THE HUMAN CAPITAL PROJECT
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Introduction
By improving their skills, health, knowledge, and resilience—their human capital—people can be more productive, flexible, and innovative. Investments in human capital have become more and more important as the nature of work has evolved in response to rapid technological change. As highlighted in the 2019 *World Development Report (WDR): The Changing Nature of Work*, markets are increasingly demanding workers with higher levels of human capital, especially advanced cognitive and sociobehavioral skills. In Vietnam, for example, workers able to perform nonroutine analytical work earn nearly 25 percent more than those who cannot.

Despite substantial progress, significant gaps in human capital investments are leaving the world poorly prepared for what lies ahead. As detailed in *WDR 2018: Learning to Realize Education’s Promise*, children in many countries are struggling to learn in school. Nearly a quarter of children worldwide are stunted, leaving them vulnerable to poor cognitive development and hampering their ability to learn. Meanwhile, half of the world’s population is not covered by essential health services, and 80 percent of poor people in low-income countries lack a social safety net.

Even though human capital is a central driver of sustainable growth and poverty reduction, policy makers sometimes find it hard to make the case for human capital investments. After all, the benefits of investing in people can take a long time to materialize. Building roads and bridges can generate quick economic—as well as political—benefits. But investing in the human capital of young children will not deliver economic returns until those children grow up and join the workforce.

The result? Countries often underinvest in human capital, thereby missing an opportunity to create a virtuous cycle between physical and human capital and growth and poverty reduction. In response to the risks to stability and prosperity posed by this underinvestment, the World Bank Group has launched the Human Capital Project (HCP). It makes the case for investing in people through country engagement and analytical work, while raising awareness of the costs of inaction and bolstering demand for interventions that will build human capital. The project emphasizes the importance of sustained leadership and coordination across all levels of government—including tackling complex issues such as inadequate or inefficient spending, governance and service delivery challenges, population dynamics, fragility and conflict, and gaps in infrastructure. The HCP has three pillars:

1. *The Human Capital Index (HCI)*. The index is designed to capture the amount of human capital a child born today could expect to attain by age 18. The HCI will be updated periodically to monitor progress, and it will be expanded and refined as data improve.

2. *Scaling up measurement and research*. This medium-term program of data and analytical work is aimed at improving measurement of a wide range
of human capital outcomes, better understanding human capital formation, and linking it to policy actions at the country level.

3. *Country engagement.* This is the key component of the HCP. The World Bank Group is supporting governments, together with development partners, to identify national priorities for human capital development and to implement policies that tackle the barriers preventing countries from reaching their goals.

This introduction summarizes the purpose, scope, and structure of the HCP. The main body of this volume—which also appears as chapter 3 in WDR 2019—describes the evidence supporting the importance of human capital for people, economies, and societies and lays out the rationale and context for the HCP’s pillars and its theory of change. The appendix to this volume describes the methodology of the Human Capital Index in detail.

### The Human Capital Index

The first version of the Human Capital Index will be released at the October 2018 Annual Meetings of the International Monetary Fund and The World Bank Group in Bali, Indonesia. This simple cross-country metric is expected to generate the political attention needed for catalytic action worldwide. Historically, the creation of transparent, easily understood metrics has helped to build consensus around similar issues. For example, when the results of the first Programme for International Student Assessment (PISA) were released in 2001, the relatively poor performance of German students sparked a “PISA shock” that led to educational reforms. And these reforms made a difference—by 2012 German students had surpassed the average of the member countries of the Organisation for Economic Co-operation and Development (OECD).⁵

The index measures the human capital of the next generation, defined as the amount of human capital that a child born today can expect to achieve in view of the risks of poor health and poor education currently prevailing in the country where that child lives. The HCI has three components:

1. **Survival.** This component reflects the fact that children born today need to survive until the process of human capital accumulation through formal education can begin. Survival is measured using the under-5 mortality rate.

2. **Expected years of learning-adjusted school.** Information on the quantity of education a child can expect to obtain by age 18 is combined with a measure of quality: how much children learn in school based on countries’ relative performance on international student achievement tests. This combination produces the expected years of learning-adjusted school. By adjusting for quality, this component reflects the reality that children in
some countries learn far less than those in other countries, despite being in school for a similar amount of time.

