective workfare program, such as India's National Rural Employment Guarantee scheme.

Variation in income tied to weather patterns is a major source of risk for rural households. Increasing variability in weather not only poses a poverty risk to farmers but also often reduces livelihood options as risk-averse farmers may be less willing to invest in improved seeds or other agricultural inputs when faced with substantial weather uncertainty. Weather index-based insurance is one option that can help farmers manage this type of risk. Through this instrument, an insured farmer receives a payment whenever rainfall falls below a pre-determined threshold. This insurance scheme overcomes challenges of moral hazard given that weather is unrelated to an individual's behavior. In addition, the scheme is easier to administer and offers faster payments than traditional forms of crop insurance. Nevertheless, this form of insurance faces some limitations, as the index may not always adequately reflect the experience of farmers. As a result, basis risk remains a challenge.

Area yield indexes offer an alternative to overcome some of these issues. Area yield indexes use average yields in a given area as the index that determines payments to the farmer. The index provides a better reflection of farmers' actual experience, as it accounts for the entire impact of weather on yields (not just related to rainfall) and non-weather risks, such as crop disease. This form of insurance has been adopted extensively in many states of India, receiving much support from the public sector, which provides subsidies on the premiums. Adopting an effective index-based insurance scheme requires a degree of sophistication on part of the insurer to operate at a large scale and diversify its risk exposure. It also needs accurate historical data on rainfall patters and yields to price the service appropriately and determine payouts. In addition, it is important to note that these instruments do not eliminate basis risk. For these reasons, weather insurance – while promising – should be complemented with additional strategies. Other financial services, such as microcredit and savings, are viable alternatives: they have been used to great effect in Bangladesh to protect households against weather shocks. Social assistance programs can also address agricultural risk. An example is Kenya's Hunger Safety Net, which offers cash transfers to vulnerable households and scales up in event of a drought.

Global insurance. Some shocks transcend national borders and threaten populations from several countries at once. The severity of the recent Ebola crisis, which extended across Guinea, Liberia, and Sierra Leone and caused economic losses of $2.8 billion, is a reminder that pandemics pose a serious threat to the prosperity of developing countries, especially to the poorest. Large-scale natural disasters that afflict more than one country are another form of a global shock. The Indian Ocean Tsunami of 2004 affected 14 countries with close proximity to the Indian Ocean, causing major loss of life—close to 230,000 deaths—and substantial economic damages amounting to $10 billion. The magnitude and frequency of extreme weather is likely to be exacerbated by climate change. A common feature of global shocks is the substantial strain that these events place on a country's capacity to respond. The burden of a global shock extends beyond the ability of a single country to cope. As a result, national and international action is required to adopt prevention mechanisms and ensure a timely response to the shock.

Pandemics, such as the Ebola crisis, wreak substantial social and economic havoc in all affected countries. A combination of weak public health systems, which fail to detect an emerging threat, and greater integration among countries through mobility and trade, sets the stage for the fast spread of disease. The poorest countries and communities are at highest risk from pandemics. Poor countries not only exhibit the greatest deficiencies in public health systems, but are also predominantly rural and reliant on agriculture. As most pathogens that can lead to a pandemic are animal-borne, this means that the poor are in a particularly vulnerable position. The economic toll on a country that experiences a pandemic is staggering: by some estimates, a severe flu outbreak could cost $3 trillion, representing a contraction of 4.8 percent in global GDP. Ending extreme poverty will require vulnerable countries—together with the support of the international community—to adopt protective measures against these serious threats.

Protecting a vulnerable country against pandemics requires a focus on both prevention and preparedness. This means undertaking greater investments to strengthen public health systems, as well as veterinary systems. It is estimated that an annual investment of $3.4 billion is required to raise the quality of developing countries' health systems up to a minimum standard. The economic return to these investments, however, is significant and ranges from 50 to 123 percent. In addition, the strengthening of early warning systems is critical to detect a disease on time. Public health authorities as well as providers of crucial services, such as electricity and transport, must develop

contingency plans that can be implemented during a pandemic. Once a pandemic is underway, financial resources must be readily available to help contain the outbreak. The international community has an important role to play in supporting vulnerable countries before and during a pandemic. To this end, the World Bank has established a Pandemic Emergency Facility, which functions as a global insurance mechanism for pandemics, providing expedited disbursements to countries during a crisis along with investments to avoid a crisis in the first place.

