CHAPTER ONE

# The Need for Innovations to Implement the Sustainable Development Goals

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On September 25, 2015, 193 countries adopted a set of goals to end poverty, protect the planet, and ensure prosperity for all people, under the auspices of the UN's 2030 Agenda for Sustainable Development. These Sustainable Development Goals (SDGs) represented a historic breakthrough in multilateral cooperation. As stated in the summit agreement:

> This Agenda is a plan of action for people, planet and prosperity. . . . All countries and all stakeholders, acting in collaborative partnership, will implement this plan. We are resolved to free the human race from the tyranny of poverty and want and to heal and secure our planet. We are determined to take the bold and transformative steps which are urgently needed to shift the world onto a sustainable and resilient path. As we embark on this collective journey, we pledge that no one will be left behind. (United Nations, 2015)

The agreement on the SDGs was followed in December by the Paris Agreement on climate change and preceded by adoption of the UN's Addis Ababa Action Agenda at the July 2015 Third International Conference on Financing for Development.

In 2015 the three agreements were considered a triumph of international cooperation. The pathway had been complicated. Differing visions of the appropriate number of goals and targets, the potential costs, and the means of implementation led to protracted negotiations lasting more than three years, from 2012 to 2015. In 2014 even the holding of a Financing for Development conference was questioned, with many arguing there was little political appetite for more aid commitments. Success in Paris was also far from assured, with the history of the failed 2009 Copenhagen climate summit still a vivid memory in the minds of many people.

So it was with a sense of relief that all national governments reached the agreements with support from so many other stakeholders—civil society, the business community, academics and scientists, young people, and indigenous groups. But the ambitions had been laid out with few specific overarching action plans. A simple question—What happens next?—remained unanswered.

The universal, inclusive, and integrative nature of the SDGs, coupled with their broad scope—seventeen goals and 169 targets—poses specific challenges for implementation. At its core, Agenda 2030 is about stimulating change, because everyone agrees that a business-as-usual approach will not suffice. Moreover, shifts in technology, finance, and global politics are occurring too rapidly for anyone to imagine that a simple continuation along historical pathways will deliver the right results. There is an imperative to articulate new approaches that will alter the trajectories so as to achieve every goal. What needs to change, whose actions need to change, and how can change be organized?

Our purpose in compiling the essays in this volume is to offer practical suggestions for innovations that could and should be adopted to bring about necessary change. Without such change, there is a risk of active inertia, of bureaucracies in governments and companies recognizing limitations in their traditional approaches but finding themselves unable to react with sufficient forcefulness and purpose to alter outcomes.

## Where Are We? SDG Trends and Gaps

The optimism that lay behind the decision to set the SDGs as ambitious global targets stemmed from the considerable gains realized under the Millennium Development Goals (MDGs). Many of the poorest countries registered major accelerations in progress on measures of health and education in particular, even in cases where targets were not explicitly met. At least 20 million and as many as 30 million additional lives were saved compared to pre-MDG trends, the majority in sub-Saharan Africa (McArthur and Rasmussen, 2018).

A starting point for the SDGs is the final stretch in ending extreme poverty. In 2015, around 700 million people were living on less than \$1.90 per day (in 2011 U.S. dollar purchasing power parity terms). By 2030, even under current trajectories, that number is slated to be closer to 440 million people, or 5 percent of the world's population. However, after falling by roughly one percentage point per year over a generation, the global trend of progress is on course to slow. That is because an increasing share of the world's remaining extreme poverty is becoming concentrated in countries with slow rates of progress and fast-growing populations.

Notably, Nigeria is beginning to represent the foremost concentration of the global poverty challenge. As India continues to enjoy rapid progress in reducing extreme poverty, Nigeria's estimated numbers continue to grow. By the end of 2018, India will likely drop below 80 million people living in extreme poverty, while Nigeria's figure is expected to be higher. Of course, the challenges of extreme poverty are not limited to any single country. At least thirty-one countries are "severely off track" with respect to the goals of ending extreme poverty (Gertz and Kharas, 2018). Among 123 countries with data to assess 2030 trajectories across measures of access to water, access to sanitation, undernourishment, and primary school completion rates, only seven countries are on track to meet all four relevant SDG targets (updated calculations based on McArthur and Rasmussen, 2016). Change is needed everywhere.

Among developing countries, the challenges of extreme poverty and basic needs are closely related to the SDG challenge of ending preventable child and maternal deaths. Target 3.1 calls for the world to reduce the maternal mortality ratio to 70 deaths per 100,000 live births, down from around 216 per 100,000 live births in 2015, and target 3.2 calls for every country to reduce the child mortality rate to no more than 25 deaths per 1,000 live births. A recent study (McArthur, Rasmussen, and Yamey, 2018) estimated that approximately forty-two countries are currently off track for both maternal and child mortality. If every country achieves both targets, an additional 11.8 million lives will be saved compared to current trends, including 10.2 million children and 1.6 million mothers. Here, Nigeria accounts for around a third of the lives at stake. When the Democratic Republic of Congo and Pakistan are included, these three countries alone account for more than half the lives at stake.

