

UPDATING INSTITUTIONAL TECHNOLOGIES

A PURPOSE-DRIVEN FUND
TO END EXTREME POVERTY

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Updating institutional technologies: A purpose-driven fund to end extreme poverty

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Abstract

Development outcomes are often affected by both accessibility to physical technology and the institutional structures through which aid is delivered. For the last two decades, vertical funds—development financing vehicles with a targeted programmatic focus and mixed funding sources— have been used in a number of sectors with mixed results. Informed by successful efforts in the health sector, we argue that institutions are most likely to be successful when focused on advancing the availability of relevant frontier technologies to help drive key outcomes directly. By articulating key design principles, we posit that such institutions can be structured to ensure transparent system learning. In particular, we argue that a new fund to end extreme poverty is now feasible technologically (thanks to new digital cash transfer options) and financially (thanks to the global reduction in poverty to date), informed by a growing body of evidence (thanks to new research approaches).

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I. Introduction

Nearly half a century ago, in 1977, Richard Nelson's prominent book, *The Moon and the Ghetto*, framed a puzzle: why could the United States muster the pioneering ingenuity to send people safely to the moon and back at the same time as it was seemingly unable to solve chronic social problems like weak education for low-income children, or water pollution and drug addiction. He argued that constraints to progress were due less to politics and more to differences in technological innovation and a lack of obvious solutions. In 2011, Nelson stressed the ongoing persistence of the underlying issues to consider how innovation systems could be reoriented to meet pressing societal needs. He emphasized the difficulty of generating some forms of know-how and redesigning innovation systems in general (Nelson, 2011).

In the realm of development finance and development assistance, the evolution of problem-specific technology systems plays a first-order role in driving development outcomes – perhaps a much bigger role than is commonly realized. Bilateral and multilateral institutions can thrive or stagnate based not only on their ability to broaden access to technology, but also on their ability to serve as a fulcrum of applied research and learning for technological frontiers and outcomes at large scale. Since the turn of the millennium in 2000, the most successful international institutions – or institutional technologies – have been those that serve both purposes: enabling widespread access to crucial technologies while also promoting dynamic learning around changes in underlying technologies and related societal applications.

This notion of technology-driven implementation institutions differs from traditional conceptions of “vertical funds,” typically defined as international mechanisms for channeling official development assistance related to a specific issue or theme.¹ Institutions are themselves a form of technology. Their organizational structures and operating modalities are just as important as their topical focus. The dynamism of an operative technology space needs to inform the design of a relevant institution towards a core purpose, such that it can continue to update its protocols and implementation strategies as the evidence base and opportunity set evolve, while remaining focused on a central mission and outcome.

The profound ongoing challenge of extreme poverty offers an important example of a mismatch between rapidly evolving implementation technology frontiers, fast-growing academic evidence, and current institutional technologies. Over the past decade, breakthrough digital technologies have dramatically lowered the cost and expanded the potential benefits of direct cash transfers as a highly efficient tool for reducing poverty. While experts reasonably differ over the extent to which such social assistance tools should form the core of global poverty reduction efforts, there is now considerable evidence regarding the poverty-reducing efficacy of such transfers amid limited adverse outcomes. So while Nelson's original Moon versus Ghetto thesis hinged on shortfalls in relevant anti-poverty technologies, the experience with digital cash transfers shows that a technology for ending extreme poverty does indeed exist. Declining cost structures only increase the viability on a global scale. But the world's existing institutional anti-poverty technologies have not kept pace with relevant implementation technologies.

¹ See, for example, a review in Gartner and Kharas (2013).

This paper considers a new approach to institutional design that can leapfrog outmoded debates of “vertical” versus “horizontal” funding. We focus instead on the need for purpose-driven, dynamic approaches to marshalling technical, financial, evidentiary, and multi-stakeholder resources toward global challenges. These could be implemented through reform of existing multilateral institutions or through the creation of new institutions. By considering specific instances of global institutional innovation and stagnation in recent decades, we describe ingredients that could help drive a new approach. We focus on extreme poverty as a compelling global priority, but the conceptual points are more broadly relevant to other key issues too.

The paper proceeds as follows. We begin with a short history of vertical fund debates. We then present the idea of purpose-driven funds, anchored in key principles and informed by recent examples in the health sector. The following section considers how this idea relates to the specific challenge of extreme poverty, contrasting it with the World Bank’s existing approach to its own headline goal of ending extreme poverty by 2030. We conclude with brief discussion of broader implications for global policy efforts to support sustainable development.

II. Short history of vertical fund debates

In international policy circles, discussion of how best to achieve targeted, problem-focused goals and outcomes typically raises debates about vertical funds. These are mechanisms through which funders – rich country governments, philanthropies, and sometimes companies and individuals – pool financial contributions for on-lending or on-granting to multiple recipient countries for a specific development issue or theme. When compared to multi-sector “horizontal” mechanisms that pool resources across sectors and forms of expertise, vertical funds are frequently lamented for increasing administrative burdens and undermining coordination among both recipient country governments and funder country governments.

It has long been common practice for governments to organize multilateral agencies around specific purposes. The Universal Postal Union was established in Bern, Switzerland in 1874 to establish common rules, policies, and information sharing processes for post offices around the world. Similarly, UN-specialized agencies on food and agriculture, tourism, telecommunications, maritime affairs, industry, labor and other areas have developed norms and standards and provided technical cooperation to assist countries build domestic capacity. In modern parlance, however, vertical funds go beyond these mechanisms to include substantial financial resource transfers, sometimes bolstered by “new” donors and innovative processes.

Initially, vertical funds were born in response to crises and a political determination to act. An early vertical fund, the Consultative Group for International Agricultural Research, was launched in 1971, shortly after Paul Ehrlich’s best-selling book *The Population Bomb*, warned of mass famines. Similarly, the International Fund for Agricultural Development (IFAD) emerged in 1977, partly as a response to sharply higher food prices in 1973, triggered by oil price spikes, and initially majority-funded by oil-producers. In similar vein of bringing in new donors, a commitment from the Bill & Melinda Gates Foundation was instrumental in the launch of the Global Alliance for Vaccines and Immunizations in 2000, the same year as the Foundation itself was formally launched.

By the 2000s, major intergovernmental gatherings of UN member states started to pair quantified goals and objectives with framework agreements on financial means of implementation, as exemplified by the UN Millennium Declaration of 2000 and the 2002 Monterrey Consensus on Financing for Development. These synthesis agreements drew from domain-specific international agreements, such as the April 2000 World Education Forum in Dakar, which produced a framework for action that included a commitment to reach free and compulsory primary education for all children by 2015. In underscoring the importance of education as a human right, the same document asserted: “We affirm that no countries seriously committed to education for all will be thwarted in their achievement of this goal by a lack of resources” (UNESCO, 2000, p. 9). This commitment was in turn translated to a specific instrument in 2002, through the launch of the Education for All-Fast Track Initiative. The EFA-FTI paired with the Heavily Indebted Poor Countries initiative for debt relief to support a rapid scale up of primary education enrollment in many low-income countries.² Following a call to action from a 2001 special session of the UN General Assembly on HIV/AIDS, The Global Fund to Fight AIDS, TB, and Malaria was also established in 2002, under the patronage of UN Secretary-General Kofi Annan. The new fund pooled resources and skills to deliver crucial life-saving treatments that were otherwise not available to large portions of humanity living in conditions of poverty.

