

Human Capital: A Project for the World

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1. EXECUTIVE SUMMARY

Human capital is central to the World Bank Group’s efforts to end extreme poverty by 2030 and raise the incomes of the bottom 40 percent of people in each country. Recognizing that human capital matters and that outcomes are falling far short of what is needed for people and economies to survive and thrive in a rapidly changing world, the WBG’s Human Capital Project is helping countries to prioritize more and better investments in people for greater equity and growth.

Where human capital has received consistent attention over time, the gains have been dramatic as in the cases of Singapore, Ireland, Finland, and the Republic of Korea. Yet policymakers often struggle to make the case for human capital investments, which take time to produce benefits for an economy. While investing in both physical and human capital is crucial for growth, countries often underinvest in the latter and miss the opportunity to create a virtuous circle between them.

Rapid technological change is raising the cost of inaction on human capital. As the forthcoming *World Development Report (WDR) 2019: The Changing Nature of Work* notes, the frontier for skills is moving rapidly, bringing both opportunities and risks. However, juxtaposed against the rising demand for higher-level skills are significant gaps in health, learning, nutrition and resilience.

The Human Capital Project (HCP) has three closely connected streams of work, covering data, measurement and research, and country engagement. The project is (i) developing a new Human Capital Index (ii) launching a program to strengthen research and measurement as a public good, and (iii) supporting countries as they tackle the worst barriers to human capital.

The HCI differs from existing indices because it will link human capital outcomes to productivity and income levels. Country performance will be expressed as distance to a frontier of complete education and full health. Countries will be able to assess how much growth they are foregoing because of human capital gaps, compare their rates of progress, and gauge how much faster they can reach the frontier by strengthening human capital outcomes.

The HCP will facilitate outcome-driven policy action on many fronts, recognizing the roles of households, governments, and non-state actors in human capital formation. Focus areas include mobilizing resources as needed and spending them better, regulating non-state actors for greater impact and equity, tackling entrenched governance problems, improving the investment climate, empowering women and girls, and raising public awareness and demand.

Money matters, but is not sufficient to guarantee better human capital outcomes. Efficiency of spending, as well as governance and service delivery challenges need to be tackled head-on. In many countries, these problems need much greater attention for investment to have greater impact where it is needed most. Contextual challenges such as population dynamics and fragility call for urgent attention, and make impactful and sustained investment ever more important.

The HCP will elevate attention to the need for “whole of government” strategies, beginning with several “early adopters” and extending to all interested countries. There are three basic principles: (i) linking sectoral programs together (ii) sustaining and evolving across political cycles and (iii) being informed by an expanded evidence base. This model is characteristic of the best performing countries.

The first prototype of the HCI will be published at the Annual Meetings in October 2018 and updated at least every three years.

2. BUILDING HUMAN CAPITAL FOR GREATER EQUITY AND GROWTH

The Forward Look outlines three strategic ways to achieve the World Bank Group's twin goals: working to accelerate inclusive and sustainable economic growth; *helping countries to invest more effectively in people*; and fostering resilience to global shocks and threats (WBG, 2017). The Human Capital Project (HCP), which is helping countries achieve better human capital outcomes by prioritizing more and better investments in people, is a major step towards realizing this strategic approach. This paper describes how the HCP will raise awareness of human capital as central to the WBG's efforts to end extreme poverty by 2030 and raise the incomes of the bottom 40 percent of people in each country. Using the Human Capital Index as an entry point into a much-needed conversation linking foregone economic growth with weak human capital outcomes, the project will also support countries as they develop more evidence-based approaches to transform human capital.

Human capital is a population's health, skills, knowledge, experience, and habits (Becker, 1964). Undeniably, education, health, resilience, and access to opportunities have intrinsic value and they are essential to increase productivity. They are important for inclusive human progress because they reduce inequality, improve welfare, produce intergenerational benefits, and promote growth and competitiveness. A 2018 WBG report, *The Changing Wealth of Nations*, which measures human capital using the present value of future income of the workforce, shows that human capital accounts for the largest share of wealth globally. The HCP aims to help build human capital by leveraging the Human Capital Index, which quantifies human capital as the contribution of health and education to the productivity of the next generation, relative to a benchmark of complete education and full health (see Box 1). The country engagement and measurement and research pillars of the project support country-level action to tackle the worst barriers to human capital.

Economic growth and development depend on human capital, physical capital and factors affecting the productivity of both. Investments in each of these complement the other: even a highly-educated and healthy workforce still requires both physical capital such as infrastructure and machines and a stable, well-governed economy to be productive. In turn, human capital investments equip the workforce to better utilize physical capital, earn more, and invest more in improving an economy's physical capital. To promote sustainable growth, governments must balance the trade-offs between investing in physical and human capital, and ultimately make the whole economy more productive and well governed. Where human capital has received consistent attention over time, the gains have been dramatic. Examples include the historic transformation of countries such as Singapore, Ireland, Finland, and the Republic of Korea.

Yet policymakers often struggle to make the case for human capital investments, which take time to produce benefits for an economy. While investing in both physical and human capital is crucial for growth, countries often underinvest in the latter and miss the opportunity to create a virtuous circle between them. The HCP will help countries move towards sustained attention to human capital investments and results by elevating a more informed discourse around investing in people and facilitating outcome-driven policy action on many important fronts. These include mobilizing resources where needed and spending them better, regulating non-state actors for greater impact and equity, tackling entrenched governance problems, improving the investment climate, empowering women and girls, and raising public awareness and demand. The HCP will also highlight the human capital benefits of coordinated action across sectors such as health, education, social protection, agriculture, water and sanitation, roads and power. Investing in human capital may require hard

choices, but these choices are not a zero-sum game. Many investments outside the social sectors can be designed to augment human capital.

2.1. Why human capital requires urgent attention

Low levels of human capital can have long-lasting negative consequences, felt most by poor people. Today, technology-driven changes in production structures can increase the cost of inaction. As the forthcoming *World Development Report (WDR) 2019: The Changing Nature of Work* notes, the frontier for skills is moving rapidly, bringing both opportunities and risks. Juxtaposed against the rising demand for higher-level skills are some significant gaps. A quarter of the world's young children may not achieve their full potential because of chronic malnutrition and illness that result in stunting, or low height for age, which can affect cognitive development, school performance and income. Student learning outcomes are in crisis in many countries, as detailed in *World Development Report 2018: Learning to Realize Education's Promise*. Half the world's population cannot access essential health services (WHO, WBG, 2017), and four out of five poor people in low-income countries are not covered by a social safety net (WB, 2018).

These challenges are further complicated by global trends, such as climate change and forced displacement of people, which risk eroding hard-won development gains. The ability to adapt to climate change depends, for instance, on factors such as strong health systems and sanitation and on high levels of education. Trained farmers with access to accurate information make better management decisions, such as choosing crop varieties that are less dependent on volatile rainfall (Di Falco et al. 2010) and are more likely to use insurance as a risk mitigation tool (Patt et al. 2010a). The latest data on forced displacement show that a record 68.5 million people were refugees in 2017, of whom 85 percent are in developing countries (UNHCR, 2018). Delivering quality services to displaced groups is particularly challenging and can strain local health and education systems.

If countries act now, the magnitude of potential impact is great. *Individuals* benefit directly from human capital investments; for example, globally, the average return to an additional year of education is about 10 percent, and especially large in low- and middle-income countries (Montenegro and Patrinos, 2014). In the United States, replacing a low-quality teacher in an elementary school classroom with an average-quality teacher raises the combined lifetime income of that classroom's students by US\$250,000 (Chetty, Friedman and Rockoff, 2014). Gains also add up for *economies*. Recent development accounting studies show that between 10 and 30 percent of the differences in per capita income between countries can be attributed to human capital alone. These gains can be even larger once the quality of workers' skills and how different skills combine are accounted for (Flabbi and Gatti, 2018). By raising incomes, human capital also helps reduce poverty. Finally, human capital matters for stronger *societies*. For example, education makes people more trusting and tolerant (Cavaille and Marshall, 2017) and social capital is in turn linked with increased economic growth (Knack and Keefer, 1997). More on the case for human capital is in Chapter 2 of the forthcoming *WDR 2019*.

If human capital is not nurtured equitably today, countries run the risk of stagnating at their income level, or of achieving growth that is not inclusive, sustainable, or diversified enough. They also risk significant instability as people's aspirations rise in increasingly connected societies. Improving human capital, especially among the most disadvantaged, can mitigate the risk that skill-biased technological change will deepen the inequality between skilled and unskilled workers. But with business-as-usual, the world faces the prospect of another generation weakened by lost human

potential. For every child who passes through the system without receiving adequate and effective services, reforms to be undertaken in the future are already too late. Added up, delayed action will translate into failure to meet some of the key Sustainable Development Goals in twelve years.

2.2. Who holds the key to human capital?

Households play an important role in human capital formation, with parents taking key decisions such as what to feed a child, when to take her to the doctor, how much early stimulation to provide, and whether or not to send her to school. But poor people or those living on the brink of poverty often lack the means to make human capital investments consistently on their own. Without access to social protection or affordable health care, they are often forced to either sacrifice their children's health and schooling or pay out of pocket for essential services. Even when not financially constrained, families might underinvest in human capital because of thwarted aspirations, lack of information, and social norms such as a preference for sons. It might also be difficult for individuals to quantify, let alone internalize, the large social effects associated with individual investments.