Many of the countries facing the deepest poverty challenges also have fragile public institutions. A generation ago, those contexts were considered too difficult for long-term development programming, but recent evidence suggests there are opportunities for progress. For example, Schmidt-Traub (2018) finds evidence suggesting that, among country proposals submitted to the Global Fund to Fight AIDS, Tuberculosis, and Malaria (GFATM), there is no difference in technical quality between proposals prepared by fragile states and those prepared by nonfragile states. Nnadi and others (2017) show that with the right strategic and operational tactics, direct interventions like vaccinations can be effective even in diverse conflict situations. In a similar vein, Gertz and Kharas (2018) show that World Bank project evaluations have found increasingly similar success rates in countries that are severely off-track with respect to extreme poverty trajectories. It is not clear that state fragility or a recent lack of progress necessarily inhibits progress toward an SDG target.

At the other end of the economic spectrum, the sustained expansion of many fast-growing countries is driving a realignment of the world economy and its geopolitics. For the past decade, Asia has been the engine of more than half the world's annual aggregate economic growth, even when Japan is excluded. This marks the first time in the modern era that emerging Asia has been the leading driver of the global economy.

In this context, the challenge of sustainable development is universal. Many advanced economies have experienced a slowdown in labor productivity growth, relatively stagnant median wages, and deepening concern over the concentration of economic gains among the very wealthy. Across high-income countries, the share of people reporting inadequate income to buy food throughout the year has been stagnant (Gertz and others, 2017). A study of Canada's domestic trajectories with respect to SDG targets showed that even such an advanced economy is not yet fully on track for any of the first sixteen goals (McArthur and Rasmussen, 2017). This is not because Canada cannot achieve the goals by 2030 but rather because a significant population or set of issues is getting left behind in each policy domain. Thus the global reference points for defining economic success are shifting.

### *Recouple Economic Growth and Social "Good": The Case for Inclusion*

One distinguishing feature of Agenda 2030 is that it calls for inclusion. It speaks to the growing global resonance of arguably the foremost SDG theme—to leave no one behind. Whether the issue is gender, indigenous status, ethnicity, religion, sexual orientation, geography, class, migration status, or some other aspect of identity, every country in the world is grappling with the policy challenges of inclusion and with political tensions resulting from exclusion. In some countries, these tensions are generating constructive public reckonings about groups and communities that have been left behind, with social media technologies providing new forms of public debate. The international #MeToo movement's illumination of long-standing gender inequities highlights the speed at which political transformations can arise. In other countries, governments have taken a more authoritarian or restrictive stance and used the same technologies to limit public discourse. There is constant tension between the benefits and costs afforded by the expanding array of digital tools.

This difference in governments' reactions reflects a central contrast in the world. On the one hand, the SDGs can be interpreted as an effort to promote the successful expansion of the global middle class. From this perspective, the outlook is good. One of the most fundamental structural changes in the world economy is the unprecedented growth of the number of people living on around

$11 to $110 per day. In 2000, fewer than 2 billion people lived in this income band. Today the corresponding number is more than 3 billion, and the world is about to become, for the first time, majority middle class. By the SDG deadline of 2030, there will likely be more than 5 billion middle-class people, with most of the expansion coming in Asia (Kharas, 2017).

On the other hand, these new middle-class people will need an unprecedented expansion of infrastructure to support their livelihoods, including energy, transport, and housing infrastructure, all of which present a challenge to achieving the environmental sustainability goals. These same people will also change the politics of distribution in their own economies, often pushing for more social insurance programs as opposed to social assistance programs from which the poor also benefit (Desai and Kharas, 2017).

Few countries in recent years have been able to achieve economic growth along with a distribution perceived as fair to all. Calls for “inclusive growth” or to “leave no one behind” are heard, but there is less clarity on what this means in practice: probably some combination of more equal access to opportunities through getting the right skills and education, less discriminatory labor markets that reward men and women equally (among other inequities), and stronger public safety nets. There is nothing about how market economies operate that inevitably leads to a deterioration in income distribution, at least in terms of the consumption opportunities of the poorest. As an empirical matter, there was no systematic relationship between growth and distribution in the postwar period. Looking across countries at changes in the Gini coefficient—a measure of inequality—over ten-year periods since 1950 shows that the mean change is zero. Just as many countries saw improvements in their Gini coefficients as saw a deterioration. The same result holds in the period since 2000, when digital technologies and winner-take-all companies have emerged. Of 146 countries that have two surveys separated by about a decade since 2000, thirty-seven have had a worsening of the Gini coefficient by more than 1 percentage point, eighty-one have shown an improvement, and the remaining twenty-eight have had no change.[1]

Nevertheless, the size of changes in top incomes suggests that some growth pathways and policies deliver better distributional outcomes than others. In this book, much of our discussion of targeting places and updating governance has implications for the distributional aspects of opportunities and outcomes.

1. Authors’ calculations, based on Gini coefficient data published in the World Bank’s PovcalNet database.

### *Decouple Economic Growth and Environmental "Bads": The Case for Ecology*

One stark feature of the current global economy is the dramatic strain humanity is placing on Earth's natural assets. Climate change is the most prominent of these, with greenhouse gas (GHG) emissions still growing year over year as of 2017. Based on the current trajectory, emissions will reach roughly 60 gigatons (GT) per year by 2030, rather than decline to around 40 GT, as required by the Paris Agreement on climate (UNEP, 2017).

For most of the twentieth century, economic growth was fueled by growth in energy use and a corresponding increase in GHG emissions. As the scientific evidence mounted of a link between human-driven carbon emissions and climate change, efforts began to decouple economic growth from these negative environmental consequences. In the United States, for example, GHG emissions peaked in 2007. In the following years up to 2016, overall gross domestic product grew by more than 12 percent, while greenhouse gas emissions declined by 11 percent, which translates to a greater than 20 percent decline in emissions per unit of GDP (EPA, 2018; World Bank, 2018). Globally, the onset of decoupling has been less pronounced, as aggregate economic growth rates have been much faster and the transition away from carbon-intensive energy systems generally slower, leading to ongoing increases in overall emissions.