These vertical funds developed a reputation for being innovative, but also for crowding out priorities that did not fit within their own narrow purview. Some have argued that this fragmentation has come at the expense of country-based multisector funds such as the World Bank’s International Development Association (IDA). Assessments of vertical funds presented a mixed picture: strong advantages compared to other agencies on the efficiency with which funds were used and on transparency and accountability for results; but weaknesses in fostering institutions and in terms of the burden placed on recipient governments when amounts being channeled by each specialized agency were relatively small (Birdsall & Kharas, 2014).

The anti-vertical fund sentiment grew so strong that in the 2008 Accra Agenda for Action on aid effectiveness, there was a strong warning that “as new global challenges emerge, donors will ensure that existing channels for aid delivery are used and, if necessary, strengthened before creating separate new channels that risk further fragmentation and complicate co-ordination at country level” (OECD, 2008). Despite this warning, the number of new vertical funds being created remains unabated, including for climate change and other related activities. A recent World Bank (2022a) study documents the challenge from the perspective of recipient countries. In 2009, 55 percent of countries receiving international assistance had to navigate more than 60 donor entities. By 2019, the corresponding ratio had increased to 78 percent of countries.

Conceptually, there is an inevitable tension between funds with a targeted focus on results in specific areas and broader efforts to strengthen society-wide governance systems and public institutions. Many issue-specific funds are financing channels rather than implementing agencies, and so rely on the sectoral systems that others help build. But when these funding channels grow large, they can drain financial and human capital resources away from basic systems and potentially weaken a sector as a whole. This has led to intense discussions as to when systems strengthening should be part of a fund’s

² The EFA-FTI was later converted into the Global Partnership for Education, which continues today.

mandate. It is also why vertical funds have sometimes performed less well in fragile contexts where existing institutional capacity is low (Yoichiro, 2012).

Vertical funds do best when they are oriented towards a specific time-bound goal to expand access to key technology systems for an issue deemed so important that it requires large-scale dedicated financing. They are also effective when they innovate by mobilizing significant new financing, by introducing cogent new forms of multistakeholder governance; by fostering internal and external learning through transparent data circulation and applied research; and by fostering systems that deploy and continue to advance the development and implementation of relevant technologies. The major health funds have these characteristics.

Conversely, despite jumps in enrollments in the early 2000s, the education sector has not seen step-change advances in funding mechanisms or learning outcomes over the past two decades. This is partly due to a lack of widely-accepted technological innovations to accelerate learning outcomes. It is also due to a lack of consensus on which core outcomes should be monitored, and hence lack of evidence on what should be scaled up to advance them. The World Bank remains the largest multilateral funder of education systems, providing funding volumes that are considerably greater than those provided by the Global Partnership for Education, which the World Bank helps to administer.

Food and nutrition-related funds fall in the middle of the spectrum. The World Food Program is a vertical fund focused on making food available in humanitarian settings. Although not without its critics, when the organization was awarded the Nobel Peace Prize in 2020, the official announcement credited its “impressive ability to intensify its efforts” despite the COVID-19 epidemic, and to reach 100 million acutely food insecure people in 88 countries in 2019. Part of WFP’s success is due to its effective management of logistics and its use of local resources (CIDA and Netherlands Ministry of Foreign Affairs, 2012).

In the realm of nutrition, there has been considerable technological innovation through food fortification, for example, and the Global Alliance for Improved Nutrition (GAIN) is a Switzerland-based foundation launched at the UN in 2002 to reduce malnutrition. A recent GAIN discussion paper argues for “expanding the food systems infrastructure as a necessary pre-condition for improving access to healthy and sustainable diet” (Morris, 2023, p. 1). It further argues that the food system infrastructure gap is very large and that the costs of filling this gap are substantial, measured in the billions of dollars. But GAIN is not mandated to tackle these infrastructure gaps and its annual budget is on the order of \$50-60 million. In such a context, it is harder for an individual fund to turn the tide on a large-scale global challenge.

Climate-related funds suffer from similar issues amid a global scale of required action that is unique in its vast scope and complexity. A combination of lack of clear purpose, dependence on many other parts of the global system, and sub-scale budgets relevant to the tasks at hand inhibit opportunities for implementation in a manner that changes global outcomes. An added complication is that many climate-related projects are best implemented by the private sector and balancing the degree of corporate subsidy with public benefit is a hard task.³ Amid the geopolitics of climate change, different donors also have different views on what should be done. Altogether many of the climate-related

³ Gavi, for example, has long struggled with the issue of how to forestall monopolistic behavior among vaccine manufacturers.

vertical funds have hence fallen into the trap that the Accra Agenda warned about: increasing problems of fragmentation and coordination.

III. Design principles for purpose-driven funds

Given the mixed success of issue-specific instruments over the course of the 2000s, debates on whether “vertical” or “horizontal” mechanisms are better become less relevant. Most important is the notion of how institutions can help achieve a specified goal over a given time-period. We call this a purpose-driven funding institution. It aligns closely with the idea of “mission-oriented innovation policies” articulated by Mariana Mazzucato (2018). She proposes that mission-oriented efforts should be well defined and measured, comprise a portfolio of research and development (or innovation) projects, engage different types of actors, lead to investment across sectors, and entail aligned policy making across diverse public institutions.

The aligning function is central to Mazzucato’s thesis. She writes that it is essential “for the lead public organizations to galvanize the interests of relevant actors and organize itself so that [the process] has the ‘intelligence’ to think big and formulate bold policies that create a sense of ownership among diverse public, private, and academic stakeholders” (2018, p. 807). In the face of uncertainty that is inherent to the innovation process, Mazzucato stresses the role of institutional learning capacities as a central element to a public enterprise’s entrepreneurial role.

Robustness and agility are key ingredients for any institutional effort aiming to deploy fast-shifting technology to support a specific goal. Robustness suggests development of programs that can be effective in many different circumstances. Agility suggests being able to learn and respond rapidly to inevitable changes in circumstances.

Purpose-driven funds should also engage multiple actors of different types. To this end, Nobel Laureate Elinor Ostrom and colleagues (2013) offer related insights in identifying core design principles for the efficacy of groups. The eight principles are: shared identity and purpose; equitable distribution of costs and benefits; fair and inclusive decision-making; monitoring of agreed upon actions; graduated rewards and sanctions; fair and fast conflict resolution mechanisms; authority to self-govern; and polycentric governance across relevant stakeholders.