Natural disasters and extreme weather events also threaten the economic prosperity of countries and their ability to end extreme poverty. As with pandemics, natural disasters pose the greatest threat to developing countries, especially those that are least prepared for the shock. In fact, three out of four deaths associated with natural disasters take place in developing countries and small island states. The economic consequences of natural disasters are severe and range from $10 billion to $15 billion in low-income and middle-income countries. Climate change adds an extra layer of complexity to the challenge of managing and responding to natural disasters. Rising temperatures are expected to increase both the severity and the frequency of extreme weather events, elevate the risk of floods near the coasts, and exacerbate the threat of droughts in the tropics. Developing countries will once again bear the brunt of the costs associated with climate change. In Sub-Saharan Africa, even a 2-degree temperature rise is foreseen to generate a permanent reduction of almost 5 percent in annual GDP per capita.

These risks are, unfortunately, not entirely avoidable. As such, countries that are most exposed to the risks of extreme weather events must take action to enhance their preparedness and ability to respond during a time of crisis. This includes developing early warning and climate monitoring systems to identify threats early. Public officials must also have response plans in place to implement if a crisis occurs. Countries that are most vulnerable will also need to consider climate risks in their urban planning. Cities, such as Tunis, are preparing against the risk of floods by improving drainage, building seawalls, and relocating new infrastructure developments away from high-risk areas. Countries that are reliant on agriculture and are at high risk of droughts, such as in Sub-Saharan Africa, will need to adapt by investing in drought-resistant crops, irrigation systems, and effective markets that facilitate the adoption of new technologies. Moving away from a rainfall-dependent agricultural economy will help these countries reduce their exposure to risk. Finally, governments must have access to funds that can be immediately deployed for reconstruction and as safety nets if a disaster strikes. Here, international cooperation is imperative. To assist in this effort, the World Bank has worked with donors and the private sector to develop a Disaster Risk Financing and Insurance (DRFI) facility to quickly fund emergency responses.

Information systems. A prerequisite to helping the destitute and vulnerable through insurance is the availability of information systems. These systems take different forms and play different roles depending on a country's situation. The provision of social assistance requires policy makers to gain a good understanding of poverty in order to identify the poor and the geographic areas where an intervention would help most. This requires periodic data collection through household surveys. In addition, panel surveys are especially helpful for identifying the chronic poor. By shedding light on poverty dynamics and identifying vulnerable, yet non-poor, populations, they also help design social insurance systems that complement the growth and investment components of the three-point strategy. Some forms of social insurance require specialized forms of data. For weather index-based insurance, for example, historical and disaggregated data on rainfall patterns is crucial for a functional insurance scheme. Last, information systems are crucial for monitoring the risks of pandemics and natural disasters. Climate models and satellite technology can be valuable tools for mapping high-risk areas.

The development of information systems requires investments in these technologies, as well as complementary investments in research, education, and training. The 2016 World Development Report *Digital Dividends* makes this case well.

2030—Ending Extreme Poverty

The 1990 World Development Report analyzed the association between poverty and policies of the 1970s and 1980s and came to the conclusion that sustained poverty reduction is possible through a combination of labor-intensive growth, investments in human capital, and supplemental social assistance or insurance. A quick review of the record of poverty reduction in the 1990s and 2000s validates this 2.5-point strategy. But with the reduction of global extreme poverty from more than half to less than a fifth, changes need to be made. The question is: In light of these developments, where and how much does the 2.5-point strategy need be altered?