Climate change is not the only environmental "bad" to be considered. A related challenge lies in the world's oceans, which cover 70 percent of the planet. Increasing GHG concentrations are altering their average temperature and acidity and thus severely affecting the nature of the oceans, which in turns affects life on land. SDG 14 helps to highlight that the oceans are also minimally protected, with increasing risk of mass extinctions, as a few countries' fleets push ever farther into the high seas, depleting fish stocks and biodiversity through overharvesting. Pollution amplifies the problems, as plastics and nutrient runoffs are dispensed from intensified industrial and agricultural production systems in mature and fast-growing economies.

To capture these and other challenges, Johan Rockström and colleagues (Steffen and others, 2015) have proposed a framework of nine planetary boundaries, of which biodiversity loss and the use of phosphorus and nitrogen (largely in fertilizer to boost global food production) are already at or beyond critical thresholds. These challenges draw attention to the need for better management of the global commons as a central element of the SDG agenda.

Overall, the evidence suggests that the adverse environmental consequences of existing growth strategies are not inevitable—rather they result from inertia and the absence of incentives to change. Agenda 2030 draws attention to the need for such changes. Its central thesis is that planetary stewardship can keep pace with economic progress if the right technology, financing, incentives, and cross-border cooperation mechanisms are all in place.

## Structural Challenges at the National Level: Communication, Measurement, Coordination

The SDGs focus attention on all the above issues and more, adding up to a much broader set of topics than the main MDG concerns of alleviating extreme poverty and meeting basic needs.[2] But the comprehensive nature of the SDGs means the goals are difficult to explain in a single narrative framework. The story line takes on different emphases in different contexts. It requires governments to focus on issues at home and abroad. It requires them to think about all segments of their populations. It requires clarity across interlocking economic, social, and environmental problems. And it requires partnering among all sectors of society. Even if doing so may already be among the inherent responsibilities of any government, it would be naïve to downplay the challenge of motivating all countries to pursue the full set of issues concurrently.

A separate challenge lies in acquiring the appropriate data to inform that pursuit. In part, this is the challenge of building data systems in developing countries. SDG 2, for example, includes five outcome targets, having to do with undernourishment, malnutrition, smallholder productivity, sustainable agriculture, and biodiversity. As of early 2018 only three of these, SDG targets 2.1, 2.2, and 2.5, had any information included in the UN's SDG global database. Of those three targets, only one indicator, undernourishment, has trend data available for 165 (out of 193) UN member states. For the other two targets and embedded indicators, trend data are available for less than half of all countries. The world's data are insufficient to track meaningfully what is working and what needs to change. The gaps are further amplified when disaggregated data within countries are sought. Unless the relevant data systems are built with urgency, it is not clear how countries can forge needed progress toward these goals.

Policy leadership is essential to overcome inertia on both the narrative and policy integration fronts. To promote public understanding, advocates need to articulate salient priorities and describe specific pathways for action. At the operational level, leaders need to pioneer new forms of integrated insights across domains of expertise and levels of government.

2. MDG 7 concerned environmental sustainability, but that goal did not achieve significant policy traction relative to other goals (McArthur and Rasmussen, 2018).

For example, the global challenges of reducing rates of obesity and noncommunicable disease will only be successfully tackled through a combination of public awareness, private sector innovation, successful urban planning, appropriate policy incentives, and integrated public sector action. The last implies cooperation among traditionally siloed government functions in the arenas of health care, education, and infrastructure. Similarly, the promotion of sustainable food systems will require cooperative action across sectors, jurisdictions, and technical realms.

The SDGs are helpful in drawing attention to these types of structural interconnections. But attention amounts to only one of many necessary ingredients for success. In this respect, the UN has provided a framework. It is up to local leaders of the public and private sectors and civil society to forge the practical connections and solutions within their own geographic and operational domains. In turn, the leaders of international organizations need to craft incentives for disparate communities to cooperate and learn from each other.

## Structural Challenges at the Global Level: Multilateralism Under Stress

During the MDG period, multilateral institutions played a central role in galvanizing new forms of international cooperation. At present, many constituencies' weakening commitments to multilateralism, a broad return to protectionism, shifts in the balance of global economic power, and the spread of nationalist politics all risk undermining the consensus on which Agenda 2030 rests. Emerging powers like China have responded to weakened multilateralism by accelerating efforts to fashion alternatives such as the Asian Infrastructure Investment Bank, multicurrency swap agreements with regional central banks, and the Belt and Road Initiative to build infrastructure linking China with western Asia, Europe, and Africa.

The gaps between those made prosperous and those left behind by economic and technological progress are widening and becoming more difficult to manage. In the early 2000s, after two decades of fiscal turmoil in developing nations, many argued that globalization was not working for the poorest countries. Since 2008, populist politicians have argued that it is not working for the richest countries either.

Ongoing political developments are heightening fears that an era of "deglobalization" is upon us (Saravelos and Winkler, 2016). In the United States, such fears have coincided with threats of trade wars and more pronounced anti-immigration postures. In Europe, anti-immigration parties have gained a new prominence. France's National Front, the Dutch Party for Freedom, and the Austrian Freedom Party all emerged as serious electoral contenders in their respective countries. Anti-globalists have also achieved breakthroughs in countries where they had previously failed to gain traction, such as Germany and Sweden, where the Alternative for Germany and the Sweden Democrats respectively have realized big electoral gains.