Governments must therefore address these common “market failures” that occur in private human capital investment—providing public goods, addressing externalities, ensuring equity—and invest in human capital with money, political capital and management capacity. Leaving this entirely to individuals is a missed opportunity for broader gains. Disease surveillance systems are a good example. The importance of strengthening these systems and coordinating them regionally and globally as a public good has been a lesson of history, most recently from bird flu and Ebola outbreaks (Marquez, 2013; Gates, 2015). This requires, for instance, developing and maintaining institutional capacity at the national and local levels to perform essential public health functions such as early warning, monitoring, research, and control of the risks and threats of diseases.

Sustaining human capital investments with high social returns is also an important public function. In Kenya, for example, deworming one child decreases the chances of other children becoming infected with worms, which in turn equips those children for higher wages (Ahuja et al., 2015). Some of these externalities—for example, those associated with educating girls—pay off for the health and education of future generations too. The benefits add up in the aggregate and shape economies and societies. Finally, ensuring equitable access to quality social services - acting both on the demand and the supply side - for the most disadvantaged is fundamental to avoid entrenching inequalities.

The role of government spans financing, service provision, and—importantly—effective regulation and recognition of non-state actors. The *private sector* (and also *non-governmental organizations*) provide services on a large scale in many countries. Globally, one in eight children attends a private school at the primary level—but the global data mask much higher private enrollment in some places. For example, in one Nigerian state, 57 percent of children are enrolled in private schools (WDR 2018). Harnessing non-state capacity will also make a difference to whether countries can achieve key SDG targets relating to equitable access to quality services.

In contexts where public capacity to deliver efficient services is weak, governments need to simultaneously improve public capacity as well as strengthen oversight and regulation. The latter enables non-state actors, communities and local leaders to play a more effective role in ensuring that policies and programs get implemented, quality services are affordable and delivered to all, and household behaviors evolve towards human capital accumulation and utilization. Non-state actors

also have a critical role in fostering innovation that can then be evaluated and scaled up, helping to solve service delivery challenges.

Across the world, there are examples of governments successfully turning to non-state actors to fill immediate gaps. In education, for example, in Pakistan's Sindh province, a local government agency created incentives for local entrepreneurs to open new low-cost schools in underserved areas, conditional on meeting minimum facility and teacher education standards and waiving all tuition fees. A recent World Bank impact evaluation of the program found that villages with access to the program saw an increase in enrolment, as well as in test scores (Barrera-Osorio et al. 2017).

In Bangladesh, non-governmental innovation has had distributional impact. Using methods such as social mapping, census taking and community engagement, BRAC—a large international non-governmental development organization that started in Bangladesh—has increased the percentage of deliveries occurring in health facilities, with declines in maternal and neonatal mortality in their urban slum service areas (Roy, 2014).

3. WHAT MATTERS FOR HUMAN CAPITAL OUTCOMES

Some of the most pervasive barriers that countries face in building human capital include low or inconsistent availability of resources, ineffective spending rooted in governance and service delivery challenges, weak regulation of non-state actors, and factors related to population dynamics. Each of these challenges is exacerbated in contexts of fragility, conflict and violence and may lead to the poorest outcomes for people who need to build human capital the most—those marginalized because of factors such as geographic location, race, ethnicity, gender. Bridging the human capital gap requires an approach led from the top that extends beyond the traditional social sectors to encompass all of government, so that actions are part of an overarching, integrated human capital plan.

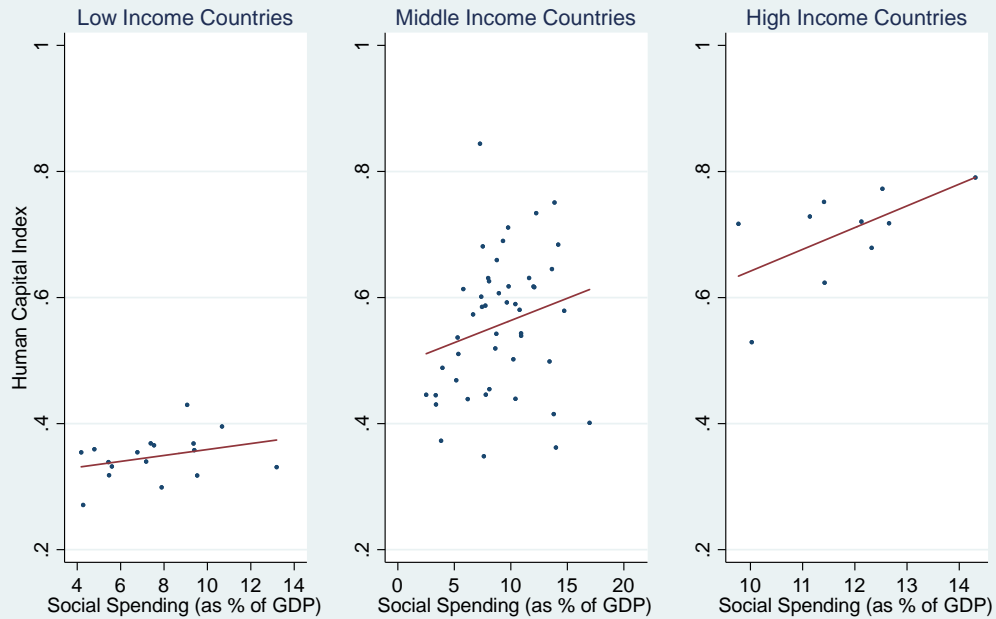
3.1. Money matters, but is not sufficient to guarantee outcomes

On average, countries with higher share of social sector spending over GDP display better human capital outcomes (see Box 1). Nevertheless, the relationship is characterized by large variability, and spending more is not a sufficient condition for better human capital outcomes. Quality is as important as quantity. High shares of spending for doctors' and teachers' salaries, especially when not linked to their performances, do not necessarily lead to improved results. De Ree et al. (2018) find for Indonesia that an unconditional doubling in teachers' pay did not improve teacher effort or student learning outcomes.

Also, spending for human capital extends much beyond health and education. Transfer programs have led to dramatic improvements in school attainment and child and adolescent health (Saavedra and Garcia, 2016, Lagarde, Haines, and Palmer, 2009). There is well-established evidence that investment in water and sanitation programs (Alsan and Goldin, forthcoming; Coffey, Geruso and Spears 2018), improved quality of air (Ebenstein et al. 2016), and electrification (Lipscomb et al. 2013) can lead to long run improvements in human capital.

Box 1: The complex relationship between social spending and human capital outcomes

Correlation btw Social Spending and Human Capital Outcomes



Graph based on preliminary version of the HCI data

Note: Both the Human Capital Index (see definition in Box 2) and social spending for each country are computed as averages (2010-2015). Social spending (as % of GDP) includes spending on Health, Education, Social Safety Nets for 74 countries that have data.

- The correlation between the Human Capital Index (HCI) and spending in the social sector (as share of GDP) is on average positive, irrespective of country income group.
- Despite this, countries that devote similar amount of resources to investment in human capital often achieve very different results.
- For countries that spend relatively little on human capital, improvements can come from three different margins: dedicating more existing resources to human capital-specific sectors, increasing spending overall, or improving quality on the margin. Most low income countries spend the same or a higher percentage of their national budget on education than high income countries, indicating that prioritization may not be the issue for them, but rather improving quality (WDR, 2018).
- When countries spend a lot, but achieve low levels of human capital, improving *quality* of spending rather than *quantity* is likely to make a bigger difference.

Improving the *efficiency of spending* is key to both strengthening outcomes and attracting more resources. A recent IMF study found that increasing health spending by 10 percent in the least efficient countries would only raise life expectancy by two months, but moving the poorest performers to the frontier of efficiency could raise life expectancy in those countries by about five years. A public expenditure review in Brazil (WBG 2017) showed that savings from efficiency reforms could increase the budget for programs proven to help poor households, while still shrinking overall domestic spending. Capacity to optimize spending is important in all countries.

Where human capital spending is simply too low to serve the population's needs, more *resources* remain necessary. In the poorest countries, improving aid effectiveness and leveraging external financing are key, as through innovative platforms such as the Global Financing Facility in Support of Every Woman Every Child (GFF). The GFF approach brings together multiple financing sources under country leadership to close the financing gap for reproductive, maternal, newborn, child and adolescent health and nutrition by 2030. In many other countries where there is potential for domestic resource mobilization, key steps include deploying various forms of taxation, raising tax compliance, and strengthening tax administration. Taxes on tobacco and other harmful products are an untapped option with dual benefits in many countries for revenues and public health.

Other avenues such as *reform or removal of regressive consumer subsidies* (for example, for fuel), paired with social protection measures to mitigate the impact on poor people, have raised resources that have been helpful for human capital spending in Indonesia, Zambia, Egypt, and many other countries. While much of the savings generated from reform in Zambia helped to curtail the national deficit, the country will also likely triple the size of its Social Cash Transfer Scheme in 2018 through energy subsidy reallocation, aiming to reach 750,000 poor households.

Countries rich in *natural resources* often simultaneously suffer from weak human capital outcomes. They need to connect these two realities strategically, by investing a significant share of their non-renewable resource revenues into investments in people designed to produce social and economic benefits in the long run. Although this has not proved easy to achieve, some countries such as Chile, Malaysia, and Norway have demonstrated success in spending wisely (de la Brière et al. 2017).

From the perspective of the WBG, the *Maximizing Financing for Development* approach in country engagement emphasizes pursuing sustainable private sector solutions for service delivery and/or financing, where they can help achieve development goals, while reserving scarce public finance for where it is most needed, such as human capital and basic infrastructure investments.

3.2. Broad patterns of spending and outcomes

While country contexts vary significantly, there are at least four broad patterns of spending and outcomes that are commonly seen among countries. The HCP will analyze these patterns in the development and customization of strategies to improve human capital outcomes, and to connect countries that can benefit from knowledge sharing based on current and historical experiences.