3. **Health.** This component uses two indicators for a country’s overall health environment: (1) the rate of stunting of children under age 5; and (2) the adult survival rate, defined as the proportion of 15-year-olds who will survive until age 60. The first indicator reflects the health environment experienced during prenatal, infant, and early childhood development. The second reflects the range of health outcomes that a child born today may experience as an adult.

The health and education components of the index are combined in a way that reflects their contribution to worker productivity, based on evidence from rigorous microeconometric empirical studies. The resulting index ranges between 0 and 1. A country in which a child born today can expect to achieve both full health (no stunting and 100 percent adult survival) and full education potential (14 years of high-quality school by age 18) will score a value of 1 on the index. Therefore, a score of 0.70 signals that the productivity as a future worker for a child born today is 30 percent below what could have been achieved with complete education and full health. Because the theoretical underpinnings of the HCI are in the development accounting literature, the index is linked to real differences in how much income a country can generate in the long run.6 If a country has a score of 0.50, then the gross domestic product (GDP) per worker could be twice as high if the country reached the benchmark of complete education and full health.

A number of criteria guided the design of the index: a focus on salient outcomes, a coherent aggregation strategy across its different components, and broad cross-country coverage of directly measured components. An outcome- rather than inputs-based index is more likely to center the conversation on what matters—results—and to provide incentives for countries not only to invest more but also to invest better. Conversely, an index measuring spending on health, education, or social protection would only capture dollars spent on specific sectors and not whether spending led to better outcomes. The need to produce a salient metric that is responsive to policy action in the short to medium term has oriented the choice of components toward measuring the human capital of the next generation rather than measuring the stock of human capital of the current workforce, which largely is the result of policy choices made decades ago when the current workforce was of school age.

Human capital has many dimensions, but the literature has recognized the usefulness of moving from “a large and eclectic dashboard” to a single summary metric.7 However, doing so requires a coherent aggregation method.8 Finally, the likelihood that a cross-country exercise can spur policy action is strongly influenced by the over-time and cross-country coverage of a metric that is transparent and can be meaningfully mapped to direct measurement.
Scaling up measurement and research

The Human Capital Index will provide a bird’s-eye view of each country’s level of human capital. The Human Capital Project has also launched a medium-term program of data and analytical work to improve measurement of a wide range of human capital outcomes, better understand how human capital is accumulated, and identify the country policies that can promote it.

This work will strengthen measurement of outcomes, including key components of the HCI. Many countries lack the key data needed to recognize their gaps in human capital investments. For example, only 71 countries have participated in PISA and only 65 in the Trends in International Mathematics and Science Study (TIMSS), and coverage of developing countries has been limited. The HCP will promote new measurement initiatives and convene stakeholders to facilitate agreement on developing instruments for existing initiatives.

The HCP will also develop analytics and tools to generate new data on the factors that contribute to human capital development. To that end, the project will support both an expansion of measurement and a research program directed at understanding the interactions between the components of human capital such as how nutrition and education complement one another during a child’s early years. It will also aim to understand how these interactions change over time.

The Human Capital Project will accomplish these goals by helping to scale up initiatives such as the Measuring Early Learning Quality and Outcomes (MELQO) surveys, which assess the school readiness of children between the ages of 3 and 6. It will also take advantage of existing measurement efforts to expand both coverage and the types of questions that can be answered. For example, the Living Standards Measurement Study (LSMS) could be used to implement new modules designed to understand the skills and workplace readiness of adolescent children and connect those measurements to household characteristics such as poverty. These measurement initiatives will be complemented with a research agenda designed to expand understanding of the links between the various components of human capital.

In addition to better understanding how human capital develops, the HCP will intensify efforts to understand what policies can help countries rapidly increase their human capital. It will explicitly connect measurements of human capital outcomes (such as learning) to policy actions (such as improving the quality of schooling or social support through cash transfer programs). In doing so, the HCP will support expansion of the World Bank’s Service Delivery Indicators (SDI) program. SDI surveys measure the quality of education and basic health services in 11 countries, and the SDI program is currently being extended throughout Africa and beyond. The SDI initiative will cover 30 countries by 2021, and new modules will measure,
for example, the quality of management practices in schools and health facilities.