In the EU's east, Poland, Hungary, the Czech Republic, and Slovakia are now led by staunchly antiglobalist populists.

These political strains are contributing to three types of multilateral gaps: gaps in institutional assistance, gaps in collective action, and gaps in peer learning.

### *Gaps in Institutional Assistance*

The political currents have affected the environment for global development financing. The Addis Ababa Action Agenda did not secure participation from many finance ministers of developed and emerging markets. No new development finance or implementation plans were connected with the new SDGs. And since the 2030 Agenda was adopted in 2015, rich countries' aid spending on the least developed countries has fallen each year despite international commitments to do the opposite. As table 1-1 shows, total official aid financing for development in 2016 was actually slightly lower than in 2014, even when measured in current dollars, and official lending for development was only slightly higher (and is far smaller in scale).

Nor has private capital stepped into the breach. Many developing countries objected to private sector participation in SDG deliberations, and the private sector was not brought to the negotiating table at Addis Ababa (Hearn, 2017). Basel III regulations aimed at restoring stability to the global financial sector have put a premium on short-term, safe lending. Banks have withdrawn from project finance in developing countries, and even private investment in infrastructure projects has fallen (see table 1-1).

Table 1-1. External Support for SDG Investments

Billions of current U.S. $

| Type of Support | 2014 | 2016 |
|---|---|---|
| Net official aid | 161.8 | 157.7 |
| Net lending by official institutions | 18.6 | 21.8 |
| Private financing | 275.3 | 180.7 |
| Total | 455.7 | 360.2 |

Sources: Data from OECD DAC2a (http://stats.oecd.org/Index.aspx?DataSetCode=Table2A); OECD 2016 Mobilization Survey; World Bank, World Development Indicators (WDI), Public and Publicly Guaranteed (PPG), private creditors; World Bank, International Debt Statistics: Net financial flows bilateral and multilateral; World Bank, WDI PPG, concessional and multilateral; World Bank, Private Participation in Infrastructure (PPI) Project Annual Update Reports.

Note: Private financing includes lending by the private sector to governments and public institutions; guarantees, syndicated loans, collective investment vehicles, and credit lines associated with official projects (2015 value used), as well as private participation in infrastructure (PPI). Net official aid covers concessional finance, whereas net lending by official institutions covers nonconcessional finance.

In developing countries, one implication of flat or declining traditional sources of international finance is that financing for the SDGs must come from "beyond aid," even though aid will remain especially important for low-income countries and a select range of sectors. Going beyond aid can shift the agenda in several ways. First and foremost, it means putting far greater emphasis on domestic resource mobilization. At the recently concluded pledging session for the Global Partnership for Education (GPE), donors committed \$2.3 billion for the three-year period 2018–2020. This covers only a small share of the global education financing gap, but notably, the fifty-three developing country partners of GPE also agreed to raise their domestic contributions to education by \$30 billion, to achieve a total spending level of \$110 billion over the same three-year period.

Second, the private sector continues to innovate with SDG financing. Green bond issuance surpassed \$150 billion in 2017, compared to just \$10 billion in 2013. A target of \$1 trillion by 2020 has been set. Of course, these figures do not necessarily represent increments to financing available for the SDGs, but they do suggest a keen investor appetite. The green bond market appears to tap into investors' desire for transparency, reporting, and accountability in financial investing. If that momentum continues, the whole shape of finance for sustainable development could change.

A third move beyond aid has to do with blending of official and private finance, often for infrastructure projects. Private and public capital play different functions in these efforts. The former brings scale, technology, and implementation expertise. The latter can strengthen institutions, bring complementary scale, help manage risks, improve domestic capacity, provide incentives for public goods, and build a solid pipeline of projects.

### *Gaps in Collective Action*

Among established institutions, fragility in multilateral cooperation impedes reform at a time when renewal is essential. It cannot be overstated that the foremost breakthroughs during the MDG era were largely driven by new institutions, new resources, and new technologies, especially in the health sector. For example, the GFATM and the U.S. president's Emergency Plan for AIDS Relief were both launched in the early 2000s to scale up newly available technologies for the treatment and prevention of infectious diseases, accompanied by pioneering philanthropic investments from the Bill & Melinda Gates Foundation, among others, and major increases in official development assistance for health.

In considering the evolving frontiers of the world's SDG challenges, one needs to consider what new efforts are needed today. We may again need new institutions, new technologies, new policy incentives, and new forms of partnership among public and private actors. Recently launched entities such as the Asian Infrastructure Investment Bank, major transregional undertakings such as the Belt and Road Initiative, and the communities of action for the oceans will undoubtedly frame new contours for international cooperation. Legacy organizations will need to update themselves accordingly or else may not be able to cope.

Even the voluntary national commitments under the Paris Agreement on climate have been challenged in some quarters, leading many subnational players to forge their own international coalitions, sometimes in partnership with other sovereign states. Meanwhile, some major issues don't yet have a proper multilateral governance structure. For example, the world has established conventions for managing commerce conducted on top of the oceans, namely, the Law of the Sea. But the world does not yet have a clear system for addressing threats beneath the ocean surface, such as destructive fishing practices, marine pollution, runoff from improper land use practices, or overexploitation of fisheries. One of the primary difficulties that could hinder collective action on these fronts is that many such threats, while common to numerous countries, vary greatly in intensity and magnitude by location. Thus new forms of regional and global cooperation are essential.