Drawing inspiration from Mazzucato and Ostrom, we propose six key design principles for purpose-driven global development funds:

- **Mission first.** The institution’s overarching mission – the outcome it seeks to achieve – needs to serve as a driving first principle guiding all operations and implementation systems.
- **Technology evolution at core.** The institution needs to embrace and advance the most relevant and scalable technologies while promoting cost reductions, anticipating ongoing advances, and promoting adaptability to new technology. Amid the common challenges of incremental long-term progress, technology-smart operations should be open to – and continually seeking to leverage -- rapid system wide changes that might empower exponential expansion of access to relevant technologies and leapfrogging of existing systems.

- **A bullseye for applied research.** Independent assessments of the institution’s work should inform transparent public debate on performance and course corrections as evidence grows and new problems emerge. The institution should commission independent evaluations of its own work while also making data available for independent researchers to explore in academic forums.
- **Multi-stakeholder governance.** Transparent and effective governance of an outcome-oriented institution should include insights and representation from a relevant mix of stakeholders, including public funders, private funders, recipient countries, independent technology leaders, independent experts, and civil society leaders from affected constituencies. The need for regular, transparent, evidence-based course corrections implies no single governing constituency should have outsized influence.
- **Adaptable to unexpected events.** As an organization’s successes might lead to the discovery of other negative unintended consequences, an institution needs to be able to adapt operations to mitigate downside risks. Moreover, a mission-first institution needs the flexibility to revamp implementation procedures in response to country- or global level shocks.
- **Adequacy of financing.** Resources alone do not solve all policy problems, but many policy problems cannot be solved in the face of inadequate resources. Purpose-driven funds need to have funding and budgets adequate to their task. They need not be a sole source of funds for a relevant issue, but if they are not equipped to provide a plurality of related international resources then they are unlikely to play a leading role in addressing the operative global issues.

Examples of purpose-driven funding institutions

As of 2000, low-income countries were emerging from decades of challenging public health trends, especially in sub-Saharan Africa. Progress on child mortality was lagging (McArthur, 2014; McArthur & Rasmussen, 2018), immunization rates were low, and the HIV/AIDS pandemic was leading to dramatic declines in life expectancy. For example, sub-Saharan Africa’s child immunization rates were stagnant, or even declining, at around 50 percent for existing technologies to fight diseases like measles and diphtheria, pertussis, and tetanus (DPT). Meanwhile Botswana, which had been long held up as a great economic development success story, saw its life expectancy at birth plummet from 63 years in 1986 to 51 years in 2000, when more than a quarter of the population was infected with HIV (World Bank, 2023).

Existing international institutions were unable to stem the crisis. The challenges related to gaps in access to existing technology and gaps in incentives to create relevant new technology. Measles and DPT vaccines were well-established technologies that were not reaching scaled delivery in the poorest countries. The 1996 breakthrough discovery of antiretroviral treatment reframed HIV/AIDS from being a terminal illness to a treatable disease. But four years later no international institution was helping to make the technology available in low-income countries where the disease had the highest prevalence. More than 25 million people were estimated to be infected in Africa alone (UNAIDS, 2000). Meanwhile private companies did not perceive adequate market incentives, so vaccines that could be suitably delivered in low-income settings to tackle prominent causes of child death like pneumococcal disease were not being manufactured at reasonable cost.

The implementation gaps prompted calls for more targeted, adequately financed, and technically-oriented funding bodies that could help countries make critical health technologies available at an affordable cost. The GAVI Alliance, launched in 2000, elevated specialized technical efforts focused on delivering frontline immunizations in low-income settings. The Global Fund to Fight AIDS, TB, and Malaria (hereafter “Global Fund”), launched in 2001, focused on three major infectious diseases, with access to HIV/AIDS treatment as an especially important early role.

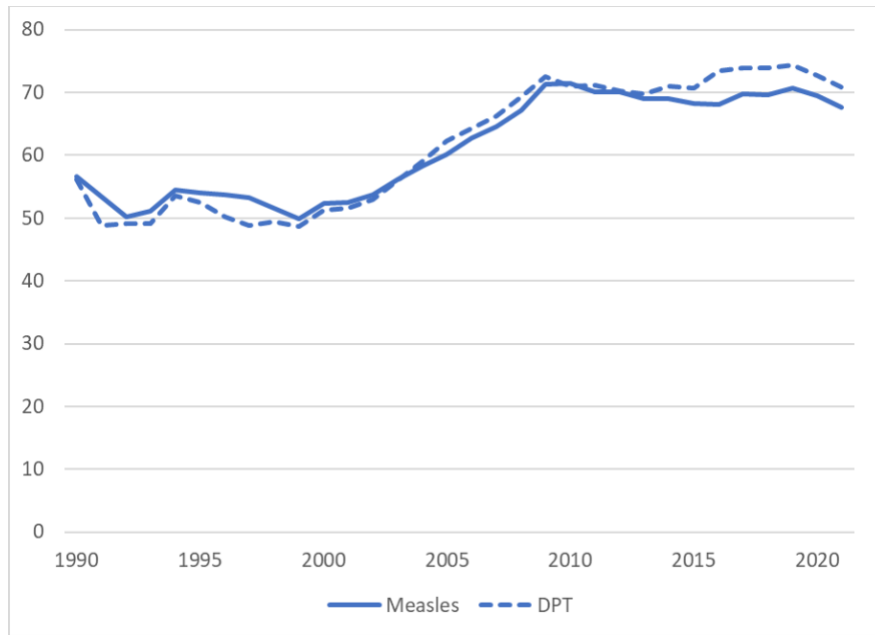
These two institutions took a non-traditional approach to multilateralism. While their respective structures and operating models are distinct, both adopted a multistakeholder governance model, bridging public, private, philanthropic, civil society, and independent expert representation from developed and developing countries. They framed funding and policy review processes around independent expert reviews, with input from field experts outside the institutions. These technical processes also helped to mitigate inter-state tensions that might have otherwise dominated decision-making in traditional multilateral institutions.⁴ They further adopted a foundation model by which countries received transparent guidance on technical criteria and then applied for funding. Crucially, they also mobilized adequate resourcing to help drive systemic change in low-income countries. High-level diplomacy focused on heads of state and government led to substantial attention and investments.

Altogether, the institutional structures led to greater voice of developing country stakeholders, beyond their national governments, and promoted true country-led programming. They also enabled heightened scrutiny and debate among academic researchers in prominent journals like *The Lancet*, which served as a de facto convener of global academic debates on policies and protocols toward the achievement of relevant outcome targets in global agreements like the Millennium Development Goals and later the Sustainable Development Goals (McArthur & Zhang, 2018).