The evidence over the last three decades (see Box 3 below for a summary of key reforms) indicates considerable support for the 2.5-point strategy that was pioneered by the East Asian countries, but with one important change: in countries where $1.90 a day poverty has been reduced to low levels, governments should consider expanding the third component from a partial supplement to a full complement. The reasons have to do with both necessity and feasibility. With reduction in extreme poverty rates in Asia and Latin America to relatively low levels, there have been two changes in the profile of poverty. The first is that with success in addressing extreme poverty, it is progressively harder to tackle, because of demographic, geographic, and cultural reasons. It is increasingly found among the marginalized and the disabled, and in parts of countries that are remote because of economic distance or cultural divisions. The second is that, as of 2012, more than 1.2 billion people are living on between $1.90 and $3.10 a day: around 600 million in South Asia, about 300 million in East Asia, over 200 million in Sub-Saharan Africa, and almost 40 million in Latin America. This segment of the population is vulnerable to shocks—emanating from the economy, their own health, pandemics, and nature—that can easily push them back into extreme poverty.

The 2000 World Development Report had raised this concern directly by emphasizing the problem of insecurity:

> "Actions are needed in three complementary areas: first, promoting economic opportunities for poor people through equitable growth, better access to markets, and expanded assets; second, facilitating empowerment by making state institutions more responsive to poor people and removing social barriers that exclude women, ethnic and racial groups, and the socially disadvantaged; finally, enhancing security by preventing and managing economy-wide shocks and providing mechanisms to reduce the sources of vulnerability that poor people face."

For these reasons, successful countries should consider gradually increasing social insurance coverage. But for this to be done in a manner consistent with the ambition of ending extreme poverty by 2030, this complement has to share a feature with the first two: it should reinforce, not weaken, the other components of the strategy. Examples of social assistance programs that qualify are cash transfers conditioned on private investments in education and health—the investment component of the 3-point strategy. An example of social insurance schemes that do not meet this test are those financed by

high taxes on wages and employment—which would weaken the labor-using growth component of the 3-point strategy.

Box 3: Selected Reforms and Estimated Impact

Country	***Period***	***Reform and impact***
Korea, Rep.	1946-55	Land reform. More than 60 percent of arable land was transferred to owner-farmers. Productivity shot up, as did school achievement.
Taiwan	1949-63	Land reform. In 1949, 64 percent of farming population were tenants; and rent was 50 percent of the income from harvests. Reform in three phases: (1) rent reduction; (2) sale of government land to tillers and (3) land-to-the-tiller program. By 1965, only 10 percent of land operated by tenants.
Indonesia	1968-96	Green Revolution. Agricultural total factor productivity grew at 2.5 percent annually between 1968 and 1996. 40 percent of rural workers escaped poverty while staying in agriculture.
China	1979	Household responsibility system. Agricultural productivity growth rose from 2.7 percent annually between 1970-78 to 7.1 percent between 1979-84. Extreme poverty fell from 88 percent in 1981 to 76 in 1984, or from 878 million people to 785 million (and then to 660 million by 1987).
Vietnam	1988-99	Land reform. In 1986 Vietnam imported 0.5 million tons of rice. By 2009, it exported 5 million tons. Now one three largest exporters of rice (others are Thailand and India).
Thailand	1968-96	Family Planning: Mechai program. Thailand's fertility declines as rapid at China's (from 6 in 1966 to less than 2 by 1996), without coercion and with relatively low female education levels. One of the most successful public private partnerships ever.
Thailand	2001	30 Baht Program. Universal health insurance—most visits cost less than $1. By 2005, covered more than 85 percent of population at cost of less than 4.5 percent of GDP.
Brazil	1994-97	Real Plan. Inflation had stayed above 100% a year since 1982; 2500 percent in 1993. 1993-2004 is the time of restoration of macro stability. Extreme poverty rate was cut by half: from 20 percent in 1993 to 10 percent in 2005.
Mexico	1990s	Progresa conditional cash transfers. By 1999, covered 2.6 million rural families. Increased education attainment of poor rural children by 10 percent (0.66 years), improved under-five morbidity by 12 percent, increased prenatal visits by 8 percent, and adult morbidity fell by 17 percent.
Ghana	1990s	Reforms to cocoa marketing board. Allowed new purchasers to compete and offer better prices for farmers' products; established a private market for the distribution of inputs. Between 2001 and 2010, land productivity grew at 5.5% per year.