### *Gaps in Peer Learning*

Since many aspects of the SDG challenge will be confronted on domestic fronts, including among the advanced economies, international cooperation will be needed to bolster peer learning. In the wealthiest economies in particular, the challenge to leave no one behind will hinge on innovations in internal cooperation that reach the people in greatest need. Local governments and market players will need to collaborate to promote new forms of progress. A form of reverse technology transfer might also be needed to translate the lessons learned from community development strategies in low-income environments or to leverage low-cost market innovations taking shape on the frontiers of emerging markets. In these and other instances, the task for multilateral institutions will be to support accelerated rates of progress through knowledge sharing rather than providing financial resources, finding points of connection and collaboration among disparate countries that have common domestic aims but face different political and fiscal constraints.

## Upgrading the SDG Action Plan: A Focus on Changing Trajectories

Against this background of new global goals and multilateral strain, it is urgent to put forward SDG action plans of appropriate scope and ambition at global, national, and local levels. Success will depend on changing trajectories in specific cases. Unpacking global averages to the level of individuals is at the heart of "leave no one behind." An illustrative example is global poverty. At the aggregate level, about 1.1 people per second are lifting themselves out of extreme poverty. That is not too far from the rate of 1.5 people per second that is required if all the nearly 630 million people estimated as poor around the start of 2018 (plus natural population growth) are to be helped above the extreme poverty threshold by 2030 (World Data Lab, 2018).

Looking at these numbers, it is tempting simply to encourage everyone to do a little more or a little better. But that would be a misreading of the situation. The issue is that in some places a lot more needs to be done, while in other places trajectories are more or less on track. In fact, in about seventeen countries today, the absolute numbers living in extreme poverty are projected to rise between now and 2030. In another forty-six countries, the number living in extreme poverty will come down but at a rate that still leaves many people in extreme poverty by 2030 (World Data Lab, 2018).

In considering implementation issues for the SDGs, then, it is important to go beyond a global overview to develop a granular picture of what is happening and where. Detailed data need to be made available by country, locality, and, often, community. Strategies, plans, and resource distribution must accord with the granular picture or else efforts will be dissipated over a variety of worthy but less impactful activities. For its part, SDG 1 cannot be achieved in the absence of explicitly funded strategies to address poverty in countries whose current trajectories need the most change.

The SDGs can be a powerful driver of change precisely because they lend themselves to exploring and comparing alternative trajectories. With the end point of 2030 defined and the starting point in 2015 known (at least baselines should be available relatively soon), alternative pathways for each goal can be constructed under different policy and investment scenarios.

### *Nonstate Actors*

While it is true that the SDGs represent an intergovernmental consensus, it does not follow that implementation is solely the responsibility of government. Policymakers in each country can set the strategy and dedicate resources, but implementation will have to reach beyond governments. Private credit and capital markets, for example, will have a key role in financing investments that contribute to progress. Companies will need to provide core goods and services to support achievement of the SDGs while complying with economic, social, and governance standards. Many in the business community have individually embraced the goals, and far-sighted business leaders have recognized that considerable opportunity is implicit in Agenda 2030. The Business and Sustainable Development Commission (2017) identified $12 trillion in new market opportunities in just four economic systems—food and agriculture, cities, energy and materials, and health and well-being. The trick will be to get widespread business engagement in new leadership, new partnerships, new technologies, and new approaches.

Scientists and engineers will also need support to generate crucial technological breakthroughs while ensuring equitable access in low-income environments. Civil society and media will need to keep innovating to ensure citizens are engaged and informed, in a way that holds powerful interests accountable. Subnational and local governments may have to take a stronger role in investing in public goods where national governments are reticent. Various mechanisms for international cooperation that served the world well in the twentieth century might need to be reformed for the twenty-first.

## Innovations for Breakthroughs

The contributors to this book look at frontier issues of implementation. The topics do not try to be comprehensive, and many crucial areas, such as the provision of basic education and health services, are not addressed. Instead, we asked experts in their fields to think about issues where breakthroughs are needed or where not enough attention has been given to a topic. The discussions in this book are squarely focused on new things that must be done to change global and country trajectories to meet the SDGs.

The contributors look at what our current economic system measures and cares about, and note that it fails to measure and capture full value, whether in the form of women's unpaid caregiving or as environmental and social sustainability. Without capturing value properly, economies systematically underinvest in these areas and create distortions, with undesirable consequences. But if maximizing value is to drive behavior, either it must be priced in in all its dimensions or a new generation of entrepreneurs must be persuaded that reputational effects, branding, mission-driven values, and employee retention are sufficient to encourage changes in how business is conducted.

The contributors also look at new approaches to targeting specific places. Thinking about the geography of where we need change is important. The oceans and high seas represent some of the least governed parts of the planet, with dire consequences for both terrestrial and marine life. To take another example, much is made of the need to distill the SDG goals so they are applicable to individual urban areas, but most cities today have a complex mix of municipalities, which makes horizontal coordination just as much a problem as the vertical coordination of cities with national governments to establish and pursue their own localized

SDG targets. And for all the discussion of cities, we should remember that nearly half the world's population—and a far greater fraction of poor people—still live in rural areas. How can SDGs be achieved there? Can we learn more about what places to target by improving our understanding of what is happening at local levels, using new techniques of geospatial observation and building up statistical capabilities within countries to generate spatially disaggregated data?