Consistent with the data in in Figures 1 and 2, these institutions played a key role in triggering broader waves of progress. Importantly, they also drew attention to – and supported – the need to invest in health systems as essential underpinnings to successful delivery of relevant technologies. Importantly, their geographic coverage was driven by the burden of disease rather than by a country’s income level. South Africa, for example, had an adult HIV prevalence rate estimated at 20 percent in 2000 but was already an upper-middle-income country throughout the 1990s and would have been ineligible for grant-based support through, for instance, World Bank channels. Figure 3 plots Global Fund disbursements against the estimated number of people with HIV/AIDS in each country in 2019. HIV/AIDS represents only one of the Global Fund’s target diseases, but this nonetheless provides a sense of a high degree of correlation between resources provided and the magnitude of the burden of disease (the slope of the fitted line in Figure 3 is 0.65).

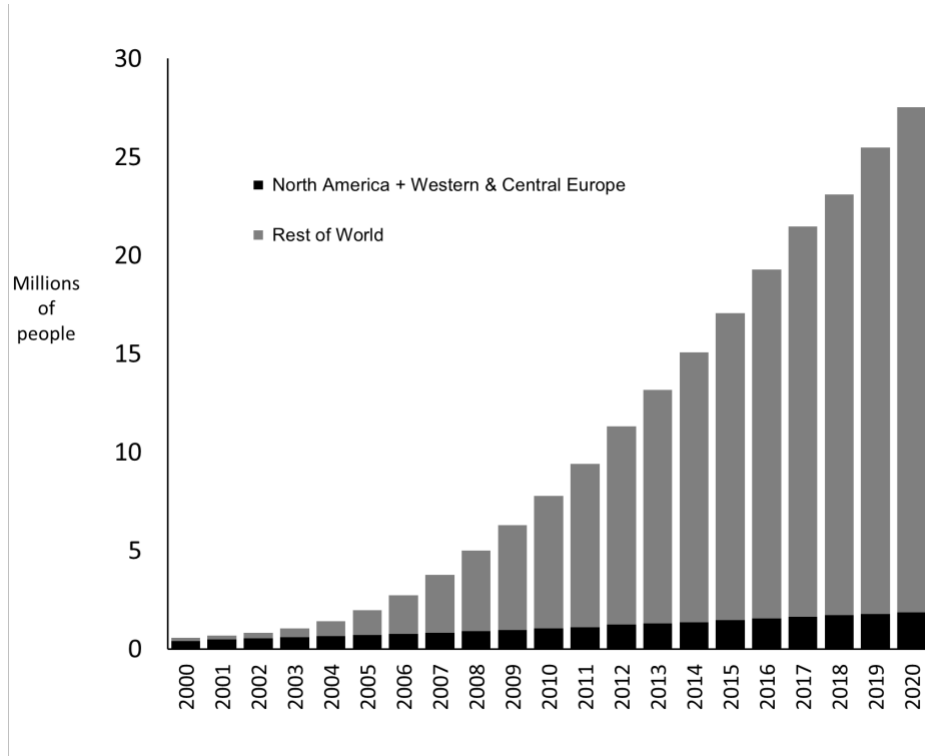
⁴ See, for example, Schmidt-Traub (2018) for a discussion of Global Fund grantmaking decisions toward China.

Figure 1: Immunization rates in sub-Saharan Africa for Measles and DPT, 1990-2021



Source: World Bank (2023)

Figure 2: Antiretroviral therapy coverage, 2000-2020 (millions of people)



Source: UNAIDS (2021b)

systems, including primary care.⁶ The underlying debates and respective pathways of causality are complex, since efforts to scale up the delivery of disease specific technologies might have both diverted resources from other priorities on a relative scale while also increasing resourcing for those priorities on an absolute scale. As Storeng (2014) has articulated, competing perspectives can be driven by differing definitions of health system success. Moreover, the complementarities between disease-specific interventions and broader system-building interventions begin to blur as health delivery systems expand in scale and sophistication. Investments in human resources, for example, can be driven by specific disease treatment protocols while also addressing other sources of morbidity. As of 2023, the Global Fund describes itself as the largest multilateral provider of grants for health system strengthening, at around \$1.5 billion per year (Global Fund, 2023).

IV. Thought experiment: A new approach to ending extreme poverty

In light of the preceding examples, the current lack of progress in reducing extreme poverty merits consideration of a new approach, based on purpose-driven, global-scale funding mechanisms. Ending extreme poverty is first among equals in the Sustainable Development Goal framework, as agreed by all 193 UN member states in September 2015. SDG target 1.1 sets the objective: “By 2030, eradicate extreme poverty for all people everywhere, currently measured as people living on less than \$1.25 a day.” This commitment is consistent with the World Bank’s overarching twin goals, adopted in 2013, to reduce extreme poverty to less than 3 percent of the world population by 2030 and to foster income growth in the bottom 40 percent of the population in each country. The World Bank is also the technical custodian of global poverty measurement for the multilateral system and announced in October 2022 that the relevant threshold had been updated to \$2.15 a day in 2017 purchasing power parity terms.

Despite the clarity of these intergovernmental and institutional agreements, they do not appear to have had much impact on the course of extreme poverty itself. In 2015, roughly 730 million people were estimated to live in extreme poverty, and the number was declining by around 65 million per year. But progress has since stalled. As of October 2022, then-World Bank (2022c) projections indicated that the global total would still hover above 570 million people in 2030, or more than 7 percent of the global population. In the foreword to the same report, World Bank president David Malpass went so far as to assert that “the global goal of ending extreme poverty by 2030 [will] not be achieved.” In other words, the head of the organization that had taken on lead responsibility for advancing the global goal was abandoning its own headline goal barely halfway to the deadline. Notably, however, the first recommendation in the same report was to expand spending on cash transfers as an effective mechanism for supporting poor and vulnerable groups.

A future independent evaluation of World Bank operations will be required to develop a more thorough assessment of its internal evolution from 2013 to 2022, but a preliminary analysis suggests that it did not develop new programs or any new formal mechanisms of accountability to drive its programs to accelerate poverty reduction, nor did it strive to allocate more resources to poverty alleviation. Instead, it continued with business-as-usual. The largest World Bank window for ending poverty, the International Development Association (IDA), has retained essentially the same country allocation

⁶ See, for example, Car et al. (2012).

framework as before (IDA, 2011; IDA, 2022a). The formula is based on a “country performance rating” of good governance, population size, and GNI per capita. Countries with higher governance scores and larger populations receive more funds, as do countries with lower per capita income scores (IDA, 2020).

One challenge with the IDA allocation formula is that it focuses on per capita income as a key variable, rather than the extent of extreme poverty. The implicit assumption is that aggregate economic growth will provide the best long-term path to poverty reduction. This is not an unreasonable assumption in historical terms but is not necessarily consistent with the institutional objective of ending extreme poverty. In particular, there are two considerations that must be taken into account in seeking to end poverty: in what situations can aid help most in promoting overall economic development, and how much poverty is there that needs to be eradicated? IDA focuses on the first consideration, but not on the second, a shortcoming that has been pointed out by previous commentators (e.g., Kanbur, 2005).