Sources: See earlier sections.

The 3-point strategy should be considered after a country develops adequate administrative capacity. It may also require developing countries to consider policy design that is different from what today's developed economies have instituted. When instituting social insurance programs, for example, developing countries might consider financing the schemes through taxes on energy use instead of labor use.

Our assessment also sheds light on three additional questions that come up in poverty-related debates: first, how much poverty reduction can economic growth generate and how much will have to be done through redistribution? Second, does focusing on a money-based poverty target jeopardize progress in other measures of wellbeing such as education, longevity, and health? Third, is a focus on extreme poverty—measured by the poverty lines of the poorest 15 countries—setting the bar too low? Our view is:

- The success of a strategy that relies on growth in private economic activity and rapid improvements in essential public services—two mutually reinforcing elements—complemented by targeted interventions to help the most needy, should discourage "growth versus redistribution" extremism.
- Evidence in support of this strategy should reassure those who worry that a "narrow focus" on monetary poverty risks neglect of non-monetary measures of human welfare. In fact, quick and sustained progress in achieving the 3 percent extreme poverty goal is not possible without augmenting the assets of the poor, principally through public support for investments in education and health.
- By recognizing that individuals who escape extreme poverty are still vulnerable to falling back into destitution, and proposing policy actions to prevent this from happening, the strategy should at least partially address the criticism of setting the bar too low.

The evidence from China, Vietnam, India, and other countries that have reduced extreme poverty rates to relatively low levels supports the three-point strategy. If ending extreme poverty is the goal, the growth versus redistribution debate, and doubts about the adequacy of the consumption-based poverty as a development goal are not the issues that policy makers should worry about too much. Instead, policy makers should be trying to figure out how this strategy can be implemented in countries where the incidence of extreme poverty is still high. They will likely find that the 2.5-point strategy is better suited for such countries. When implemented well, extreme poverty rates will fall quickly, and the 2.5-point plan should give way to the 3-point strategy.

Whatever the conclusion of these debates, finishing off extreme poverty will soon become much the same thing as ending extreme poverty in Sub-Saharan Africa and conflict-affected countries elsewhere. Just as progress in East Asia required rapid progress in China and poverty reduction in South Asia is almost the same thing as eliminating extreme poverty in India, progress in Sub-Saharan Africa will not happen unless Ethiopia and other strong performers in East Africa keep doing as well as they have in the last decade, and Nigeria, the Democratic Republic of Congo, Madagascar, Angola, and others in West and Southern Africa start doing a lot better than in the past.

Selected References

Akyeampong, K. 2011. "(Re)Assessing the Impact of School Capitation Grants on Educational Access in Ghana." *Center for International Education, University of Sussex,* Research Monograph No.71.

African Development Bank et al. 2011. "Supporting Infrastructure Development in Low-Income Countries". Submission to the G20 by the MDB Working Group on Infrastructure.

Azevedo, J.P. et al.2013. "Is Labor Income Responsible for Poverty Reduction? A Decomposition Approach." *World Bank,* Policy Research Working Paper 6414.

Banerjee, A. et al. 2006. *Understanding Poverty.* New York: Oxford University Press.

Banerjee, A. and Duflo, E. 2011. *Poor Economics.* New York: Public Affairs.

Beegle, K. et al. 2014. "Enhancing Africa's Contribution to the Eradication of Extreme Poverty by 2010." World Bank. Washington, DC. Processed.

Bhagwati, J. 1988. "Poverty and Public Policy." *World Development,* Vol. 6, No. 5, 539-555.