1. ***Low capacity to mobilize resources, low investment in human capital, and high needs.***

Many countries have limited capacity for investment in human capital, characterized by a low share of revenues in national income, and may take time to increase domestic resources as they build institutions, curb leakages, and improve public financial management. These are typically the world's poorest or most vulnerable countries, many of which need help with

resources for foundational investments, often in the aftermath of devastating crises. Many are characterized by high fertility rates and dependency ratios as well as weak coverage of quality social services at the frontline. Niger, Sierra Leone, and Liberia are examples of countries with weak resources and implementation capacity in the face of urgent needs. Some countries such as Ethiopia and Rwanda are prioritizing human capital, focusing on key results, and overcoming challenges steadily, even though their overall means are limited. For all these countries, however, the limited availability of resources is a bottleneck and coordinated external assistance remains very important.

2. ***High capacity to mobilize resources, low investment in human capital, and weak outcomes.*** Some countries could raise more resources for human capital but are chronically underinvesting, sometimes in the face of deep challenges. They are characterized by a low share of public spending for human development, and could either be (i) raising limited revenues overall for several reasons including low taxation, or (ii) failing to prioritize human capital within an otherwise reasonable level of resources. They may also face serious governance, implementation, and equity challenges. Nigeria, for example, has very urgent needs, but a large mobilization gap (government revenues as share of GDP are below the average for Sub-Saharan Africa), and low prioritization of human development spending within the budget. Public resources for human capital development need to be urgently expanded and resources managed for maximum impact.
3. ***High investment in human capital, without commensurate outcomes.*** Some countries *are investing considerably but without strong outcomes.* Governance and management challenges may translate into inefficient and low-quality service delivery. Indonesia's current medium-term development plan includes a strong focus on social assistance where directing significant public resources towards pro-poor programs has been made possible by removing long-standing energy subsidies. However, its next challenge is to see that improved governance translates these resources into better health, nutrition, and learning outcomes. Another example is Costa Rica, which spends approximately 7 percent of GDP on education, but needs to address issues such as low teacher quality and insufficient school readiness in order to tackle high dropout rates and disappointing student learning outcomes.
4. ***High level/efficiency of human capital spending, good outcomes.*** While a number of countries are investing well and getting excellent returns on their human capital investments, the challenge of sustaining results is a continuous one. The frontier for skills is not static, so these countries also need to constantly evolve and adapt. Singapore, one of the highest performers in the world on human capital, continues to focus on early childhood development and tackling diabetes as key national priorities this year. Success in achieving high human capital outcomes reflects not only well conceived and implemented sectoral policies but also the underlying efficiency of public sector systems.

3.3. Beyond money: factors influencing what happens at the frontline

Governance and accountability are overarching problems affecting development in general, and accounting for significant variation in human capital outcomes. For example, quality of the bureaucracy and control of corruption are important factors explaining why spending on public health and primary education is more effective in reducing infant mortality or improving learning outcomes in some countries (Rajkumar and Swaroop, 2008). Often, policy choices and allocation of

resources are not aligned properly with service delivery challenges. Underlying *governance dynamics* and imbalances in power and resources in the policy arena may result in some groups being excluded while others unduly influence policy to serve their needs. Even when policies and institutions are in place, *implementation* is often lagging. Although spending on wages and procurement may be high, in some countries school grants do not reach schools, health workers are not paid on time, and drugs are not in stock. Strong rural-urban or gender biases in service delivery systems also undermine the quality and equity of services and result in poor distributional impact. Weak regulation of both public and private sectors can be a large barrier to better outcomes for the poorest.

The WBG's Service Delivery Indicators (SDI), which reflect the primary education and health experiences of 450 million people in 10 African countries, have revealed a trifecta of poor service provider knowledge, low levels of effort, and a lack of adequate resources. Across these countries less than 20 percent of teachers master the curriculum they teach, and on average, health providers misdiagnose half the basic medical conditions they encounter. In one country, only 43 percent of primary school teachers were in class and teaching during a visit, while in another, almost half the health providers were not in the facility. Needless to say, these crippling problems in *service delivery*—including gaps in management—directly affect human capital outcomes. For instance, improving teacher knowledge to the minimum standard in SDI countries would reduce the gap in children's observed education outcomes by a third (Bold et al. 2018). SDI findings are now informing reforms and program design in many countries, including in Tanzania, where children's ability to read is improving as a result of targeted incentives in program financing.

Across these complex problems, action needs to be taken on many fronts to tackle governance and service delivery challenges, including better alignment of incentives within systems, fostering of competition through benchmarking, investments in civil service reform, management capacity and human resources at the frontline, and improved financial management and procurement systems. Countries also need to use measurement and transparency to increase accountability, leverage technologies to boost human capital outcomes for the poorest (see *Disruptive Technology and the World Bank Group, Maximizing Opportunities, Mitigating Risks, WBG 2018*). Last, but not least, regulation and harnessing of non-state capacity to reach underserved populations is very important.

3.4. Contextual challenges posed by population dynamics and fragility

Population dynamics are important in the context of human capital and growth. High fertility rates remain a persistent problem for many developing countries. Sub-Saharan Africa especially faces a dual challenge: many of the lowest-performing countries on the Human Capital Index also face rapid population growth—with total fertility rates (TFR) above 4 in 39 countries in the region, and as high as 6 to 7 births per woman in countries such as Niger and the Democratic Republic of Congo. In some settings, higher fertility has been linked to lower levels of educational attainment as well as poorer child health (Jayachandran and Pande, 2017), more so for later-born children. At the other extreme, in societies where fertility rates are already low and populations are ageing, human capital needs are evolving and health and education services provide the appropriate set of services.

In the absence of commensurate increases in public resources, high fertility rates can lead to a strain on service delivery by decreasing the health or education resources available per child. This is particularly true in countries where frontline services are already weak and there is typically a shortage of trained health workers and teachers. By contrast, bringing down fertility rates allows a

country to begin reaping its demographic dividend, reducing dependency ratios and freeing up more household and public resources to invest in human capital. Some countries, especially in East Asia, have taken timely action to reap significant demographic dividends, by both investing in people and developing a vibrant private sector that absorbs and employs the growing working age population. Thailand is one example, where the TFR fell from 5.5 per women to 2.2 across twenty years, with increased access to voluntary contraception.

Countries affected by *fragility, conflict and violence* face great human capital challenges—disability, potential loss of life, interruption or destruction of basic services, and lack of economic opportunity. Often, social services fail just as the needs of people affected by war, violence and displacement are most acute. The impact is felt not only during crises but has implications through life and across generations. During the first four years of the Syrian conflict, over six million people were without work or out of school (WBG, 2017) and only half of eligible refugee children were attending primary school (UNHCR, 2017). The correlation with reduced earnings over a lifetime is well documented. In Cambodia, where 90 percent of health staff were lost during conflict, there were long-lasting impacts on subsequent human capital development (WBG, 2014). Rebuilding systems after conflict and moving from *ad hoc* humanitarian aid to strong systems for the long run is important, as failure to do so could not only damage people’s health, education, and resilience, but also risk further conflict.

3.5. Call to action: A “whole of government” approach

In addressing the many serious barriers to human capital and less-than-optimal patterns of spending and outcomes, the HCP will elevate attention to the need for “whole of government” strategies. While a more *detailed discussion of integrated strategies at the country level is annexed*, there are three basic principles: (i) linking sectoral programs together (ii) sustaining and evolving across political cycles and (iii) being informed by an expanded evidence base. This model is characteristic of the highest-performing countries on human capital, some of which have achieved complete transformations in just a few decades.