The HCP will also expand and build on existing system benchmarking initiatives—such as the Systems Approach for Better Education Results (SABER), Atlas of Social Protection Indicators of Resilience and Equity (ASPIRE), and measurement of progress toward Universal Health Coverage (UHC)—to inform the more specific policy levers available in a country. These initiatives will be complemented by a research program that draws on data on both policy actions and outcomes to isolate the causal link between the two.

Data and research on human capital are crucial global public goods supported by the World Bank, which can use its convening power to coordinate the improvement or expansion of existing measurement initiatives. When it has a comparative advantage, the World Bank will finance or conduct these efforts itself, such as by including new modules in the LSMS.

**Country engagement**

A critical contribution of the Human Capital Project is to scale up the World Bank’s engagement with countries to bring about transformative investments in human capital. This effort will complement the steady increase in the World Bank’s support of human capital through its lending for human development projects.

The HCP is already working with nearly 30 countries seeking to develop priorities for human capital development, to identify the areas in most need of attention, and to find the best path to overcoming barriers to better results. These governments have nominated focal points, usually in their ministry of finance or planning, to lead a conversation across all of government. These countries will also form a network for sharing knowledge and evidence on the challenges of implementation.

The Human Capital Project will expand as more countries participate and pursue more and better investments in human capital. Strategic support through the project is available to all World Bank client countries, including through an effort focusing on Sub-Saharan Africa.

**Patterns of spending and outcomes**

The Human Capital Project will consider the various contexts that countries face in investing in human capital, reflecting different levels of financing and efficiency of spending for human capital. These contexts vary significantly, but at least four broad patterns of spending and outcomes are common.

The first of these patterns is a combination of low capacity to mobilize resources, low investment in human capital, and high needs. Many countries have a limited capacity for investment in human capital, and so they may need 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. Limited resources are a bottleneck, and coordinated external assistance remains important.

The second pattern is a high capacity to mobilize resources, low investment in human capital, and weak outcomes. These countries could raise more resources for human capital, but they chronically underinvest, sometimes in the face of severe challenges. Characterized by a low share of public spending on human development, they may have limited revenues overall for several reasons, including low taxation, or they may fail to give human capital priority within an otherwise reasonable level of resources. These countries also may face serious governance, implementation, and equity challenges. They need to expand their public resources for human capital development and manage their resources for maximum impact.

The third pattern is high investment in human capital without commensurate outcomes. Governance and management challenges may translate into inefficient, low-quality service delivery. Increasing value for money and efficiency of spending are critical in these countries.

The fourth pattern is a high level of efficiency of human capital spending that achieves good outcomes. Although several countries are investing well and receiving excellent returns on their human capital investments, the challenge of sustaining results is an ongoing one because of the changing nature of work. The frontier for skills is not static, so these countries also need to continually evolve and adapt.

The HCP will analyze these patterns in the development and customization of strategies to improve human capital outcomes. It will then connect countries that can benefit from knowledge sharing based on current and historical experiences.

**Call to action: A “whole-of-government” approach**

In addressing the many serious barriers to human capital and suboptimal patterns of spending and outcomes, the HCP emphasizes the need for “whole-of-government” strategies. Three elements cut across politics, institutions, and knowledge.

The first element is to sustain effort across political cycles. A long-term commitment across political cycles is fundamental to human capital transformation. Country experience shows that sustained prioritization of issues is both possible and effective in diverse contexts. For example, it is difficult to imagine that in 1950 adults in Singapore had, on average, just two years of formal schooling. By paying sustained attention to human development, Singapore is now among the world’s highest performers on learning and in the Human Capital Index. Today, the country remains attentive to human capital issues in the face of rapid technological advancement.

The second element is to link sectoral programs. Improvements in human capital do not depend exclusively on social sector policies. Investments in
the infrastructure sectors, complemented with investments in the social sectors, can make substantial contributions to advancing the human capital agenda. For example, historical data show that sewage and clean water interventions together accounted for a large share of the decline in child mortality in Massachusetts between 1880 and 1920.\(^\text{11}\)

The third element is to **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 example, a deeper understanding is needed of how aspects of human capital interact. This is especially true at early ages. Recent pathbreaking analyses of the long-term impact of early childhood interventions in the United States have helped quantify the long-term benefits of targeted investments early in life.\(^\text{12}\) Research is also under way on the benefits of similar interventions in developing countries, thereby shedding light on the interaction between interventions in different sectors such as education, health, and social protection, and helping to identify affordable and transformational interventions. As countries strive to bridge the human capital gap, they need to assess how best to apply these principles to their contexts. Doing so will be critical to ensuring that people are able to realize their full productive potential.

