

Global Agenda Council on Sustainable Development (GAC-SD)

Public-Private Problem-Solving for the Sustainable Development Goals

Homi Kharas, Senior Fellow and Deputy Director, Global Economy and Development, Brookings Institution

John McArthur, Senior Fellow, Brookings Institution; Senior Advisor on Sustainable Development, United Nations Foundation

July 2016

Thousands of specialized collaborations between public actors and private businesses will be required in order to implement the estimated \$5-7 trillion of annual investments needed to achieve the sustainable development goals (SDGs) by 2030.¹ Although infrastructure projects often generate the greatest attention in this regard, they represent only one of many essential forms of public-private cooperation across the SDG landscape. Different sectors are providing many pilots and experiments from which crucial lessons can be drawn.

Overall, the most successful examples of public-private cooperation share a common feature: they involve up-front discussions between stakeholders to clarify responsibilities and expectations. The probability of success falls when one sector moves first and then simply calls on the other for help when problems arise. Most often, cooperation will be best initiated at the national or even local level. But regional or global cooperation is sometimes appropriate too, for example when entire markets need to be created or transformed at large scale.

There are many ingredients to successful public-private cooperation. Some situations will require joint spending from both public and private sources. But other times the cooperation instruments may be non-financial – such as a policy or institutional change, awareness or capacity raising, a technological innovation, or some other complementary activity. Resources and approaches always need to be mapped against the ground-level impediments at hand, each of which might call for a distinct form of collaboration.

Given the breadth of situations where public-private cooperation could be important for the SDGs, it is worth distinguishing among the range of distinct underlying issues that might be present. These can generally be described across a spectrum, ranging from (1) problems that markets cannot solve on their own to (2) problems that governments cannot solve on their own. Below we describe a range of cases, grouped under the two categories, based on the end of the spectrum to which it lies closest. For each, we also describe examples of instruments where the complementary sector – public or private – can help to address the issue at hand.

¹ UNCTAD, World Investment Report 2014—Investing in the SDGs: An Action Plan

1. When markets are the prime movers but can't solve the problem on their own

- **Credit constraints.** Many businesses have limited access to the borrowing needed to finance their own growth. This might be driven by their own lack of assets to serve as collateral or by the high costs of borrowing in their local environment. In many cases, banks themselves face a high cost of loan supervision and administration, which keeps borrowing costs high, for example in rural areas where populations are spread out. When only a limited number of people meet the criteria for borrowing and it is expensive for banks to administer lending, there will be even less competition on the price of loans, further reducing the opportunities for business to borrow at lower rates to grow their businesses.
 - **Public cooperation instruments:** Government action can help increase access to credit through a variety of channels, ranging from publicly-funded institutions that offer sub-market borrowing costs, to credit lines made available by official agencies, to regulatory requirements imposed on private lenders. Public actors can also help to coordinate and, as appropriate, subsidize pooled credit mechanisms, such as insurance instruments to mitigate agricultural risks. They can help to subsidize the financial infrastructure, including credit rating systems, consumer savings protections, collateral registries, and mobile farm data that help to lower the costs for private actors to enter lending markets.
- **Affordability constraints.** There are many cases where low income levels within a population mean that people simply cannot afford to buy essential goods or services at international market prices. In these cases, there is a role for public entities to intervene to purchase commodities in a manner that stimulates expanded market-based production and makes products available at lower cost. For example, many life-saving health commodities had limited distribution in sub-Saharan Africa during the early 2000s due to lack of affordability.
 - **Public cooperation instruments:** Public sector entities, including those financed by official development assistance, can commit to purchase goods and services from market actors. This can in turn support expanded market production and product availability, which often leads to decreases in average prices. In other cases, instruments like regulated “lifeline” pricing can ensure that every person has free or subsidized access to a minimum required amount of an essential good, like drinking water, while amounts above that threshold are subject to market pricing.
- **Environmental sustainability outcomes.** Private firms rarely have a direct incentive to account for all of the environmental consequences they might generate, especially if those consequences are diffused broadly and subject to “tragedy of the commons” problems through externalities and aggregation. This is the problem, for instance, faced by carbon-fueled power plants that emit greenhouse gases and by fishing fleets mid-ocean. Each actor’s incremental emission of greenhouse gases or capture of ocean wildlife might help to boost its own profit while depleting the natural resource base available to others.
 - **Public cooperation instruments:** Governments can intervene either through regulatory directives or by setting prices to help capture externalities. In the simplest cases, governments might set limits or bans on harvesting of natural resources in particular geographies so that a long-term reservoir of those resources will be available in the future. Public actors can also put a price on externalities that need to be constrained. For example a carbon price (or tax) will affect investment decisions by providing a financial incentive to minimize carbon emissions across market actors. Such taxes can be implemented in a revenue-neutral manner, for example with offsets in personal income tax. Meanwhile, regulatory requirements can also be implemented, such as cap-and-trade systems, which limit the aggregate amount of emissions and then allow market forces to achieve the most efficient means of staying within that envelope.