Blanchet, N., Fink, G., and Osei-Akoto, I. 2012. "The Effect of Ghana's National Health Insurance Scheme on Health Care Utilisation", *Ghana Medical Journal,* Volume 46, No. 2. 76-84.

Byamugisha, F. 2014. *Agricultural Land Redistribution and Land Administration in Sub-Saharan Africa.* Washington, DC: World Bank.

Center for Global Development. Undated. "Reducing Fertility in Bangladesh: Case 13". Millions Saved: What Works in International Development?

Choudhary, V. et al. 2015. *Ghana: Agricultural Sector Risk Assessment - Risk Prioritization*. Washington, DC: World Bank.

Chow, G. 2006. "Rural Poverty in China: Problem and Policy." *Princeton University,* CEPS Working Paper No. 134.

Chuhan-Pole, P. and Angwafo, M. 2011. *Yes, Africa Can: Success Stories from a Dynamic Continent.* Washington, DC: World Bank.

Claessens, S. 1993. "Interest Rates, Growth, and External Debt: The Macroeconomic Impact of Mexico's Brady Deal." *World Bank,* Policy Research Working Paper WPS 1147.

Coady, D. 2003. "Alleviating Structural Poverty in Developing Countries: The Approach of Progresa In Mexico." *International Food Policy Research Institute.*

Currie-Alder, B. et al. 2014. *International Development: Ideas, Experience, and Prospects.* New York: Oxford University Press.

Damrongplasit, K. and Melnick, G. 2009. "Early Results from Thailand's 30 Baht Health Reform: Something to Smile About", *Health Affairs*, 28, No. 3, 457-466.

Darvas, P. and Balwanz, D. 2014. *Basic Education beyond the Millennium Development Goals in Ghana.* Washington, DC: World Bank.

Devarajan, S. 2014. "Growth Without Apology." *World Bank*. Future Development: Economics to End Poverty.

Dollar, D. et al. 2014. "Growth, Inequality, and Social Welfare: Cross-Country Evidence." *World Bank Development Research Group,* Policy Research Working Paper 6842.

Duflo, E., Dupas, P. & Kremer, M. 2015. "School governance, teacher incentives, and pupil–teacher ratios: Experimental evidence from Kenyan primary schools," *Journal of Public Economics*, Vol. 123(C), 92-110.

The Economist. 2014. "China's Economy: Poverty Elucidation Day." Oct. 20, 2014.

The Economist. 2014. "Poverty in Indonesia: Muted Music." May 3, 2014.

Edward, P. and Sumner, A. 2013. "The Future of Global Poverty in a Multi-Speed World: New Estimates of Scale, Location, and Cost." *King's International Development Institute, King's College London.*

Ferreira et al. 2015. "A Global Count of the Extreme Poor in 2012: Data Issues, Methodology and Initial Results." *World Bank,* Policy Research Working Paper 7432.

Fiszbein, A. et al. 2009. *Conditional Cash Transfers: Reducing Present and Future Poverty.* Washington, DC: World Bank.

Gertler, P. et al. 2012. "Investing Cash Transfers to Raise Long-Term Living Standards." *American Economic Journal: Applied Economics,* Vol. 4, No. 1, 164-192.

Gill, I. and Kharas, H. 2007. *An East Asian Renaissance: Ideas for Economic Growth.* Washington, DC: World Bank.

Gilligan et al. 2009. "An Impact Evaluation of Ethiopia's Productive Safety Net Program." *Mimeo, International Food Policy Research Institute*. Washington, DC.

Gockowski, J. 2012. "Policy-led Intensification and Returns to Input Use among Ghanaian Cocoa Farmers." *Sustainable Tree Crop Program of the International Institute of Tropical Agriculture.*

Government of Ghana. 2013. "The Livelihood Empowerment Against Poverty (LEAP) Programme." *Ministry of Gender, Children and Social Protection,* Briefing Paper.

Greatrex H. et al. 2015. "Scaling Up Index Insurance for Smallholder Farmers: Recent Evidence and Insights." *CGIAR Research Program on Climate Change, Agriculture and Food Security,* CCAFS Report No. 14.