As the Human Capital Project expands, the demand from countries for better results will continue to grow. Through the International Development Association (IDA) and the International Bank for Reconstruction and Development (IBRD), the World Bank Group already works to meet this increasing demand through, for example, results-based financing for human capital in which 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. Of those, 27 have received support so far, the majority in Africa and Asia. In education, the World Bank Group has far exceeded its 2015 commitment to double results-based financing for education from US$2.5 billion to US$5 billion in five years—and to reach US$7 billion in just three more 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. In these programs, cash transfers to households are conditional on key human capital investments such as immunizations, nutrition counseling, or enrolling children in school.

**A project for the world**

The World Bank Group has long-standing engagements with its client countries in health, education, social protection, water and sanitation, and many other sectors influencing human capital outcomes. Over the last decade, much progress has been made in getting children into school, reducing child mortality and tackling communicable diseases, increasing life expectancy, and expanding social safety nets in low-income countries. However, to meet
the remaining and increasingly urgent challenges, further acceleration and prioritization of human capital outcomes are needed (figure I.1).

Progress is possible. Countries that have successfully managed to align support around reform have seen impressive levels of improvement (box I.1). For example, Poland enacted education reforms between 1990 and 2015 that led to one of the fastest improvements in a PISA score in OECD countries. Vietnam also achieved a meteoric rise in learning, and it recently topped the OECD average PISA score. With concerted political effort and a clear target, Peru managed to reduce its rate of stunting by roughly 15 percentage points over an eight-year period. Malawi succeeded in reducing its rate of stunting by nearly 20 percentage points in under two decades.

As the world faces rapid change and technological advancement, the stage is set for more and better investments in people. In addition to improving incomes and fostering sustainable growth and poverty reduction, these investments are good in and of themselves. The goal of the Human Capital Project is to realize a world in which all children arrive at school well nourished and ready to learn, their classrooms are places that facilitate real learning, and they are given a chance to grow up to live and work as healthy, skilled, and productive adults.

**FIGURE I.1 Nurturing human capital**
BOX I.1 What do countries stand to gain from engagement in the Human Capital Project?

The Human Capital Project (HCP) supports countries through a customized package of data, policies, and interventions to accelerate human development outcomes. It focuses on the following areas:

- **Providing access to policy benchmarking and diagnostic tools** to identify resources for metrics, programming, and financing of efficient and effective interventions. The World Bank Group offers a host of tools, including the Systems Approach for Better Education Results (SABER), 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 tailored to the country context, including lessons from states affected by fragility, conflict, and violence where applicable.** The World Bank Group’s Strategic Impact Evaluation Fund (SIEF) measures the impact of programs and policies aimed at improving education, health, access to quality water and sanitation, and early childhood development in developing countries.

- **Connecting governments with advances in disruptive technology.** For example, in 2018 the World Bank Group launched TechEmerge Health Brazil to help small firms scale up innovations able to boost health outcomes in the country. The platform matches these firms with health care providers to help improve affordability, scale, and efficiency. Such a program could be replicated in other countries.

- **Facilitating peer learning on how to raise interest in building human capital.** The World Bank Group will support a variety of ways in which countries can connect with others to discuss aspirations, plans, opportunities, and the challenges of implementation. This community of practice could be supplemented by twinning or partnering relationships, staff exchange programs, or an HCP fellows program.

- **Improving the efficiency of resource allocation by focusing on and demonstrating results, including through expenditure reviews, governance reforms, and program effectiveness.** Public expenditure reviews are one tool to help identify ways to improve efficiency in the social sectors. Reforms aimed at results-based financing are also an area of focus.

- **Increasing resources for human capital through resource mobilization or reallocation.** The World Bank Group could support efforts to close tax loopholes and exceptions, improve revenue collection, explore excise taxes, and remove or reform regressive subsidies.

- **Engaging citizens in increasing the take-up and improving the delivery of public services.** The World Bank Group has both a wealth of information on social accountability and citizen engagement tools to advise governments on how the end users of public services can help improve those services. Such an effort could include awareness-building campaigns on various interventions.

Notes

3. WHO and World Bank (2017); World Bank (2018a).
5. OECD (2014).

References