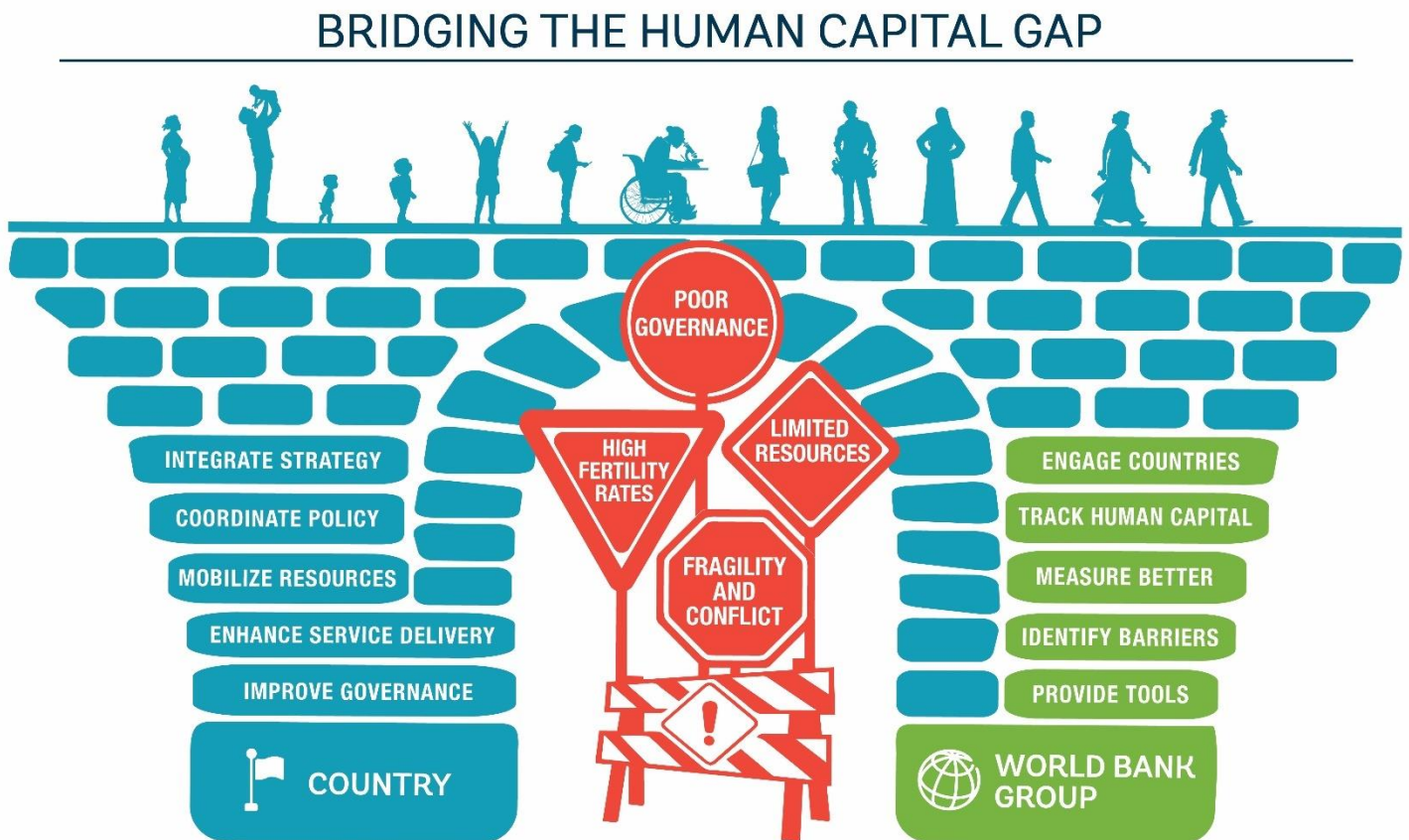
Principle 1: Sustain effort across political cycles. Long-term commitment across political cycles is fundamental to human capital transformation. Country experiences have shown that sustained prioritization of issues is both possible and effective in diverse contexts. It is difficult to imagine today that in 1950, adults in Singapore had on average just two years of formal schooling. With sustained attention to human development, Singapore is now among the world’s highest performers on learning and in the Human Capital Index. The country is still preoccupied with human capital issues in the face of rapid technological advancement.

Principle 2: Link sectoral programs together. Improvements in human capital do not depend exclusively on social sector policies. There is substantial contribution that investments in the infrastructure sectors, complemented with investments in the social sectors, can make in advancing the human capital agenda. Using historical data, Alsan and Goldin (forthcoming) find that a sewage and clean water intervention together accounted for a large share of the decline in child mortality in Massachusetts between 1880 and 1920. Experimental evidence for developing countries support these findings (Coffey, Geruso and Spears 2018). In Chile, rather than being a single program, *Chile Crece Contigo* is a system of coordinated cross-sectoral programs and services targeted at investing in the early years (children under age 5 and their families). About 70 percent of the programs it encompasses existed before it was set up. What it has done innovatively and effectively is linking programs around children’s developmental needs and matching municipal or local networks to

national policies and programs. In Rwanda, social protection and health services are being delivered in a complementary way to target the districts with the highest stunting rates. In Pakistan, recent efforts to adopt a “delivery unit” approach in education, together with performance management reforms, have improved student attendance and teacher performance.

Principle 3: Expand the evidence base for policy design. Undertaking new analyses, even using existing measurement, can help identify which interventions deliver the highest returns to investment and can, in turn, aid in the design of cost-effective interventions. For instance, a deeper understanding is needed of how different aspects of human capital interact. This is especially true at early ages. Recent path-breaking analyses of the long-term impact of early childhood interventions in the U.S. has helped quantify the long-term benefits of targeted investments early in life (Garcia, et al. 2016). Increasingly, research is being carried out on the benefits of similar interventions in developing countries. This sheds light on the interaction between interventions in different sectors such as education, health, social protection, and helps to identify affordable and transformational interventions. As countries strive to bridge human capital gaps, they will need to assess how best to apply these principles to suit their contexts. Doing so will be critical to ensuring that people are able to realize their full productive potential.

Fig 2. Bridging the Human Capital Gap



4. WHAT THE HUMAN CAPITAL PROJECT IS DOING

The HCP has three pillars: The *Human Capital Index*, *Scaling up Measurement*, and *Country Engagement*. Through these lines of work, the WBG will call attention to human capital in countries, identify policy constraints, review investment and efficiency gaps, and work with countries across several dimensions—from measurement and monitoring and evaluation to a range of actions to strengthen service delivery coverage and quality—to ultimately help deliver better human capital outcomes. The HCP will draw on global and cross-sectoral knowledge from across the WBG and beyond, to appropriately underpin the advocated approach in countries.

BOX 2: The Human Capital Index (HCI)

The Index is a summary measure of *the amount of human capital that a child born today can expect to attain by age 18, given the risks of poor health and poor education that prevail in the country where she was born*. The HCI consists of three components:

- **Component 1: Survival.** This component reflects that not all children born today will survive until age 5, when the process of human capital accumulation through formal education begins.
- **Component 2: Expected Years of Quality-Adjusted School.** This component combines information on the *quantity* and *quality* of education. The *quantity* of education is measured as the expected number of years of pre-primary, primary and secondary school that a child can expect to obtain. The *quality* of education reflects new work at the World Bank to harmonize test scores from major international student achievement testing programs.
- **Component 3: Health.** Two proxies for the overall health environment are used to populate this component: (i) adult survival rates, defined as the fraction of 15-year-olds that survive until age 60, and (ii) the rate of stunting for children under age 5. Adult survival rates can also be interpreted as a proxy for the range of non-fatal health outcomes that a child born today would experience as an adult. Stunting is broadly accepted as a proxy for the pre-natal, infant and early childhood health environment.

The HCI formulation has its theoretical underpinnings in the Development Accounting literature. The contribution of the health and education components to the index *reflects their contribution to worker productivity*, as assessed by rigorous micro-econometric studies. This is the biggest difference from indices such as the UN's Human Development Index (HDI).

The index is defined in the range between 0 and 1, where the index takes the value 1 only if the average worker in the country will achieve both full health and her full education potential (14 years of expected quality adjusted years of school). Therefore, if a country scores 0.70 in the HCI, it indicates that the productivity of its average worker is 30 percent below what she could have achieved with complete education and full health.

As the index is closely connected to the Development Accounting literature, *increases in its score can be used to predict basic changes in growth*. If a country has a score of 0.50, then GDP per worker could be twice as high if the country reached the benchmark of complete education and full

health. This is because human capital leads workers to become more productive and earn more, and in turn save more, providing the economy with more physical capital.

The initial version of the index will be presented as a country average as well as disaggregated by gender. Discussions about further disaggregation, such as at subnational level for selected countries, are currently ongoing.

Source: WDR 2019; Kraay (2018). The HCI team has collaborated closely with David Weil (professor and leading expert, Brown University) and received feedback on methodology from a number of prominent academics.

4.1. Pillar one: The Human Capital Index as a powerful entry point.

The theory of change around this new cross-country metric is simple. By helping to create a shared understanding of reality, the Index is expected to draw in high-level political attention needed for transformative action at the country level. Historically, transparent measurement has helped build consensus around important issues. For example, when Germany took part in the first round of the Program for International Student Assessment (PISA), reforms were stimulated by “PISA shock”.

The HCI differs from existing indices because it will link human capital outcomes to productivity and income levels. Country performance will be expressed as distance to a frontier of complete education and full health. Countries will be able to assess how much growth they are foregoing because of human capital gaps, compare their rates of progress, and gauge how much faster they can reach the frontier by strengthening human capital outcomes. The first prototype of the HCI will be published at Annual Meetings and updated at least every three years.

While survival and health data feeding into the Index are drawn from existing sources such as the UN Database of Child Mortality, the UNICEF-WHO-WBG estimates of child stunting, and the UN Population Division, the education data combines perspective measures of school attainment, based on UNESCO-UIS enrollment rates, with new information on learning harmonized across different learning assessments such as PISA, TIMMS, PIRLS, EGRA and various regional tests. This allows calculation of a measure of expected years of schooling which takes into account the quality of that schooling, and the fact that children in some countries are learning far less than in others, despite being in school for the same amount of time.

The HCI does not capture every important aspect of human capital. Similarly, although the HCI comprises a few specific indicators of health and education outcomes, *this does not mean that only health and education policies matter*. The choice of the ingredients in the index has been determined by a combination of factors: a focus on outcomes that are responsive to policy changes in the short-to-medium run; reliance, as much as possible, on direct measurement (rather than highly modelled data); and broad data coverage country-wise. While important, including additional elements of human capital such as workers’ experience and the quality of tertiary education in future versions of the index will crucially depend on data availability and coverage.

All the components of the Index are closely linked with the Sustainable Development Goal targets for health, education, and nutrition. In the survival component, under-5 mortality links to SDG target

3.2; in the school component, learning adjusted school years links to SDG target 4.1; and in the health component, improving adult survival rate by reducing causes of premature mortality links to SDG target 3.4 and stunting links to SDG target 2.2.

4.2. Pillar two: Scaling up measurement and research as a public good

Better measurement, research and transparent information enable countries to create a shared understanding of reality between citizens and policymakers as well as help policymakers to design more effective, context-specific solutions. The HCP's measurement pillar has two objectives: (i) to improve measurement and benchmarking of outcomes, including by expanding country coverage of international tests and national surveys to better measure the different dimensions of human capital, and (ii) to help shed light on the mechanisms that underlie human capital formation and what elements of service delivery are more likely to generate results cost-effectively.