Handa, S., M.J. Park, R.O. Darko, I. Osei-Akoto, B. Davis, S. Diadone. 2013. "Livelihood Empowerment against Poverty Impact Evaluation," *Carolina Population Center, University of North Carolina.*

Hanson, G. 2012. "Understanding Mexico's Economic Underperformance." *Migration Policy Institute.*

Heckman, J. 2012. "The Case for Investing in Disadvantaged Young Children". *HeckmanEquation.Org*.

Inchauste, G. and Saavedra-Chanduvi, J. 2014. "Opportunity Knocks: Deeping Our Understanding of Poverty Reduction." In *Understanding Changes in Poverty,* 1-13. Washington, DC: World Bank.

Inoue, K. et al. 2015. *Out-of-School Youth in Sub-Saharan Africa: A Policy Perspective.* Directions in Development. Washington, DC: World Bank

Islam, R. 1985. *Strategies for Alleviating Poverty in Rural Asia.* Geneva: International Labour Organisation.

Jonas, O. 2013. "Pandemic Risk." Background paper for the *World Development Report 2014*.

Jonas. O. 2014. "Pandemic Risk". *Finance and Development,* December 2014.

Kim, J. 2014. Speech by World Bank Group President Jim Yong Kim: "The Importance Of Safety Nets: Mexico's Leadership."

Kraay, A. 2004. "When is Growth Pro-Poor? Evidence from a Panel of Countries." *World Bank.*

Kwon, H. and Yi, I. 2009. "Economic Development and Poverty Reduction in Korea: Governing Multifunctional Institutions." *Development and Change,* 40(4): 769-792.

Legislative Council of Hong Kong. Undated. "Information Note: Poverty Combating Strategy in South Korea." Research and Library Services Division, IN34/04-05.

Leipziger, D. and Thomas, V. 1993. *Lessons of East Asia.* Washington, DC: World Bank.

Levy, S. and Walton. M. 2009. *No Growth without Equity? Inequality, Interests, and Competition in Mexico.* New York: Palgrave Macmillan.

Lipton, M. 2014. "Farming, Fertility, Food: Why Has Bangladesh Done Better than Expected? Can It Continue to Do So?" 1st Bangladesh Economic Forum Paper, Dhaka.

Liu, Y. and Deininger, K. 2010. "Poverty Impacts of India's National Rural Employment Guarantee Scheme: Evidence from Andhra Pradesh." Agricultural & Applied Economics Association 2010 AAEA,CAES, & WAEA Joint Annual Meeting Paper.

Lobell, D.B. and Burke, M. 2009. *Climate change and food security: Adapting Agriculture to a Warmer World*. New York: Springer Science & Business Media.

Lopez-Acevedo, G. 2008. "Mexico: Quality of Public Expenditure." Note No. 4 – June 2008.

McCaig, B. and Pavcnik, N. 2013. "Moving out of Agriculture: Structural Change in Vietnam." *National Bureau of Economic Research,* Working Paper No. 19616.

McNamara, R. 1973. Speech by World Bank Group President Robert S. McNamara: "Address to the Board of Governors."

Merrick, T. 2002. "Population and Poverty: New Views on an Old Controversy." *International Family Planning Perspectives,* Vol. 28, No. 1, 41-46.

Molini, V. and Paci. P. 2015. *Poverty Reduction in Ghana: Progress and Challenges.* Washington, DC: World Bank.

Mu, R. and van de Walle. D. 2009. "Rural Roads and Local Market Development in Vietnam." *The Journal of Development Studies,* Vol. 47, No. 5, 709-734.

Musacchio, A. 2012. "Mexico's Financial Crisis of 1994-1995." Harvard Business School Working Paper, No. 12–101.

Oks. D. 1992. "Stabilization and Growth Recovery in Mexico." *World Bank,* Policy Research Working Paper WPS 833.