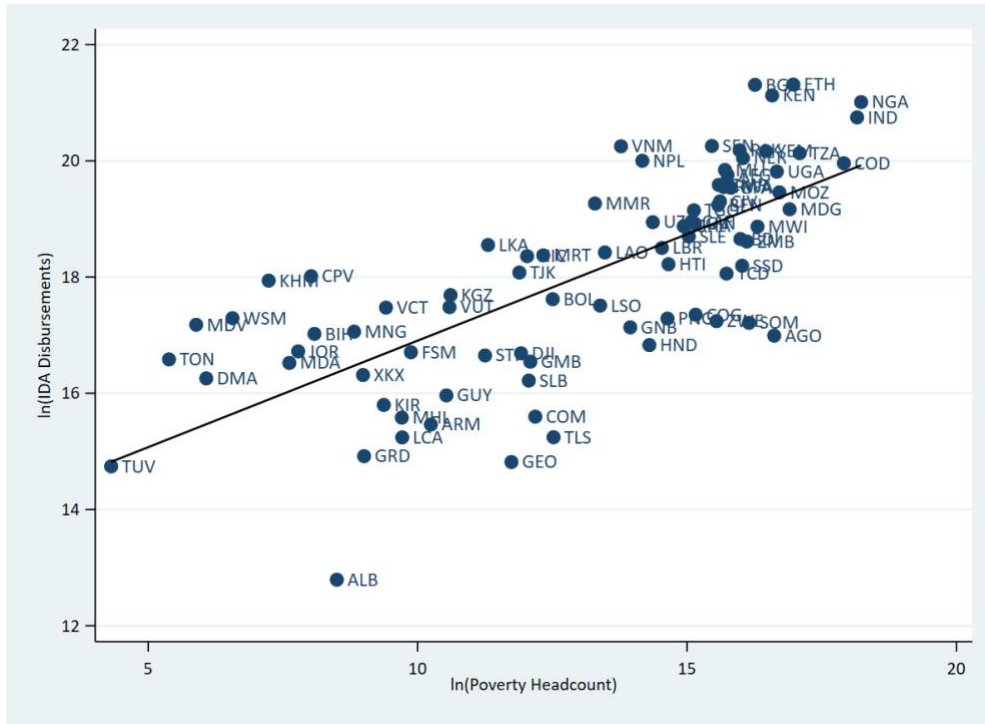
A further practical issue is that IDA seeks to stay engaged across multiple sectors in client countries over time. Each country’s financing package typically maintains a minimum of programming resources across agriculture, education, health, infrastructure, social protection, and so forth, independent of any specific assessment regarding which might offer the optimal deployment of resources toward the headline goal of ending poverty. Each sector-focused technical team is also competing internally for IDA budget allocations. There is no poverty-reducing objective function against which sectoral programs are objectively evaluated. And even if a sector team were to make a compelling case for outsized return on investment, it is highly unlikely that any individual sector program could ever receive a corner solution budget of 100 percent within a country’s IDA allocation envelope.

Figure 4 shows how IDA is allocating resources toward countries with extreme poverty in the most recent pre-pandemic year, 2019. It does show a clear positive correlation between IDA disbursements and extreme poverty headcount, but the slope of the fitted line is only 0.37, much lower than the corresponding 0.65 for the Global Fund in Figure 3 above. The considerable degree of variation around the trendline prompts questions regarding the focus of IDA resources and how they relate to ambitions for reducing extreme poverty. Looking at the top right of the chart, for example, India and Nigeria are shown to be receiving a similar scale of IDA resources, although India’s headcount poverty rate has been declining fairly quickly in recent years, while Nigeria’s has been relatively stagnant and the headcount has been growing in absolute terms.

IDA’s limitations are further underscored when considering specific countries that now account for a large share of extreme poverty. Poverty has become increasingly concentrated in places with weak governance (World Data Lab, 2023), but IDA explicitly reduces resources to these places. Figure 5 plots IDA’s Country Performance Rating against poverty headcount rates in 2020, showing a clear negative relationship.

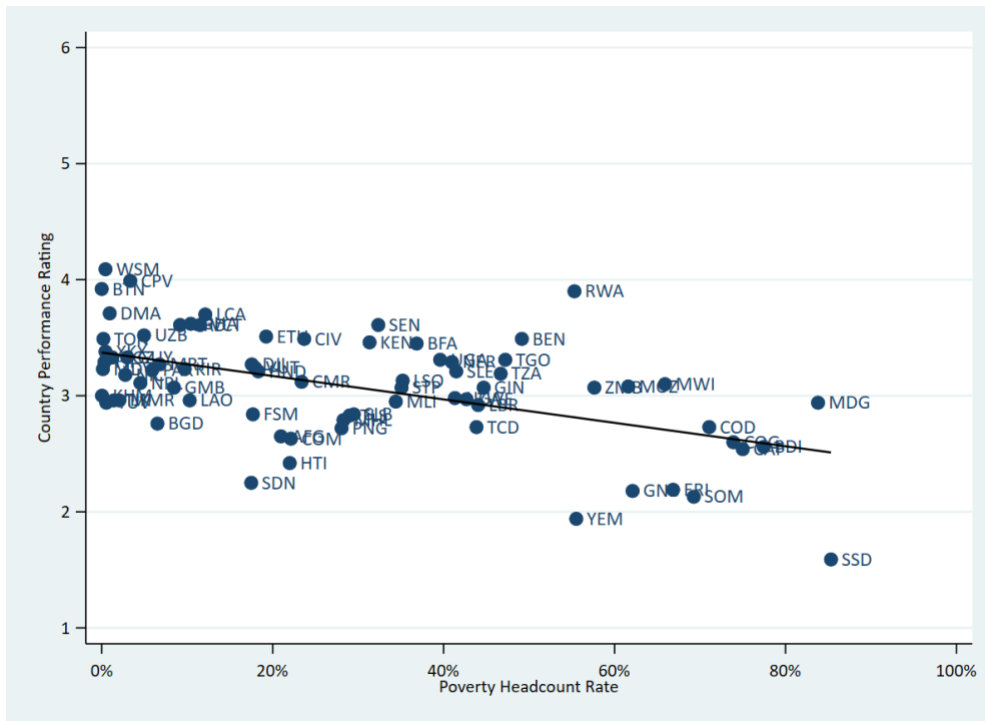
To consider country-specific issues, we examined policy documents for five countries where projections indicate the largest numbers of poor people in the world will reside in 2030. These are Nigeria, the Democratic Republic of Congo (DRC), Tanzania, Madagascar, and Angola, where recent projections indicate 81 million, 60 million, 22 million, 17 million, and 17 million people, respectively, living in extreme poverty in 2030 (World Data Lab, 2023). Together, these five countries account for nearly 40 percent of projected global poverty total in 2030. Any effort to end global poverty must, therefore, have success in these countries.