Unpacking the distributional impacts of human capital investment. At the root of human capital issues in many countries are disparities in outcomes between various groups, with extremely low outcomes for poor and marginalized people. As such, future areas of focus will include subnational measurement and a deeper understanding of what influences outcomes for them—as well as where efforts by government to empower these groups and improve their outcomes are falling short.

Expanding existing measurement initiatives. Given the lag between human capital investments and returns, it is important to measure progress in the contributing factors that allow countries to track progress towards outcomes. But regular measurement of service delivery quality in health and education is rare. The *Service Delivery Indicators* will therefore expand to cover 30 countries by 2021—across Africa, Asia, Latin America and the Middle East—and there will be more civil society engagement in all countries for wider dissemination and use of the data. New modules will measure, for instance, quality of managerial practices both in health facilities and schools. Also, the *Measuring Early Learning Quality and Outcomes* (MELQO) initiative, that aims to assess school readiness and the quality of early learning environments comparably across countries, will be scaled up. The *Living Standards Measurement Surveys* (LSMS) could be used to implement new modules designed to understand the skills and workplace readiness of adolescents who leave school early, and to measure the association between school readiness and household situation.

Developing and deploying new measurement tools. Examples of tools being developed include (i) an Education Dashboard, used to track and understand how service delivery quality is changing, which itself should lead to changes in the outcomes measured by subsequent versions of the HCI, and (ii) a Rapid Human Capital Assessment, which would offer a series of specific survey modules designed to capture core metrics, and will help countries assess their progress between Index updates.

4.3. Pillar three: Country engagement to realize better human capital outcomes.

The WBG is well positioned to work in this space through the HCP because it presents evidence on the centrality of human capital for economic development and growth from many perspectives—productivity, national wealth accounting, multidimensional poverty, impact evaluation of programs, systems benchmarking, and unpacking of service delivery. It also works within ministries and levels

of government to help build systems for delivery, informs human capital investments and policies with the latest knowledge and data, and helps attract financing from multiple sources by showing results. Finally, it convenes partners to work collectively to reduce inefficiency and increase impact.

Through IDA and IBRD, the World Bank Group has already been working to meet increasing country demand for *results-based financing for human capital*, where financing is linked to the achievement of pre-agreed results. Fifty countries have asked to join the Global Financing Facility to scale up promising results-based approaches in health; 27 have received support so far, the majority in Africa and Asia. In education, the WBG has far exceeded its 2015 commitment to double results-based financing for education from \$2.5 billion to \$5 billion in five years—crossing \$7 billion in just three years. In addition, Sub-Saharan Africa and Asia are rapidly expanding coverage of social safety nets and allocating substantial resources to conditional cash transfer programs—a form of results-based financing in which cash transfers to households are conditional on key human capital investments such as immunizations, nutrition counseling or enrolling children in school.

Early adopters of the HCP. The HCP is engaging with over 21 “early adopter” countries based on interest shown by countries in engaging with the WBG ahead of the release of the Index. Confirmed early adopters represent a wide range of countries diverse in level of income and geographic location, from Sierra Leone to Saudi Arabia and Uzbekistan to Iraq. Driving this process is strong country ownership and leadership of the human capital agenda in each country, with the nomination by government of a focal point, usually in the ministry of finance or planning, to lead the discussion across government. The idea is for the HCP to help assess how well existing approaches to human capital development are working, identify barriers holding back better outcomes, and support countries in developing their national strategic approaches to transforming human capital outcomes.

Early adopter countries will articulate a strong commitment to *accelerating human capital outcomes* at the WBG-IMF Annual Meetings in Bali in October 2018. As a cohort, they will connect with each other as a community of practice to brainstorm strategic plans and discuss implementation challenges and opportunities, as well as draw up recommendations for WBG engagement. Beyond ongoing policy dialogue and support, the HCP will produce various Index-specific case studies to understand how different countries achieved significant improvements (especially in short periods of time) through targeted policy actions.

Expansion to other countries. The cohort will be expanded as other countries express interest in and commitment to the HCP. Countries will convene again at the WBG-IMF 2019 Spring Meetings and at subsequent Annual and Spring Meetings to showcase progress, discuss challenges, and maintain momentum. The idea is for the HCP’s framework of support to cover all WBG client countries.

BOX 3: What countries stand to gain from engagement with the Human Capital Project

The HCP provides support to countries through a customized package of data, policies, interventions to accelerate human development outcomes. Areas of focus include:

- *Providing access to policy benchmarking/diagnostic tools* to identify resources for metrics, programming and financing for efficient and effective interventions. The WBG offers a host of tools, including Systems Approach for Better Education Results (SABER), the Atlas of Social Protection Indicators of Resilience and Equity (ASPIRE), Service Delivery Indicators (SDI), Primary Health Care Performance Indicators (PHCPI), Water Supply, Sanitation, and Hygiene (WASH) and Poverty Diagnostics.
- *Advising on evidence-based interventions based on the country context, including lessons from FCV contexts where applicable.* The WBG's Strategic Impact Evaluation Fund (SIEF) measures the impact of programs and policies to improve education, health, access to quality water and sanitation, and early childhood development in developing countries.
- *Connecting governments with disruptive technology advancements.* For example, in 2018, the WBG launched TechEmerge Health Brazil to help small firms scale up innovations that have shown proven results to improve health outcomes in the country. The platform matches these firms with healthcare providers to help improve affordability, scale, and efficiency and would hold the potential for replicability in other interested countries.
- *Facilitating peer learning on how to raise ambition for human capital achievement.* Starting with the Early Adopters, the WBG will support a variety of opportunities for countries to connect with others to discuss aspirations, plans, opportunities, and implementation challenges. This community of practice may be supplemented by twinning or partnering relationships, staff exchange programs, or an HCP Fellows program.
- *Improving resource allocation efficiency* by focusing on and demonstrating results, including through expenditure reviews, governance reforms and program effectiveness. Public expenditure reviews are one tool to help identify efficiency improvements in the social sector. Reforms towards results-based financing are also an area of focus.
- *Increasing resources for human capital through resource mobilization or reallocation.* The WBG can provide support to close tax loopholes and exceptions, improve revenue collection, explore excise taxes, and remove or reform regressive subsidies.
- *Involving people to increase take-up and improve delivery of public services.* The WBG has a wealth of information on social accountability and citizen engagement tools to advise governments how the end-users of public services can help improve those services. This could include awareness-building campaigns on various interventions.
- The HCP will also scale up measurement and research as a public good (see section 3.2).

5. A PROPOSED RESULTS FRAMEWORK FOR HUMAN CAPITAL

The development objective of the HCP is to accelerate progress on global human capital outcomes. Its proposed results framework will be widely consulted across the WBG as well as with country clients during 2018, before it is formally adopted.

Acknowledging that it takes time for smart policy reforms and investments to translate into improved human capital outcomes, the HCP proposes a 10-year outlook for results. During this timeframe, the measurement of such progress can be grounded in the Human Capital Index and its theory of change.

The HCP also proposes intermediate indicators that could demonstrate desired progress towards the desired HCP outcomes in three areas: 1) the increasing collection and use of human capital data and analytics to better inform policy decisions and a growing research agenda on the role human capital plays in economic development and how to enhance it. 2) Commitment by countries and demonstrated progress on improving their human capital as well as more and/or smarter investments in policy interventions that yield desired outcomes. 3) How the HCP is gaining traction in governments, donors, academia, media, and the public.

6. QUESTIONS FOR THE COMMITTEE OF THE WHOLE

- (i) How does the Human Capital Project add value and raise awareness of the importance of human capital to national development?
- (ii) How is the Human Capital Project useful in furthering the WBG's country engagements?

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ANNEX

INTEGRATED STRATEGIES TO BRIDGE THE HUMAN CAPITAL GAP

Investments in the health, skills, knowledge, experience and habits of a population are crucial for both growth and equity. As such, they are inexorably linked with the twin goals of the World Bank Group. However, mounting evidence from across the globe suggests that governments are too often falling short of the critical investments necessary to provide quality health, education and social safety net services to their citizens, or not getting the expected results from investment. This leads to a human capital gap that is deeper in countries that can ill-afford it. This annex examines a wide-ranging set of potential changes, improvements, and considerations that will need to be meaningfully integrated by policymakers seeking to accelerate human capital development.

As noted in a set of principles described in the paper “*Human Capital: A Project for the World*”, bridging the human capital gap requires an approach led at the highest level that extends well beyond the traditional social sectors to encompass the whole of government, so that actions are part of an overarching and integrated plan. Such an approach was characteristic of high-performing countries such as Singapore, the Republic of Korea, Japan, Ireland, and Finland.

Concerted policy action is needed on multiple fronts—from resource mobilization and effective budget prioritization and execution to strengthening of systems, governance capacity, and the overall investment climate and job creation—in a way that is sustained over multiple political cycles and links sectoral programs. Governments must also commit to sustaining momentum in the implementation of policy actions. Success, even in top-performing countries, depends on a frequent recalibration of strategy and policy in response to the changing global and local environment.

Strategies are effective when informed by evidence and when they leverage economic windows of opportunity, such as favorable demographic trends, which, in some cases, can be particularly conducive to harnessing productivity. As countries design and implement reforms, attention to the distributional impacts is also fundamental to direct action where it is needed the most and to make rapid progress towards poverty reduction and shared prosperity. This implies that many governments should deliberately complement the focus on the next generation with support to the stock of those adults who do not have the skills or means to ensure a proper livelihood. These strategies are discussed more in detail below.