Ultimately, achieving the SDGs requires agreement among stakeholders on a governance system to address coordination gaps. Updating governance arrangements will be crucial in areas such as citizen participation, multilateral banking, the global commons, coordinating the proliferating partnerships in sectors such as global heath, and even in the way rich countries pursue the SDGs at home and abroad. Without improvements, it is unlikely the institutional structures aiming to support the SDGs will be able to carry out their task.

The authors offer innovative thinking in the three core implementation areas—capturing value, place-based targeting, and multistakeholder governance—addressed in this book.

### *Innovations in Capturing Value*

"We treasure what we measure" is an old business adage. It applies equally to public policymakers and is perhaps the issue most salient to the discrepancy that has arisen between economic growth and sustainable development. Growth alone does not deliver sustainability precisely because it is driven by profit maximization while ignoring other social priorities. To succeed on the SDGs, mechanisms must be found to invest in the things that are valued by society but which private business does not yet necessarily measure or address on its own.

SDG 5, for example, calls for gender equality and the empowerment of all women and girls. Although these principles are critical to achieving inclusive growth, significant gender gaps in economic opportunity and political agency persist. Jeni Klugman and Laura Tyson in chapter 2 examine mechanisms that could narrow the gaps. They note that progress in narrowing the pay gap between women and men—which had been closing in recent years with rising levels of female education—has now slowed in most lower- and middle-income countries. It is still the case that, in addition to being overrepresented in the informal sector labor force and in low-wage occupations, much of women's work consists of (usually) unpaid child care or eldercare. Though some of this unpaid work may be a result of choice, evidence suggests that many women, especially younger adults and older teens, cannot look for paid work because of their unpaid responsibilities. Klugman and Tyson argue that public investment in care services for newborns, infants, and the elderly can reduce the burden of unpaid care on women and boost their labor participation. Extending women's access to financial services can also allow families to save for education and health, and to start small businesses. In addition, Klugman and Tyson call for private businesses and government agencies to help unleash women's potential in the workforce by addressing their own organizational biases in hiring, promotion, and contracting.

Looking at other forms of national-scale investment, there is much talk of the SDGs requiring "integrated" processes with respect to mobilizing resources that address a broad range of goals simultaneously. What do these look like? Amina Mohammed and Simon Zadek in chapter 3 provide firsthand insight into the process that led to Nigeria's first sovereign green bond issuance in 2017. Mohammed's perspective derives from her service as minister of the environment, a post she took up after serving as UN Secretary-General Ban Ki-moon's special adviser on the post-2015 development agenda, right up through the September 2015 SDG summit. Zadek was formerly co-director of the UN Environment's Inquiry into the Design of a Sustainable Financial System. Their chapter, written in their personal capacities, offers a unique account of their collaboration, told through a first-person narrative. When she took up the environment portfolio, Mohammed was looking for instruments to tackle Nigeria's interconnected challenges of poverty, insecurity, poor governance, and environmental degradation. She realized that green bonds could be a way to break down silos among diverse constituencies and called on UN Environment's Inquiry for help. Together they devised a way to harness the interests of influential economic actors, public and private, to deliver measurable progress on environmental outcomes. This approach offered new methods for capturing environmental and political value across constituencies.

The full breadth of SDG ambitions cannot be realized without large-scale contributions from private business, which can help both by innovating new solutions and by minimizing problematic actions. Jane Nelson in chapter 4 argues that common standards, goals, and metrics with respect to environmental, social, and governance indicators will be crucial for success. But any movement toward measuring market actors' contributions faces many technical and political challenges. Nelson therefore offers a framework for leapfrogging from a norm of celebrating standout business entities to mainstreaming business contributions to the SDGs. The personal commitment of individual business leaders forms one crucial piece of the puzzle. Business coalitions are also essential, within and across industries; and here financial institutions and capital market intermediaries play particularly important roles. Policymakers need to do their bit too, creating the policy and regulatory environment that encourages market actors to report the right metrics.

Partnerships of this sort between public and private sectors (along with nonprofit players) are vital to implementing the SDGs. The track record of such collaborations, however, has not been sufficiently successful, according to Ann

Florini. In chapter 5 she argues that most partnerships tend to founder for reasons beyond financial constraints, chiefly skill shortages. Partnerships often do not attract professionals with the requisite expertise to manage and expand collaborations across multiple sectors, each with its own organizing principles, agenda, and culture. Florini explores some of the determinants of the success and failure of multistakeholder efforts even when partners share a common objective. Reviewing the cases of partnerships formed to achieve an important social or developmental goal (health, education, gender equality, and food security), she shows how mismatches between partners' priorities, communication platforms, or timelines can lead to coordination failures. She then outlines some of the skills, incentives, and mindsets that can increase the value of collaboration and gives some examples of programs that provide these ingredients.

SDG 9 addresses three important aspects of sustainable development: infrastructure, industrialization, and innovation. In chapter 6 Rogério Studart examines the unfolding of events in Brazil, which for many years successfully targeted public investments to build up its human capital and end poverty but at the expense of investing in infrastructure. Lack of infrastructure in turn led to private investment and job creation falling well short of desired levels. Studart analyzes Brazil's experience with creating a scaled-up program to invest in more sustainable infrastructure. This is easier said than done. The practical difficulties facing Brazil were considerable, from the need to develop a pipeline of projects with appropriate social and environmental safeguards to undertaking and financing infrastructure in an environment of high domestic interest rates. A platform approach developed by the National Development Bank held initial promise but ran into difficulty as domestic bond markets—the ultimate source of the long-term capital needed for infrastructure—never developed sufficiently. Studart concludes with a salutary reminder of the many complementary activities that are needed to move forward with sustainable infrastructure investments, including coordinated macroeconomic policies, financial market development, regulatory arrangements, innovations to bring in new players and financial instruments, and the effective use of public money to catalyze a program at scale. His takeaway message is that a domestic agency dedicated to sustainable infrastructure is a necessary but by no means sufficient condition for success.