Figure 4: IDA disbursements and poverty headcount, 2019



Note: excludes Fiji. Sources: OECD (2023) and WDL (2021)

Figure 5: World Bank Country Performance Rating and poverty headcount rate, 2020



Sources: IDA (2022b) and WDL (2021)

To explore the World Bank's recent policy approaches, we reviewed the Systematic Country Diagnostic (SCD, the World Bank's analytical assessment) and the Country Partnership Framework (CPF, its project programming) for each country. The first thing one notes about these documents is the scattered production timeline. Whereas, for example, Madagascar's latest SCD was published in April 2022, there has been no update of Tanzania's SCD since February 2017. As of May 2023, there was no published CPF for Angola. These delays do not convey a sense of urgency and real-time adjustments that one might hope for in focus countries of high priority.

A second surprise is that in the four CPFs available as of May 2023, a simple word cloud analysis shows that it is a challenge to even find the word "poverty" and that in three of the four cases – DRC being the exception -- this word appears far less frequently than "growth" in each case (see Figure 6). Of course, economic growth, where viable, would be the most sustainable way of reducing poverty. However, looking at IMF forecasts, only DRC and Tanzania appear to have a likely prospect for positive trend per capita income growth through 2026. For both countries, the IMF forecasts growth at around 2% per year (calculated as 2019-2026 so as to exclude the cycle associated with the COVID-19 recession and subsequent recovery), barely enough to make a sizable dent in DRC's poverty rate of approximately 71 percent and Tanzania's of 38 percent (World Data Lab, 2023).

Given the limited prospects for growth, one might hope that alternative measures for reducing poverty would be considered, with consideration of tradeoffs for different approaches to achieving the 2030 extreme poverty goal. For example, the documents could assess the relative return on investment, measured by reductions in poverty, for strategies prioritizing investments in agricultural productivity, human capital, infrastructure, or social protection.

Nonetheless all four CPFs do allocate some attention to social assistance and a variety of cash transfer programs, even if not directly discussing the scale of extreme poverty in each country and corresponding gaps in access to the relevant programs. The CPF for DRC, for instance, describes a target of 1.2 million people receiving cash transfers and cash for work by 2026, up from 60,000 people in 2020, but without describing how the country's other 66 million or so people living in extreme poverty might gain access (World Bank 2022b). As a reference point, UNAIDS reports that 440,000 people in DRC were on antiretroviral treatment in 2021, 82 percent of those infected, so the 2 percent reach of the cash transfer program looks modest in comparison (UNAIDS, 2023).

The emergent technology of digital cash transfers

The World Bank's increasing support for cash transfer social assistance programs, however modest in scale, aligns with growing academic evidence that cash transfers can be highly efficient for poverty alleviation.⁷ Contrary to common assumptions of inefficacy two decades ago, the World Bank (2022c) now estimates suggest that every \$1 of cash transferred in a typical low-income country setting has a "marginal value of public funds" (MVPF) of 1.0-1.6 – i.e., the total benefit to people affected by the policy exceeds the net cost to the government – and an MVPF of 1.6 to 3.0 in a typical middle-income country setting. Since cash transfers are generally found to have positive effects on children's education, middle-income countries tend to have higher MVPF values due to higher complementarities in education systems and greater opportunities to tax children's future earnings.

Within the past two decades, the dramatic shift in opportunity for cash transfers has been driven by two distinct yet complementary technology shifts. One is the explosion of access to mobile telephony, digital banking, and multiple forms of geospatial data over the past two decades. These technologies have dramatically improved the ability to identify target recipients, and to lower the implementation cost and time required to transfer cash to these individuals.

In a pioneering recent case, the government of Togo introduced an emergency cash transfer program in the middle of the COVID-19 pandemic, with artificial intelligence-enabled algorithms enabling rapid targeting of extremely poor people. The government's Novissi initiative worked in partnership with local mobile telecom networks and financial institutions alongside external researchers, NGOs, and philanthropists to develop a pioneering social protection program amidst extremely challenging circumstances. The platform reached nearly one million beneficiaries within a year, roughly a quarter of the adult population, with special prioritization to women. The underlying innovations and scaling mechanisms did not come from a large official development institution but from a collaboration across key players.

These breakthrough implementation systems have been accompanied by a revolution in research technology to test specific interventions in various settings, especially through randomized control trials. Although RCTs are not without their critics, especially around issues of external validity, they have enabled a rapid accumulation of evidence around the range of benefits to both conditional and unconditional cash transfers (e.g., Bastaglia et al., 2016; Banerjee, Duflo, & Sharma, 2021; Egger et al., 2021; Banerjee et al., 2020; Baird et al., 2014; and other research summarized by Blattman et al., n.d.).

To be sure, none of this is intended to argue that cash transfers offer the best or only path to extreme poverty reduction. Investments in other sectors remain key ingredients to self-sustaining economic growth, which remains a vital objective for all lower-income countries. Moreover, there is not yet enough evidence to say what the long-term growth and poverty reduction effects would be if countries were to implement population-wide cash transfers to all people living in extreme poverty. Nonetheless, modern cash transfer technologies do offer a transparent and effective tool for boosting the incomes and consumption of recipients living in extreme poverty. In the context of headline global commitments

⁷ Some of which is discussed in World Bank (2022c)

to end extreme poverty by 2030, this fact alone can help inform institutional decision-making moving forward.

The practical progress on cash transfers over recent years is consistent with international policy commitments. In 2015, the seminal Addis Ababa Action Agenda on financing for development (UN 2015) committed signatories to social protection for all, including floors, with a focus on the poorest people:

To end poverty in all its forms everywhere and finish the unfinished business of the Millennium Development Goals, we commit to a new social compact. In this effort, we will provide fiscally sustainable and nationally appropriate social protection systems and measures for all, including floors, with a focus on those furthest below the poverty line. (UN 2015, para 12)

The G20 group of major economies has since made similarly bold pledges to deliver social protection for all. This is motivated at least in part by the fact that nearly all countries implemented some form of cash transfer programs in response to the COVID-19 pandemic (World Bank, 2022c; Gentilini, 2022). In 2022, the G20 Bali Leaders' Declaration went so far as to commit to accelerate progress towards universal social protection for all by 2030. This builds on the 2021 statement of the G20 Labour and Employment Ministers, which recognized that "our social protection systems should [...] leave no one behind," (p. 3) and committed to "Ensure that [...] social protection systems, and in particular social protection floors, should promote an adequate living income" (p. 16).

To clarify terms, social protection typically implies many more policy layers than social assistance-type cash transfers for people living in extreme poverty. Other layers typically include unemployment insurance, pension systems, maternity support, health protection, labor market policies, and broader actions to prevent vulnerability throughout the life cycle. In that context, the expansive commitment to "social protection for all" is a much bigger commitment than targeted social assistance transfers to end extreme poverty among the roughly 600 million people, or 7.5 percent of world population, who still live in conditions of deprivation today.