Box 1: Singapore’s ongoing pursuit of human capital excellence

Singapore is already among the highest-performing countries on the Human Capital Index and continues to focus on prioritizing human capital. On its National Day in 2017, two of three main messages from Prime Minister Lee to Singaporeans were focused on human capital. These included the need for more and better preschools to get all children off to a good start, and the need to tackle diabetes on a war footing. For all the immense progress it has made, the country recognizes that the frontier for skills and human capital is constantly moving.

Only 50 years ago, Singapore faced severe unemployment, poor infrastructure, and housing shortages. As recently as 1950, its adult population had on average two years of formal education and in the 1960s people needed to be educated about nutrition and immunization. In two

generations, Singapore has transformed itself into a success story underpinned by strong human capital. By 2010, the country had increased its average level of schooling five-fold to 10.6 years – exceeding the regional average of 7.9 years. Thanks to sustained leadership and commitment, the country now has one of the world’s highest-performing education systems, and its citizens have access to cost-effective, high quality health services.

The *Global Burden of Disease Study 2010* ranked Singaporean men and women second and fourth respectively in healthy life expectancy at birth, and in 2012 Bloomberg ranked Singapore the world’s healthiest country. Total healthcare expenditure in 2014 was 4.9 percent of GDP, much lower than that in many other developed nations. The public share of total health expenditure was less than half, or about 2.2 percent of GDP.

When examined in the context of other small states that demonstrated remarkable economic results, Singapore’s experience suggests several lessons. First, pragmatic governance is key to ensuring priorities are maintained and results are achieved. Second, leveraging global markets and general-purpose technologies can assist in continued innovation as successes are achieved. Third, the quality of human capital is both an input and an outcome when it comes to not only achieving lasting success but also being ready to face new, unforeseen and evolving challenges.

In this spirit, Singapore remains preoccupied with developing its human capital in the face of rapid technological change. The country has been constantly adjusting, innovating and improving with changing times. For instance, the health needs of Singapore’s population are changing, with several key factors putting significant pressure on the system: aging, rising burden of disease, especially non-communicable diseases; rising healthcare costs, due to higher utilization and improvements in medical technology.

Likewise, “Thinking Schools, Learning Nation” is a first step Singapore has taken to help develop creative and critical thinkers and instill in them a passion for lifelong learning. This initiative has led to the development of a framework on “21st Century Competencies and Student Outcomes”, which articulates the core competencies and values to be delivered to youth through education. Singapore is also grappling with a demographic challenge as its population ages. The country has taken steps to address the changing dependency ratio, including raising the retirement age.

1. Address resource challenges

Spend more efficiently. It can be difficult to make the case for dedicating more resources to something when current spending is inefficient. An IMF study found that increasing health spending by 10 percent in the least efficient countries would only extend life expectancy by two months (Grigoli and Kapsoli, 2013). But if countries could become more efficient, the returns reaped could be considerably higher. The same IMF study found that moving the poorest performers to the frontier of efficiency could raise life expectancy in those countries by approximately five years. Moving from good to great service delivery systems does not typically require the investment of additional resources but rather changes in service delivery approaches and organizational processes. Spending per student in secondary and tertiary education varies greatly among countries that achieve similar outcomes (McKinsey, 2017). The more effective countries tend to focus on teacher quality, school autonomy and competition, and not necessarily on more spending.

Global evidence on social safety nets highlights three complementary reforms that can help realize better outcomes from spending (AFD, WBG, 2018). *First*, investing in strong national systems to streamline and coordinate outreach, intake, and administration of services can have long-lasting returns. In the Kyrgyz Republic, the transition to an automated system for the allocation and payment of social safety nets reduced the process from several days to about two minutes per report. Systems also allow for cross-checking beneficiary data. In 2013, Romania recovered roughly US\$1.65 million through such checks. While investments in such systems can have high upfront costs, economic analyses show worthwhile returns. For example, with WBG support, Lesotho is in the process of establishing better systems to monitor its national pension, for which estimates suggest savings up to 0.5 percent of GDP annually once these measures are in place. *Second*, for social protection, how beneficiaries are targeted has major impacts on program outcomes. Research in Africa and Latin America shows that poverty targeted programs result in greater returns to combat poverty; however, targeting processes also result in higher administrative costs. Countries with higher poverty rates often see decreasing returns to the upfront investment in poverty targeting as compared to more universal programs. *Third*, governments must focus on those programs with proven impacts. In the Dominican Republic, the government reduced its energy subsidies while introducing cash transfers to help poor households with their electricity bills. The reform saw an increase in customers of almost one million, while realizing an annual savings of US\$45 million. The decision about what reforms a government should consider requires a data-driven and political economy informed understanding of the country context.

The 2017 WBG public expenditure review *A Fair Adjustment: Efficiency and Equity of Public Spending in Brazil* found that public spending is significantly less efficient than other countries with similar domestic resource mobilization. The analysis reveals three specific areas of particularly inefficient expenditure: public pensions, government salaries, and tax breaks and other benefits for large companies. In 2017, the public pension system had a deficit of nearly 4.5 percent of GDP and less than 20 percent of this deficient spending went to the poorest 40 percent of households. Savings from reforms in these areas could increase the budget for programs proven to help poor households while still shrinking overall domestic spending.

Periodic benchmarking and spending reviews can help in creating fiscal space. For example, Denmark's rigorous spending reviews typically identify 10 percent to 15 percent in savings across major government spending areas which are used to finance investments or new priorities within the same sector or agency and to re-prioritize in the context of the Government's broader expenditure policy. Building capacity to carry out spending reviews in countries is an important form of support.

Mobilize domestic resources. While large investments do not necessarily guarantee results, creating fiscal space and achieving sustained prioritization is a vital step in developing human capital. Countries that chronically underinvest in human capital can take steps such as closing tax loopholes and exceptions, improving revenue collection, and dismantling inefficient subsidies. Even in low income countries, while overseas development assistance may continue to play a major role, steps need to be taken to prepare for expansion of the tax base and reduced aid dependence.

- ***Maximize development resources appropriately.*** Maximizing Finance for Development (MFD) entails pursuing sustainable private sector solutions (service delivery and/or financing) where they can help achieve development goals, while reserving scarce public finance for where it is most needed (especially areas that cannot attract private solutions including human capital investments and basic infrastructure). The important role of MFD

approaches can benefit the creation and maintenance of human capital.

- ***Reap double benefits with pro-health taxes.*** In addition to increasing tax revenue on the intensive margin by closing loopholes and increasing compliance, countries can also raise revenue through fiscal policies that can directly improve health. These policies, involving taxes on tobacco, alcohol, and sugar, achieve three things: first, they increase government revenues; second, they contribute to health, productivity and human capital; and third, they could potentially reduce health expenditure owing to a lower incidence of some diseases. The World Health Organization (WHO) notes that when a pack of cigarettes costs 10 percent more, demand for cigarettes drops by about 5 percent in developing countries, making a strong case for the greater excise taxation of tobacco products (WBG, 2018). WHO specifically advises finance ministries to raise tobacco excise taxes or other taxes applied only to tobacco products to make up at least 70 percent of retail prices; the significantly higher prices causes many smokers to stop smoking and deters youth consumption the most. Only 33 countries impose taxes that constitute more than 75 percent of the retail price of a pack of cigarettes and taxes in most countries account for less than half of retail prices. The Philippines, Ukraine, and Trinidad and Tobago are among countries that have increased their average excise rate for cigarettes, thereby reducing cigarette sales and consumption and increasing their revenue. In countries like Colombia, Moldova, Botswana and Armenia, tobacco tax increases are part of broader fiscal reforms. These countries have targeted some of the additional revenue to health promotion and health insurance activities.
- ***Reform or remove regressive subsidies.*** Reforming consumer subsidies—such as fuel subsidies—is not simple for many reasons, including longstanding public perceptions and expectations, entrenched vested interests, lack of trust in the government, and legitimate concerns about impact on poor people. In one study of 22 country cases, factors that contributed to success included comprehensive strategic planning before embarking on reforms, assessment of impact, communicating effectively with stakeholders, phasing in liberalization gradually and sequentially, and taking measures such as vouchers and cash transfer programs to protect poor people (Clements et al. 2013). Zambia is an example of a country that has recently cut its energy subsidy and reallocated resources towards human capital investments. In 2017, the government removed fuel subsidies, which had cost over US\$200 million the previous year. While much of the savings helped to curtail the national deficit, the government also realized a significant increase in its Social Cash Transfer Scheme. In 2016, roughly 240,000 poor households benefitted. In 2017, the government more than doubled this number and has set a target of 750,000 for 2018, effectively tripling the size of the program.

Secure fiscally sustainable financing for human capital investments. Securing stable, sufficient and fiscally sustainable funding for human capital investments, including leveraging private funding, is critical. An example of a fiscally responsible mechanism towards universal health coverage is *Seguro Popular* that was introduced in 2003 and provides access to a package of comprehensive health services with financial protection for more than 50 million Mexicans previously excluded from insurance. The scheme is bound by legislative reform which has helped ensure policy continuity across different governments. Rigorous research has also been helpful to secure support and financing for effective social programs. This has been the case in the *Progresas/Oportunidades* program, where a large-scale gold-standard impact evaluation of the pilot has shown effectiveness and helped garner support from the broad political spectrum.