### *Innovations in Place-Based Targeting*

SDG implementation is not an abstraction. It involves making investments and policy choices that affect specific places. Often, however, the geographic elements are not considered, and explicit place-based targeting remains the SDG exception rather than the rule. For example, even though most of those being left behind reside in rural areas, there is no specific SDG target that focuses on the rural dimensions of development. Thanks to new technologies, however, the opportunity is at hand to change the trajectories of rural livelihoods. Bettina Prato in chapter 7 argues that directed public investment in infrastructure for agrifood corridors that connect rural and urban areas, along with improved access to public services, offers promise of accelerating the slow-moving transformation of traditional rural life through outmigration and the shifting of labor from agriculture to off-farm activities. She argues that public policies need to regulate and facilitate supply chain relationships that can link smallholder farmers, including women and youth, to urban areas. Doing so on a large scale requires empowering rural constituencies so that more of the value added from the agrifood system ends up in rural areas. Her key point is that rather than divide the world into rural and urban areas, policymakers should think in terms of spatial policies that connect these together.

If new approaches to spatial planning are to take root, policymakers will need tools to identify and visualize the spatial dimensions of economic and social data. Linda See, Steffen Fritz, Inian Moorthy, Olha Danylo, Michiel van Dijk, and Barbara Ryan in chapter 8 provide examples of the use of satellite remote sensing and call detail metarecords to help generate granular maps of where poor people reside, even in locations such as North Korea where little other evidence is available. These technologies have the considerable attraction of being scalable but lack the institutional base of a public-private partnership that could appropriately fund and catalyze activities to generate a database of evidence from across the globe. In recognition of the proliferation of small-scale attempts to demonstrate what can work, the authors also caution against "indicator fatigue," or the acceptance of reporting requirements and data generation as the end product rather than the input into real actions and impacts.

With 169 SDG targets, the burden of data collection and analysis in monitoring SDG progress can be substantial for all countries, rich or poor. For low-income countries, however, the onus is substantially greater because the statistical agencies have limited personnel and resources. Ryuichi Tomizawa and Noriharu Masugi in chapter 9 evaluate the modalities of technical assistance to help build capacity for statistical agencies in developing nations. Relying on the more than three decades' worth of experience of the Japanese International Cooperation Agency (JICA) in implementing statistical capacity-building programs, the authors conclude that expertise and institutional capabilities are established only by providing painstaking, on-the-ground support to official statistics agencies in the developing world. They refer to the absence of data collection in Cambodia, where no general census took place between 1962 and 1998. Another decade passed in training agency staff, implementing the population census, and preparing for an economic census scheduled for 2011. Tomizawa and Masugi use the lessons of the Cambodian experience to develop a blueprint for improving the ability of statistics agencies across the developing world to collect, use, and disseminate relevant data. They also provide tips on helping statistical agencies utilize "big data," data from the internet, and other sources for developmental needs.

Few demographic shifts will define the place-based contours of the SDG era as much as the growth of cities, especially in low- and middle-income countries. But as Reuben Abraham and Pritika Hingorani point out in chapter 10, the increasingly widespread recognition of cities' importance has not translated into a common understanding of cities, how to define them geographically, and how to ensure governments are responsive to rapidly shifting spatial realities. Taking India as an example, Abraham and Hingorani find the country to be considerably more urbanized than some official statistics suggest. As a result, urban governments need to increase horizontal coordination among neighboring urban areas to promote economies of scale, especially in areas such as transport. They also need to see themselves as systems integrators, providing place-based integration across vertical layers of government. As hosts to more than half of humanity, cities across the globe can serve as the front line for targeting SDG efforts on an extraordinary breadth of issues, ranging from reducing traffic deaths to mitigating the effects of climate change.

One of the major early SDG deadlines is for target 14.5, to conserve 10 percent of coastal and marine areas by 2020. In chapter 11, Enric Sala and Kristin Rechberger consider this target in the context of a growing body of literature suggesting that fully half the ocean needs to be protected. Along with an overview of the ocean's contributions to terrestrial life and the many ways in which humans are severely damaging ocean life through actions ranging from overfishing to acidifying and polluting the seas, Sala and Rechberger present a practical strategy for large-scale conservation. Marine reserves anchor the approach since they can serve as regenerative "fish banks" that promote the growth of ecosystems in neighboring areas. If 30 percent of all countries' exclusive economic zone and at least 80 percent of the high seas are targeted, the 50 percent global protection task can be achieved by 2050, if not sooner. This conservation objective should be accompanied by better regulation of the fishing industry, including dramatically improved regional fisheries management.

### *Innovations in Multistakeholder Governance*

The third area ripe for innovation is governance, broadly defined. The global sustainable development agenda is increasingly defined by its complexity and interconnectedness. Suitable solutions can be found only if diverse players bring knowledge, information, and a commitment to act to the table. Doing so requires new systems of governance that define the roles of the actors, the rules by which they operate, and lines of authority and collaboration linking actors to each other. It also requires spaces in which new players can be integrated into existing transnational networks of experts, stakeholders, and decisionmakers who set agendas, design policy solutions, and evaluate outcomes. We call this type of arrangement multistakeholder governance.