Institutional implications

If one accepts the premises that, first, digital cash transfers offer an effective tool for reducing extreme poverty and, second, that multilateral institutions should play a leadership role in supporting cash transfer scale up to help reach all people in extreme poverty, then the next question to ask is which institution could best play this role. In theory, IDA could certainly do so, potentially anchored in the expertise of a new World Bank president, Ajay Banga, who happens to have extensive business expertise in digital payments infrastructure. However, IDA would need to reform its operating procedures and allocation formulas to prioritize poverty reduction over economic growth. For countries with weak governance scores and high poverty, cash transfers might even be an effective counterpoint to the limitations for other sectoral investments in countries with of low CPR scores. Cash transfers allow direct investments in poverty reduction by working directly with private mobile providers and banking enterprises. In terms of budgets, IDA would also need to find a way to prioritize cash transfers within its annual gross disbursement volume of roughly \$20 billion per year (OECD, 2023). Perhaps most importantly, it would also need to update its structure to allow multistakeholder governance and transparent independent technical review of country funding proposals. Altogether, these bureaucratic hurdles might be too much for IDA to surmount.

The Tinbergen Rule famously recommended that each policy objective should be directly matched with a corresponding policy instrument (Tinbergen 1952). In institutional terms, this would suggest the need

for a targeted approach to scaling up cash transfers through a single, purpose-driven mechanism. We dub this a Fund to End Extreme Poverty. In line with our six key design principles articulated earlier, such a mechanism would need to be anchored in the mission of ending extreme poverty by a target date like 2030. It would then place digital cash transfer technology at its core, promoting coherence in protocols across countries and tailoring of digital infrastructure platforms to meet country-specific needs.⁸ Countries could apply for support to build their own digital public infrastructure or, perhaps for smaller countries, to apply to be part of a regional infrastructure.

A Fund to End Extreme Poverty would need to incentivize independent research on its successes and failures, in order to promote constant learning and evolution in its own organizational protocols. These protocols would need to be able to evolve quickly in the face of emergent technologies, such as rapid breakthroughs in satellite data, large language models, neural networks, and other forms of artificial intelligence. It would need multistakeholder governance to bridge funders, recipients, digital technology expertise, civil society representation across key constituencies, and independent technical expertise. The organization would need to be robust to be effective in different country circumstances, including fragile and conflict-affected states, and agile to respond to changes in international context, such as a future pandemic or widespread natural disaster. It would also need to be funded at a scale large enough to “bend the curve” towards global success on extreme poverty.

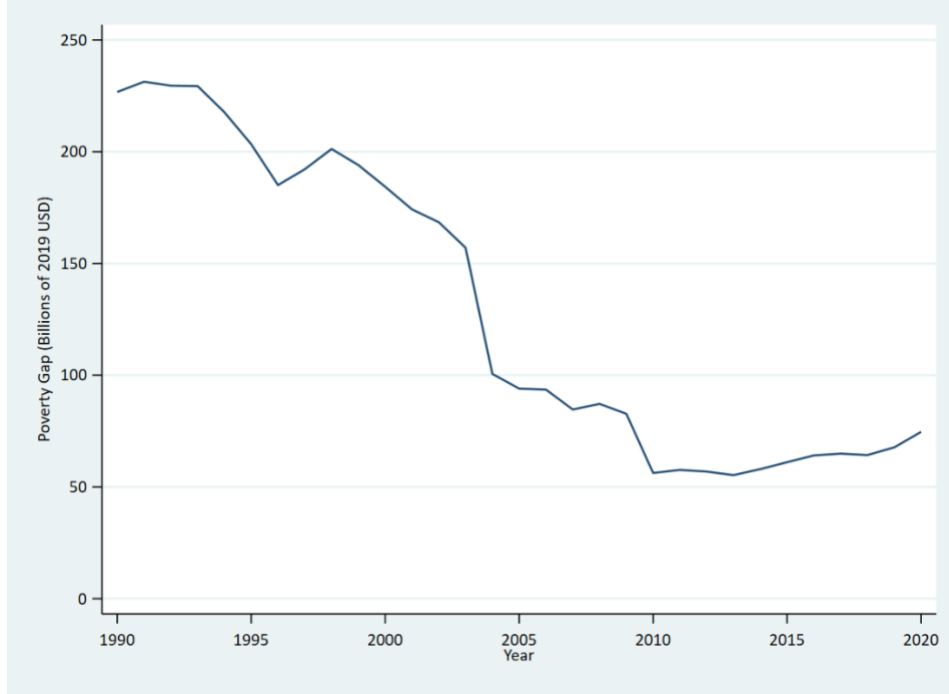
The scale of financing required for such a fund to succeed is both sizeable and affordable when compared to relevant benchmarks. For situations where concessional foreign aid is needed, an overall “aid gap” can be identified. For example, one criterion for selecting countries to support could be the size of the poverty gap. We estimate that there are still 49 countries where the poverty gap exceeds 1 percent of GDP, a threshold above which countries likely need some form of external support. As shown in Figure 7, the aggregate poverty gap for such countries has seen a long-term decline from more than \$200 billion in 1990 to around \$75 billion as of 2020, the latter number being equivalent to roughly three-quarters of the global total poverty gap.

How does this \$75 billion gap compare to overall official development assistance volumes? The following figures answer this in two parts. The first, Figure 8, shows that the extreme poverty gap has shrunk to the point that it is now worth consistently less than half of total net ODA disbursements. In other words, allocating roughly half of existing ODA to cash transfers would in theory be enough to end extreme poverty immediately.

However, ODA goes to many countries for many purposes other than poverty reduction, so Figure 9 compares the extreme poverty gap in the same group of countries to net ODA received only by those countries. It shows that, as of 2000, the poverty gap was roughly six times as big as net ODA going to relevant countries. But this declined steadily such that, by 2020, the poverty gap is nearly equal to ODA allocated to those countries. In other words, if all existing ODA to these countries were reprogrammed as cash transfers, it would theoretically be nearly enough to end extreme poverty in them.