Manage natural resources revenues. Natural resources wealth from oil, natural gas, and minerals can give economies a tremendous boon, which however eventually runs out. Economies that depend heavily on natural resources often simultaneously suffer from weak human capital outcomes. They need to connect these two realities strategically, by investing a significant share of their non-renewable resource revenues into investments in people designed to produce social and economic benefits in the long run. The WBG report *From Mines and Wells to Well-Built Minds: Turning Sub-Saharan Africa's Natural Resource Wealth into Human Capital* notes the value of extending the gains from a natural resource windfall over time by “converting a finite resource into a form of capital that is perpetuated through the generations.” (de la Brière et al. 2017) Although this has not proved easy to achieve, some countries such as Chile, Malaysia, and Norway have demonstrated success in spending wisely. The report lists sound institutions, coherent incentives for service delivery, and open access to information as essential for both governments and citizens to channel resources better and harness their potential to contribute to shared prosperity.

Improve effectiveness of aid platforms for human capital and leverage external finance. Even if their domestic resource challenges are addressed, many countries still struggle to raise enough revenue to sufficiently invest in their human capital or to do the groundwork for identifying priority areas. It is in these countries that external aid will continue to play a role. This will require strong donor coalitions to enhance the harmonization and alignment of aid towards human capital investments, as well as higher quality partnerships with counterpart governments and other country stakeholders. For example, the Global Financing Facility (GFF) brings together multiple stakeholders, including donors and governments, to identify and adequately fund investments in improving health.¹ In the space of education, the International Finance Facility for Education uses donor guarantees and the leveraging ability of the multilateral development banks to increase resources for education, incentivize more borrowing for education and help countries prioritize education in their domestic spending choices.

2. Strengthen service delivery systems, focus on results, and implement effectively

Build a purposeful reform process. Contrary to common discourse, there is nothing "soft" about securing support, designing, and implementing programs that can support inclusive, quality investments in human capital: it is a complex undertaking, where many different pieces need to come together to ensure success. Experience to date shows that it can be achieved by setting up a purposeful reform process that brings together critical elements.

- **Target key outcomes and sustain engagement over time.** Progress in specific areas of human capital development is being made rapidly in countries that have been able to align support around reform in key areas. For example, between 1990 and 2015, through reforms including decentralization, strengthening of general education path, and better school management, Poland recorded one of the fastest improvements in PISA among all OECD countries, with significant gains among students from disadvantaged socioeconomic backgrounds. Vietnam has also reached an extraordinary level of learning, above the OECD average and with more equitable outcomes across socioeconomic groups. Malawi, one of the poorest countries in the world, has reduced its stunting rate by 10 percentage points in 6 years; Peru and Rwanda

¹ Based at the World Bank Group, the Global Financing Facility in Support of Every Woman Every Child was established in 2015 as an innovative financing mechanism to close the financing gap to eliminate preventable deaths of women, newborns and children by 2030 as well as improve the health and wellbeing of women, children, and adolescents.

have also made rapid progress. Senegal reduced stunting significantly by 10 percentage points in a mere five years at a time when economic growth was faltering. However, the experience of Senegal amongst others shows that sustained action and political ownership are essential to keep up progress (WB, forthcoming, with support from the Bill and Melinda Gates Foundation).

- ***Measure to manage.*** In 2006, when Peru embarked upon its ambitious plan to reduce stunting by 5 percentage points in five years, it benefitted from a program of continuous measurement through annual Demographic and Health Surveys, allowing both the government—through Results-Based Budgeting—and civil society to monitor progress towards this goal. In Tanzania, the Service Delivery Indicator results uncovered both low levels of student learning and teacher knowledge leading to a comprehensive education reform program known as “Big Results Now in Education”. Repeated measurement of student and teacher performance can be used to continue catalyzing political support for the reform and to gauge whether interventions are working.
- ***Improve coordination among government agencies.*** Achieving development outcomes requires the intervention of different government agencies and sector programs. Their effective coordination can often ensure that results are aligned with needs and resources are optimized. Some countries have established delivery units either at the center of government or at the Line Ministry to foster coordination among government agencies and drive performance improvements in critical service delivery areas. For instance, the Education Performance Delivery Unit (PADU) and the Performance Management Delivery Unit (PEMANDU), have been critical in improving student learning outcomes as part of the Malaysia Education Blueprint and National Transformation Program. Recent efforts to adopt a delivery unit approach in the education sector in Pakistan have led to impressive achievements in student attendance and teacher performance together with related performance management reforms. Chile’s Early Child Development *Chile Crece Contigo*, rather than being a single program, is a system of coordinated cross-sectoral programs and services targeted at investing in the early years (children under age 5 and their families). About 70 percent of the programs it encompasses existed before it was set up. But Chile Crece Contigo has innovatively and effectively linked programs around children’s developmental needs and matched municipal or local networks to national policies and programs. Similarly, the anti-poverty program *Chile Solidario* was based on an integrated approach to effectively connect disadvantaged families to jobs and services, with very limited spending of less than 0.2 percentage points of GDP (ILO, 2013).
- ***Align performance incentives through results-based financing or performance management reforms.*** Health and education systems cannot deliver quality services when beset with problems such as teacher absenteeism, inadequate knowledge and motivation of service providers. Results-based financing—in which incentives within systems are aligned to deliver the results that matter—has been helpful in moving the focus towards outcomes such as getting girls into secondary school in Bangladesh and beginning to raise the level of learning in Tanzania. Results also leverage more resources as with the Global Financing Facility. For example, Rwanda has championed innovative healthcare financing policies, including the expansion of micro-insurance (*mutuelles*) and performance-based financing that have contributed to remarkable improvements in financial access for the poor, increased utilization of health services and reduced out-of-pocket payments for healthcare. In fact,

utilization of all health services by poorer groups has increased, sometimes dramatically. Use of assisted deliveries, for example, increased from about 12 percent to 43 percent in the poorest quintile. Payments at the point of delivery have reduced and catastrophic expenditures have declined. Similarly, performance management tools have proven effective in improving service delivery. For example, a review of the performance management models implemented by the states of Minas Gerais, Pernambuco, Rio de Janeiro, and Ceará (Brazil) shows that result agreements linked to variable pay and results monitoring can lead to meaningful improvements in education and health outcomes (Viñuela and Zoratto, 2015).

- **Foster competition through benchmarking.** Different mechanisms have been used to provide performance incentives to local governments including ranking districts to encourage district performance. The district performance benchmarking tool of the Government of Punjab (India) has been credited for improvements in the quality of services and the impact of social programs locally implemented under the supervision of the district administration. Similarly, fostering competition among service providers has also proved to be an effective performance tool. Launched in 2007, Morocco's *Concours Qualité* program of competition among health facilities, involving self-assessment and audit by peers, motivates performance improvements and has proven particularly effective in the presence of dynamic and visionary leadership at the local, provincial and regional levels. Chile's National System of Performance Assessment (SNED) is one of several programs within Chile's education system that introduces market-like incentives to enhance school performance. SNED creates competition among schools to encourage teachers to improve their performance. Similarly, friendly competition and rivalry among local schools and communities in Jordan around student scores in the national test has become a key driver for performance (Brixi, et al. 2015).

Build capacity and strengthen resource management systems. Delivering quality social services requires strong capacity to deliver at the frontline, from teachers to nurses to procurement officers, in public systems overall and in specific sectors. This requires governments to not only invest in high quality civil servants but also manage them well. It also requires governments to improve their financial management and procurement to ensure that both human and financial resources are effective.

- **Invest in human resources.** Among low income countries, Ethiopia stands out as having implemented a wide range of civil service reforms to improve public sector effectiveness. According to 2018 WBG analysis on civil service reforms, civil servants in Ethiopia consider merit and performance to be the main drivers for how staff are treated, and view managerial practices as strong, especially in the education sector. In Honduras, a major education sector reform was the approval of the Education Law in 2012 that included amendments to the teacher hiring and supervision system, among other measures, and led to remarkable reductions in teacher absenteeism and improvements in teaching practices. Bangladesh has a long history of training community health workers with the support of NGO partners such as BRAC to support health services (mostly health promotion and disease prevention) especially among poor and vulnerable populations. The number of community health workers has increased from just over 1000 in 1990 to about 100,000 currently and, as noted in a 2017 USAID financed review of community health worker programs globally, this self-sustaining program has contributed to Bangladesh's progress in reducing under-5 mortality and its national tuberculosis control program (Perry et al, 2017). As a pilot program, Indonesia has

trained over 3,000 Human Development Workers to address the need to coordinate nutrition interventions implemented by various programs and sectors at the village level. The plan is to gradually scale up this pilot to support the convergence of priority interventions as part of the Government's National Strategy to Accelerate Stunting Prevention.

- ***Strengthen management capacity.*** Recent evidence shows that organizational and managerial practices are causally associated with more efficient provision of public services for middle-tier bureaucrats or frontline education and health. For example, management practices in Nigeria—particularly giving bureaucrats more autonomy—have led to a higher rate of project completion (Rasul and Rogger, 2016). Management practices have also been shown to explain both learning and health outcomes across a variety of settings, from OECD countries to Brazil, India and Uganda. Interventions aimed at improving service delivery management have an impact on outcomes such as teacher absenteeism in Gambia and student achievement in the US.
- ***Improve financial management and procurement systems.*** This is critical to ensure that resources are spent efficiently and reach frontline providers. In Pakistan, a seemingly minor reform involved issuing a notification guaranteeing timely and full quarterly budget releases. This led to a significant increase in the number of beneficiaries of the Benazir Income Support Program who received four annual transfers. In Mozambique, addressing weaknesses in the flow of funds ensured that by 2016, 93 percent of primary schools received their education grant on time and district expenditures on education were reclassified appropriately for enhanced oversight and accountability. Improving the management of drug supply chains in Mozambique also increased the availability of essential maternal health medicines at the facility level from about 79 percent to 85 percent in the period 2013-2015 and reduced shortages of antiretrovirals from 27 percent to 5 percent. More efficient procurement through bundled procurement, increased competition and buying from producers of generic rather than branded drugs can considerably reduce the cost of antiretrovirals. For instance, prices of antiretroviral drugs to treat HIV/AIDS dropped between 25 percent and 54 percent in Latin America and the Caribbean countries thanks to negotiated agreements between ministries of health and pharmaceutical companies through national and international purchasing pools (PAHO, 2002).