Multistakeholder governance starts with common understandings to inform collective action. One of the core—and novel—SDGs aims is to encourage developed country societies to reflect on their own domestic policies and performance, and to share in a common responsibility for delivering global outcomes. Margaret Biggs and John McArthur in chapter 12 examine these questions in the context of Canada, an advanced economy that is often praised both for its domestic successes and for its history of multilateral contributions. Building on a separate recent benchmarking assessment, Biggs and McArthur show how the SDGs can be adopted as a society's "North Star," a shared outcome framework to shed light on internal and external challenges, drawing attention to which people and issues are being left behind. The authors stress the importance of identifying where policy acceleration or breakthroughs are needed through an assessment of current trajectories. On the domestic side, they consider how all layers of government, business, universities, communities, and civil society can pursue individual and collaborative strategies that allow all Canadians to achieve all the SDGs. Crucially, they argue that the engagement and leadership of indigenous people and substantial improvements in outcomes for indigenous people will be a sine qua non for Canada's SDG progress. Internationally, the authors present a series of guiding questions to identify where an advanced economy like Canada can make the greatest contributions to both collective and external global challenges.

The SDG ambition to "leave no one behind" will be tested at the agenda's interface with civil society. In chapter 13 Dhananjayan Sriskandarajah describes the need for a multidimensional accountability revolution, guided by citizen participation. To frame the challenge, Sriskandarajah asks what it would take for a public official ever to lose her job if an SDG target is not met. For such a thought experiment to be tractable, he argues that civil society's own approaches need to evolve too. Amid increasing concerns of repression in many countries, the implicit norms of SDG governance require civil society to engage in both advocacy and implementation at all scales, while also promoting accountability. This will require revamped funding models that empower community-level action, but only 1 percent of official aid has gone directly to civil society in developing countries. Community foundations offer potentially important vehicles in this regard. Civil society will also need to develop increasingly sophisticated approaches to managing collaboration boundaries with private sector actors. And it will need citizens at the heart of the data revolution. After having played such an important role in contributing to the SDG agreements, civil society must keep innovating at the nexus of these issues to ensure the goals deliver meaningful results in citizens' lives.

Official development institutions tend to be oriented toward doing projects, and their governance systems reflect this proclivity. Projects are an efficient way of delivering specific activities, but they have limitations when multiple players and multiple issues need to be connected. In chapter 14 Naoko Ishii highlights four complex systems that are stressing planetary resources because of the scale of human activity and the difficulties encountered when trying to address these systems through traditional development institutions. She argues that a new approach is needed to manage food, energy, cities, and circular economy issues as systems that have a clear purpose, orient a range of actors, provide the right incentives, have feedback loops, and recognize nonlinearities and tipping points. Developing such systems, and the governance that drives them forward, needs urgent attention. She describes examples of multistakeholder coalitions that provide a sound building block for such systems' governance and advocates extending their use in the four critical areas identified.

Sound global governance systems must also adapt to new constraints and threats. Global health initiatives have proliferated since 2000, many of them created to coordinate an expanding number of key actors. As Ikuo Takizawa explains in chapter 15, many of these initiatives are not yet equipped to address twenty-first-century transnational health issues affecting a cross section of citizens across countries. The spread of some recent epidemics and the inadequacy of existing governance structures to prevent them are illustrative. Takizawa notes that the existing global health initiatives are hampered by resource constraints, fragmentation, and proliferation. One obvious solution would be to consolidate the global health architecture by removing duplication and overlap. In addition to consolidation, Takizawa proposes greater reliance on specific health issue "regimes," or systems of rules that establish incentives and set expectations for a defined group of players. After examining some instances in which global health regimes hold potential for expanded responsibility, Takizawa concludes that these regimes are likely to be more agile in addressing cross-border health issues than existing health initiatives.

Ultimately, successful implementation of the SDGs rests on providing adequate finance in an appropriate policy and institutional context. In developing countries, multilateral development banks (MDBs) can help with both—they provide financing, directly and indirectly, along with significant knowledge products to guide their clients. But multilateral development banks have traditionally been oriented exclusively towards the public sector. As market-oriented development takes root and as business becomes an ever more crucial prime vehicle for scaling up finance, especially in middle-income countries, the MDBs must adapt to complement and catalyze private finance. Mahmoud Mohieldin and Jos Verbeek in chapter 16 consider bringing together a “cascade and a portfolio” approach: a cascade of logical decision making to determine when and under what conditions to bring in private finance and a portfolio of projects that private institutional investors can invest in. Such an approach brings with it a new perspective on risk, something that is hard to change under current governance arrangements in MDBs.

## Conclusion

When the SDGs were adopted, there was hope that implementation would take off rapidly, based on successful planning and institutional experiences established under the MDGs. While some sectors and geographic areas have moved faster than others, much more effort is needed to shift the world from a business-as-usual regimen. It is becoming increasingly clear that new approaches are needed, globally, nationally, and locally, to accelerate implementation in many areas. These new approaches are untested and will require a period of innovation and experimentation.

The chapters that follow offer a collection of views on some aspects of innovation that could lead to breakthroughs. The magnitude of the challenge is daunting, but we are excited by the broad-ranging discussions now taking place in business boardrooms, in multilateral institution management offices, within national governments around the world, among local officials, among activists, and in science and academia. This volume offers just a sampling of the dialogue. We hope it inspires our readers to reflect on how they too might join the conversation and stimulate breakthrough movements to help achieve the SDGs by 2030.

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