Olinto, P. et al. 2013. "The State of the Poor: Where are the Poor, Where is Extreme Poverty Harder to End, and What is the Current Profile of the World's Poor?", *World Bank Economic Premise,* Number 125.

Otoo, N. et al. 2014. "Universal Health Coverage for Inclusive and Sustainable Development: Country Summary Report for Ghana." *Health, Nutrition and Population Global Practice,* World Bank Group Report.

Parker, S. 2003. "The Oportunidades program in Mexico." Shanghai Poverty Conference - Scaling Up Poverty Reduction.

Perkins, D. et al. 2012. *Economics of Development*, *7th ed*. New York: W.W. Norton and Co.

Radelet, S. and Sachs, J. 1997. "Asia's Reemergence." *Foreign Affairs*, Nov/Dec 1997, 44-59.

Ravallion, M. 2009. "A Comparative Perspective on Poverty Reduction in Brazil, China and India." *World Bank Development Research Group,* Policy Research Working Paper 5080.

Ravallion, M. 2010. "Poverty Lines across the World." *World Bank Development Research Group,* Policy Research Working Paper 5284.

Ravallion, M. 2013. "The Idea of Anti-Poverty Policy." *National Bureau of Economic Research,* Working Paper 19210.

Ravallion, M. 2016. *The Economics of Poverty.* New York: Oxford University Press.

Ravallion, M. and Chen, S. 2007. "China's Uneven Progress against Poverty." *Journal of Development Economics,* 82, 1-42.

Ravi, S. and Engler, M. 2015. "Workfare as an Effective Way to Fight Poverty: The Case of India's NREGS." *World Development*, Vol. 67, issue C, 57-71.

Rodgers, L. and Fletcher, G. 2014. "Indian Ocean Tsunami: Then and Now." *BBC News.* December 25, 2014.

Rodrik, D. 2001. "Trading in Illusions." *Foreign Policy*, March/April 2001. 54-62.

Rubio, G. 2011. "The Mexican Government's M&E System." *World Bank,* PREM Notes, No.14.
Spence, M. and Lewis, M. 2009. *Health and Growth: Commission on Growth and Development.* Washington, DC: World Bank.

Stiglitz, J. and Yusuf, S. 2001. *Rethinking the East Asian Miracle.* New York: Oxford University Press.

Stiglitz, J. 1996. "Some Lessons from the East Asian Miracle." *The World Bank Research Observer,* Vol. 11, No. 2: 151-177.

Sumner, A. 2013. "Aid Agencies of the Future: Poverty, Geography, and the Double Dilemma." *The Economist.* June 3, 2013.

Taylor, A. 2014. "Ten Years Since the 2004 Indian Ocean Tsunami." *The Atlantic.* December 26, 2014.

UNESCO Institute for Statistics and the Education for All Global Monitoring Report. 2015. "A Growing Number of Children and Adolescents are Out of School as Aid Fails to Meet the Mark." Policy Paper 22 / Fact Sheet 31

UNICEF. 2015. Levels & Trends in Child Mortality. *UN Inter-Agency Group for Child Mortality Estimation.* 2015 Report.

UNICEF and World Health Organization. 2015. Progress on sanitation and drinking water – 2015 update and MDG assessment.

United Nations Development Programme. 2011. "Mexico: Scaling Up Progresa/Oportunidades – Conditional Cash Transfer Programme." *Special Unit for South-South Cooperation.*

United Nations Development Programme. 2015. "Ghana Millennium Development Goals." 2015 Report.

Wagstaff, A. 2014. "We Just Learned a Whole Lot More About Achieving Universal Health Coverage." *World Bank, Let's Talk Development.*

Wang, C. 2012. "History of the Chinese Family Planning program: 1970-2010." *Contraception, 85(6): 563-9.*

Walker, S. et al. 2007. "Child development: risk factors for adverse outcomes in developing countries." *The Lancet* 369, 145-157.

Warr, P. 2011. "Thailand's Development Strategy and Growth Performance." *United Nations University World Institute for Development Economics Research,* Working Paper No. 2011/02.