Use measurement and transparent information sharing for accountability. Enabling citizens, especially the poor, to monitor service providers and demand quality services can enhance accountability. In addition, strengthening provider incentives to serve the poor can improve quality in areas where doing so can yield the highest returns. Information and communication campaigns can shape incentives for both citizens and providers. To improve health service performance in Uganda, conventional social accountability tools of citizen report cards and health provider surveys were supplemented to create new interface spaces for community engagement. Joint action plans and community contracts between facility staff and communities served by the facility were used to work towards improved health outcomes such as reduced child mortality and increased child weight (Bjorkman and Svensson, 2009). Somewhat similar efforts elsewhere have not yet reported significant improvements, suggesting the key role in the Uganda case of information improving health and education outcomes also being related to other parallel reforms on improving information and incentives within government through changes in grant financing structures (Khemani 2017, Grandvoinnet et al. 2015, Hubbard, 2007).

Leverage technologies to boost human capital especially for the poorest. New technologies can be both a powerful enabler of better human capital outcomes as well as an important opportunity to be productively seized by a more skilled population. As articulated in *Disruptive Technology and the World Bank Group: Maximizing Opportunities, Mitigating Risks* there exist a variety of untapped opportunities to harness technology to solve lingering development challenges. As the WBG builds the foundational blocks for sustainable, technology-enabled economies, a primary focus should be on ensuring compatibility with existing human capital. As the WBG helps to boost people's capacity to thrive in a technology-enabled economy, investments in human capital will be crucial. Recent public health service delivery achievements in Bangladesh have been partly linked to partnerships between the government and NGOs and the early and rapid adoption of innovation. Governments should identify and use technology to deliver services better. There is strong potential in (1) technology to support significant advances in human-centered service delivery, especially in MICs and LMICs; (2) “big data” to shape policies, and improve service delivery; (3) technology to expand the reach of services to remote areas and to marginalized and vulnerable people (for example, Mindspark in India); and (4) cross-cutting interventions to respond to the changing nature of work.

Where service delivery gaps persist, leverage non-state actors. Governments can also take charge of financing and regulating services rather than providing them directly. This is particularly relevant in contexts where coverage or quality of services are lacking, and governments are facing long-term barriers to improving the situation. There are examples where governments have successfully turned to non-state actors to fill these gaps: for example, in Pakistan’s Sindh province, a local government agency collaborated with the World Bank to create the Promoting Low-Cost Private Schooling in Rural Sindh (PPRS) program, created incentives for local entrepreneurs to open new schools in underserved areas conditional on meeting minimum facility and teacher education standards and waiving all tuition fees. A recent World Bank impact evaluation of the program found that villages with access to the PPRS saw an increase in enrolment and increase in test scores by 0.63 standard deviations (Barrera-Osorio et. al, 2017).

3. Leverage economic contexts to make progress towards poverty reduction

Use demographic windows of opportunity. Some countries, especially in East Asia, have taken timely action to reap significant demographic dividends by both investing in people and developing a vibrant private sector that absorbs and productively employs the growing working age population. Thailand is one example, where the total fertility rate (TFR) fell from 5.5 children per woman to 2.2 in 20 years between 1970 and 1990 thanks to increased access to voluntary contraception. Simultaneous investments in education and health matter for a demographic dividend, as do access to jobs and savings mechanisms. This is profoundly important for many of the worst-performing countries in the Human Capital Index, especially those with high TFR (4 and above) and rapid population growth above 2.9 percent. These countries could achieve a demographic dividend by making foundational investments in human capital. Improving reproductive, maternal, and child health outcomes is critical to this, and so is girls’ education and delayed marriage. In Niger, it is estimated that the annual welfare gains from ending child marriage could reach \$1.7 billion in 2030 (Wodon et al. 2017), or 8 to 9 percent of the country’s projected GDP.

Ensure distributional impact. Through specific policy choices, which have leveled the playing field across excluded groups, countries such as Singapore, Finland, Poland and others have been successful in improving outcomes for the bottom 40 percent. Many developing countries have also made significant strides with distributional impact in recent years. Bangladesh, with support from the Bill and Melinda Gates Foundation and BRAC, has worked through community health workers to

reduce maternal and child mortality. Using methods such as social mapping, census taking and community engagement, BRAC has increased the percentage of deliveries occurring in health facilities with declines in maternal and neonatal mortality in their urban slum service areas (Roy, 2014). Brazil's *Bolsa Familia*, a national cash transfer program, stands as a best practice example of how targeted social assistance can help reduce poverty and inequality. In its first decade of operation, the program contributed to a 15 percent reduction in the Gini coefficient. In international research on social safety nets, the benefits for women are particularly clear with reductions in physical abuse, increases in women's decision-making power, and lowering of risky sexual behavior. When money goes directly to women, there is potentially an increase in household spending on children (Beegle, et al. 2018).

Tanzania and Mozambique have both utilized the Global Financing Facility's financial and coordination support to catalyze implementation of priority actions among poor and marginalized people. In Tanzania, the number of people identified as living below the poverty line that received outpatient health and nutrition services has risen from 2.5 percent to 14 percent within two years. Mozambique has used health systems and financing reforms to improve results by linking disbursements to coverage of health expenditures in underserved areas. Results-based financing can be an effective way of ensuring targeted impact; it can be used to deploy more teachers or health professionals to remote districts instead of having them concentrated in and around urban areas.

Improve human capital of adults for both today and tomorrow. Poor and unevenly distributed human capital is reflected in the low productivity of today's workforce in many countries. Through intergenerational effects, this can affect the human capital of tomorrow. Social protection programs can help alleviate poverty and have other positive human capital outcomes at the household level—such as uptake of health and education services, dietary diversity, and child development outcomes—that will contribute to future human capital outcomes. They also can increase labor market outcomes in the immediate term (Bastagli et al. 2016, Baird et al. 2018). Complementary measures, such as the comprehensive package of support provided under the Productive Inclusion (or “graduation”) model, can further enhance outcomes in financial inclusion, income and revenues, and productive asset ownership, among others. Finally, there is scope for creative solutions. For example, improved training and economic inclusion of community health workers could have the double benefit of delivering better community health and preparing people for the onward job market.

Engage citizens, providers and government agencies. Human capital is a population's health, skills, knowledge, experience, and habits. While governments have an important role to play, individuals also need to be full partners—and, at times, change behaviors—to demand services for and build better human capital outcomes. Social protection programs are increasingly providing the needed information, services, incentives and conditions to use services provided by other agencies. Cash transfer programs can incentivize investments in human capital, for example, by linking payments to school attendance or health clinic visits. Other measures can take the form of information such as working with parents to implement state-of-the-art practices to provide nurturing care, and be jointly responsible for increasing the use of social services.

Tackle underlying political economy constraints. Informal norms, values and the underlying power dynamics also influence how policies get implemented and how effective they are. In Punjab (Pakistan), the Monitoring the Monitors Program was only able to improve inspection rates and reduce absenteeism in competitive electoral districts. This initiative had no effect in non-competitive constituencies that were under the influence of patronage systems and where politically connected inspectors and doctors were less sensitive to monitoring (Callen et al. 2018). The experience of Latin

American countries in implementing performance management reforms in the education sector (Bruns and Schneider 2016) points to managing stakeholders as the most important success factor. Sequencing and bundling reforms to maximize support and impact; compensating losers; and using effective communications strategies to mobilize pro-reform stakeholders in civil society and the business community were some of the strategies that were used to draw key stakeholders into the reform processes and sustain pro-reform coalitions.

Box 2: Nurturing Human Capital in FCV contexts

Conflict has a profound impact on human capital. This impact can have lifelong effects on subsequent generations. Even when a country is being shaken to its foundation, it must take steps to support and protect human capital.

Temporary implementation measures can limit disruptions in the supply side of education and health services. In 1999, the Timor Leste Interim Health Authority partnered with NGOs for district delivery of services. Despite the high cost, the system provided access to healthcare while the government built its national capacity. The temporary system benefitted from clearly articulated plans with frequent monitoring. More recently, the World Bank has worked with WHO and UNICEF in Yemen to provide health services to six million Yemenis and support health facilities or systems in 1,500 locations.

Supply side interventions alone are insufficient when a population is facing the struggles inherent to living in or fleeing from conflict. In Yemen, World Bank support for provision of services is complemented by a US\$700 million investment in social protection that reaches over 700,000 households with cash transfers or employment support. In Liberia, following the Ebola outbreak, many already struggling micro and small enterprises folded from the shock of the crisis. Cash grants, business training, and group formation helped young women directly affected by the disease to start working again.

Well-designed programs can also bridge the humanitarian and development nexus, strengthening systems for the long haul. For example, it is important to build longer-term resilience in poor households that cannot prioritize health and education if they are constantly buffeted by the shocks of fragility. In recent decades, Ethiopia has built a sustainable safety net system that has replaced expensive, reactive humanitarian aid responses to recurrent famine. Establishing this system has saved lives and helped stabilize household ability to invest in human capital, while also allowing the government to shift its attention to other issues affecting human capital development.

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