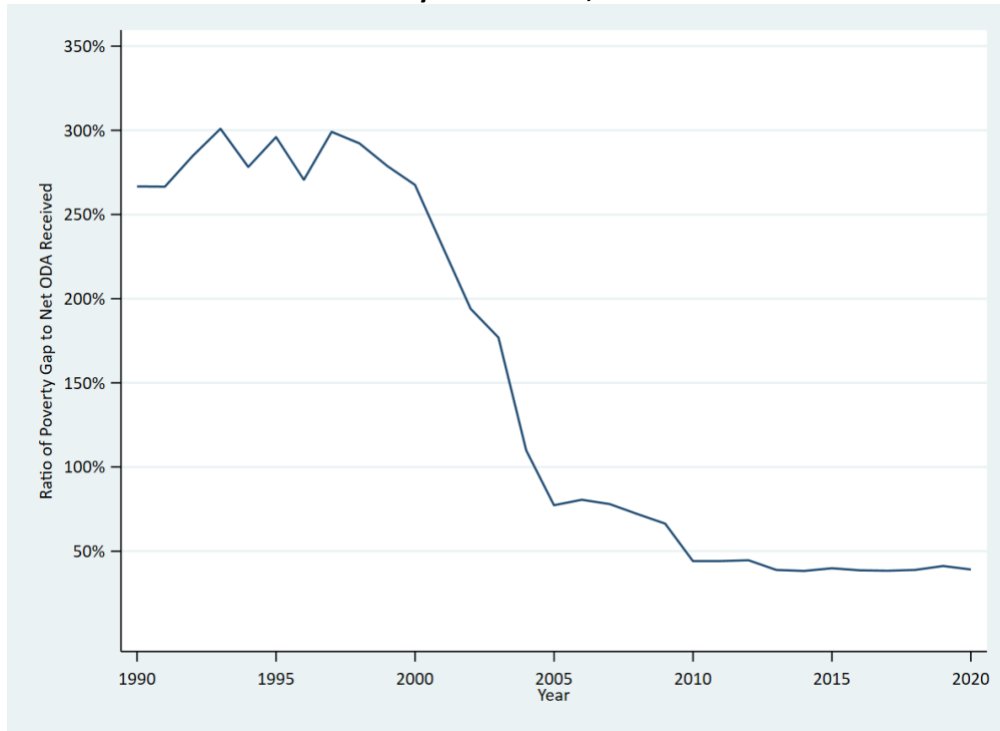
⁸ An example of this alignment of protocols is provided by Chowdhury et al. (2022).

Figure 7: Total extreme poverty gap among countries where gap is greater than 1 percent of GDP, 1990-2020



Sources: World Bank (2023) and WDL (2021)

Figure 8: Ratio of Extreme poverty gap (among countries where the gap is > 1% of GDP) to total ODA received by all countries, 1990-2020



Source: World Bank (2023) and WDL (2021)

Figure 9: Ratio of Extreme poverty gap (among countries where the gap is > 1% of GDP) to total ODA received by the same set of countries, 1990-2020



Source: World Bank (2023) and WDL (2021)

The point of the preceding discussion is not to offer a point estimate for the cost of delivering cash transfers to end extreme poverty. The practicalities of such estimates have many layers of decision, including whether transfers should be one-time or recurrent, the right “dosage” of transfer per person, and the potential for sequencing across geographies or groups within a country. Nonetheless, the core insight is that cash transfers to end extreme poverty are now, on an order of magnitude basis, affordable within existing ODA allocation envelopes.

Further considerations

In considering the international political economy around a potential Fund to End Extreme Poverty, developed country governments might be attracted to the ease of tying funding allocations directly to results. The growing cadre of mega-billionaire individuals even now have enough personal wealth to make a material global scale difference on extreme poverty outcomes (Kharas, 2021). It would likely be easier to track, for example, the poverty reducing benefits of a billion-dollar allocation to such a fund than to estimate the economic growth benefits of a billion dollar allocation to IDA – even if the true underlying growth benefits were to be larger over the long term. A push for digital inclusion among beneficiaries could also have positive second-order effects, such as to help developing countries build infrastructure to foster more efficient taxation systems for growing domestic resource mobilization over time.

On the flipside, there would surely be challenges too. A Fund to End Extreme Poverty might prompt resistance among governments keen not to give too much influence to new multilateral institutions.

Some other governments might not wish to cede their legacy channels of influence through existing multilateral channels. Current multilateral institutions might also resent and resist any new institutional effort that draws attention to their own organization's shortcomings. Some beneficiary countries might resist any international institution that enables direct support to their own citizens. Others might ostensibly encourage the investments, but then deploy any new digital infrastructures to advance their own repressive policies later. All such concerns would need to be confronted and addressed through careful iterative problem-solving and independent review, consistent with a core institutional ethos of adaptability and resilience.

V. Conclusion

This chapter has sought to make the case for purpose-driven international development institutions that deploy financing to quickly scale up access to important and evolving development technologies. A broad conception of technology is essential to the argument. Successful purpose-driven funding mechanisms are not simply instruments to deliver commodities. They are instruments to deploy and advance new and systemically important technologies for development. We have argued that the advent, affordability, and demonstrated efficacy of digital cash transfers is one such systematically important technology that can serve as a central plank for the international community to follow through on its goal of ending extreme poverty.

In that spirit, there is strong merit for a large-scale purpose-driven fund (or window within a fund) to ensure extreme poverty is globally eliminated by 2030, with a practical focus on supporting cash transfers as social safety nets or a social floor for the poorest people in the poorest countries. IDA could naturally convert itself into such a fund, although this would require substantial reforms. Alternatively, a new dedicated Fund to End Extreme Poverty could focus on digital cash transfers while IDA focused on complementary strategies for boosting economic growth in the poorest countries, prioritizing agriculture, infrastructure, human capital, and broader policy reforms.

On which other issues might purpose-driven funds help the most? There are no shortages of global problems requiring collective action, but we do not seek here to engage on debates of which issues should be "in" or "out." Purpose driven funds are best suited when relevant technologies become widely *applicable*, when a critical mass of evidence on the impact of interventions becomes *available*, and when the magnitude of financing to achieve the desired result becomes *affordable*. Any purpose-driven fund would need to be linked to a clear case for how such a fund could drive change in relevant technology systems at scale.

A checklist for considering the merits of any new purpose-driven fund could include discussion of the following:

- Is there strong global and national political pressure for action?
- Are there new technological innovations that can link financing to results in a direct fashion?
- Can results be readily measured and monitored in real "political" time?
- Can the expansion of access help drive ongoing improvements in relevant technologies?
- Can a cross-section of relevant expertise and stakeholders be incorporated into the governance process to ensure a foremost focus on results?
- Can relevant input, output, and outcome metrics be published in a manner that invites scrutiny from independent researchers and professional academic debates to inform progress?

- Can scalable delivery mechanisms be created that offer a clear menu of support options to developing countries and are responsive to the large variance in recipient country institutional system capabilities?
- Can political leaders and major philanthropies see a clear investment case for deploying large budgets toward the new systems amid competing resource pressures?

If the answers to all these questions are yes, there might well be a case for launching a new purpose-driven fund. If the full slate of answers are more mixed, existing institutions might offer a better vehicle for advancing the relevant issues until more ingredients can take shape.

In any event, what the multilateral system needs more than anything is to help the world generate better results on issues that matter. For many pressing problems, a growing clamor for new approaches needs hard-headedness in defining adequate conditions for success. Done in the wrong way, further proliferation of issue-specific funds will only amplify frustration and confusion. Done right, purpose-driven funds can be an effective catalyst in solving many of the world's foremost existing challenges, starting with the elimination of extreme poverty by 2030.

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