Wodon, Q. 2012. *Improving the Targeting of Social Programs in Ghana.* Washington, DC: World Bank.

Wolter, D. 2009. "Ghana: Agriculture is Becoming a Business", *OECD Journal: General Papers,* Vol. 2009/2*.*

World Bank. 1980. *World Development Report 1980.* New York: Oxford University Press.

World Bank. 1990. *World Development Report 1990: Poverty.* New York: Oxford University Press.

World Bank. 1990. "Indonesia: Strategy for a Sustained Reduction in Poverty." World Bank Country Study, Report 10009.

World Bank. 1993. *The East Asian Miracle: Economic Growth and Public Policy.* New York: Oxford University Press.

World Bank. 2001. *World Development Report 2000/2001: Attacking Poverty.* New York: Oxford University Press.

World Bank. 2003. *World Development Report 2004: Making Services Work for Poor People.* Washington, DC: World Bank and Oxford University Press.

World Bank. 2004. "Poverty in Mexico: An Assessment of Conditions, Trends and Government Strategy." Report No. 28612-ME.

World Bank. 2005. "Mexico Income Generation and Social Protection for the Poor." Report No. 32884-MX.

World Bank. 2006. *World Development Report 2007: Development and the Next Generation.* Washington, DC: World Bank.

World Bank. 2006. "Decentralized Service Delivery for the Poor." Report No. 35692

World Bank. 2006. "Making the New Indonesia Work for the Poor." Report No. 37349-ID.

World Bank. 2007. *World Development Report 2008: Agriculture for Development.* Washington, DC: World Bank.

World Bank. 2007. "Mexico 2006–2012 Creating the Foundations for Equitable Growth." Report No. 39993-MX.

World Bank. 2009. *World Development Report 2009: Reshaping Economic Geography.* Washington, DC: World Bank.

World Bank. 2010. *World Development Report 2010: Development and Climate Change.* Washington, DC: World Bank.

World Bank. 2011. *World Development Report 2012: Gender Equality and Development.* Washington, DC: World Bank.

World Bank. 2011. "Republic of Ghana: Tackling Poverty in Northern Ghana." Report No. 53991-GH.

World Bank. 2012. "Agribusiness Indicators: Ghana*."* Report Number 68163-GH. Washington, DC: World Bank.

World Bank. 2013. *World Development Report 2014: Risk and Opportunity*. Washington, DC: World Bank

World Bank. 2013. "Bangladesh Poverty Assessment: Assessing a Decade of Progress in Reducing Poverty, 2000-2010." Bangladesh Development Series, Paper No. 31.

World Bank. 2015. *Rising through Cities in Ghana: Ghana Urbanization Review.* Washington, DC: World Bank.

World Bank. 2015. *Ethiopia Poverty Assessment 2014*. Washington, DC: World Bank.

World Bank. 2015. *World Development Report 2016: Digital Dividends*. Washington, DC: World Bank.

World Bank. 2016. "World Bank Group Launches Groundbreaking Financing Facility to Protect Poorest Countries against Pandemics." *World Bank,* May 21, 2016 Press Release.

World Bank. forthcoming. *World Development Report 2017: Governance and the Law*. Washington, DC: World Bank.

World Bank and GFDRR. 2012. "Disaster Risk Financing and Insurance Program." *GFDRR.*

World Bank and World Trade Organization, 2015. *The Role of Trade in Ending Poverty*. World Trade Organization: Geneva.

World Bank and International Monetary Fund. 2016. *Global Monitoring Report 2015/2016: Development Goals in an Era of Demographic Change.* Washington, DC: World Bank.

World Bank. Undated. *Transformation through Infrastructure: Infrastructure Strategy Update FY2012-2015.* Washington, DC: World Bank.

World Health Organization. 2014. "Investing In Water and Sanitation: Increasing Access, Reducing Inequalities." *UN-Water Global Analysis and Assessment of Sanitation and Drinking-Water*, GLAAS 2014 Report.