- **Supply chain constraints.** In cases where market demand is not high enough to support a highly diversified mix of goods and services, or where suppliers are mostly informal small firms, robust supply chains may not develop. This is a common problem, for instance, among smallholder farmers with limited access to agricultural input markets in rural subsistence environments. Fragile supply chains, where they exist, are easily subject to disruption or suffer from low levels of competition. A prevalence of small informal firms also makes contract enforcement and tax collection more difficult, reinforcing trends towards informality.
 - **Public cooperation instruments:** Publicly funded agencies can help organize market actors (like smallholders) and invest in logistics and other supporting infrastructure needed for supply chains to emerge. Public sector legislation on SME contracts can also help protect against monopolistic or monopsonistic behavior by large firms.
- **Government policy uncertainty.** Private investor behavior is considerably affected by the coherence and predictability of government policies and regulation, especially in industries with large up-front costs and very long-term investment horizons. This is common in the realms of energy generation and distribution or construction and real estate. Market actors will be less likely to invest if they believe there is a likelihood that a government will change direction at some point over the course of a 30- or 50-year investment lifespan, for example on energy pricing protocols or zoning codes. This is one of the more challenging evolving frontiers of public-private cooperation, especially in addressing climate change. Many governments want to lower the perceived risks faced by investors in order to promote investments in areas like clean energy, but they do not want to subsidize investors who are accustomed to managing risk and who have the opportunity to generate enormous long-term profits if they succeed.
 - **Public cooperation instruments:** A variety of mechanisms can be used to promote market confidence, including publicly funded instruments to mitigate or share risk, even long-term political risk. Public instruments can also commit to absorb the “first loss” or “partial loss” of a venture, or provide credit based on the achievement of performance targets. Collective investment vehicles and co-financing arrangements are also ways of promoting trust and increasing investor confidence in specific projects or programs. Of course, sound policies and transparent institutions that reduce the risk of abrupt policy reversals are also essential.
- **Pioneer effects.** In many industries, especially those with returns to scale through network dynamics, market players might be unwilling to make the first-mover investments needed to create a new market. This could be because a relevant technology is new and untested, or because there are low barriers to entry and the first mover automatically creates advantages for competitive second-movers to short-cut the pathway to profitability. For instance, a technology like mobile money transfer in sub-Saharan Africa was only scaled up by private actors after receiving an initial public grant and coordinated support. Meanwhile, infrastructure companies might not want to put cell phone towers in remote low-income areas if they believe demand for using the towers will not return a profit. The first company to build a tower might discover the potential for profitability, and might also crowd-in the ecosystem of other networked market actors that render a competitor tower even more profitable.
 - **Public cooperation instruments:** In instances where the introduction of new technologies or services brings important benefits to populations in need, governments might want to offer incentives to market players through vehicles like pioneer tax advantages or publicly funded prizes for innovations. In some cases, public funding of market awareness can help to promote uptake of new products as well.

- **Technology adoption constraints.** Many companies work to develop innovative new products that embody technological frontiers and solve social problems. However, when a product targets consumers with limited ability to pay, extensive delays can ensue around the awareness of a new technology and how its widespread adoption could generate long-term economic and social returns. At the same time, government officials can themselves face limited incentives to experiment with new technologies, or limited capacity to evaluate among competing efficacy claims made by a cross-section of market innovators. The consequences are long-term missed opportunity for economic and social progress.
 - **Public cooperation instrument:** Governments can work with technical evaluation bodies to track emerging technologies linked to frontier SDG challenges and support appropriately scaled trials of emerging products and services. For example, the market-based invention of long-lasting anti-malaria nets with insecticide woven into the thread made a step-change contribution for potential prevention efforts. But one key benefit of the nets is only achieved through “mass action” effects, when use is widespread. There were initially no large-scale public programs in place to make sure the nets were commonly used in highly endemic countries. The advent of new public institutions to support procurement and test large-scale distribution campaigns led to rapid learning-by-doing and fast evolution in public health protocols, which in turn boosted demand for diffusion of market-based production technologies. Analogous efforts to combat households’ indoor air pollution through the piloting and subsidization of various “clean cook stove” products have also helped to accelerate product diffusion, albeit to a lesser extent to date.

2. When government is the prime mover but cannot solve the problem on its own

At the other end of the spectrum, there are many instances where governments might wish to act but need cooperation from market actors in order to maximize impact.

- **Balance sheet constraints.** Many government actors, especially sub-national actors, are unable to carry the debt needed to finance major infrastructure projects with large up-front costs, ranging from energy to transport to water and sewage systems. This might be either because the liability amount would swamp their balance sheets, at great consequence to underlying credit rating, or because lumpy increases in debt would violate national or international standards that link debt or borrowing to other economic indicators like export volumes or short term revenues.
 - **Private cooperation instruments:** These situations provide some of the most common public-private agreements, especially for building new forms of public infrastructure. In such cases, private investors may build the project themselves and carry the financing cost on their own balance sheets, while setting terms with the public actor that recoup expenses either through a service delivery arrangement or through a longer term transfer of ownership.
- **Procurement volatility constraints.** Sometimes many public actors, including national governments, need to procure and restock goods (like medicines) periodically, but each actor’s orders might come at a different time and thus face stock-out constraints in the moment. Individual orders might also not be large enough to stimulate an adequately fast incremental production run by the private manufacturer. When orders are staggered unevenly across time periods, the manufacturer might limit exposure to demand volatility and ensuing carrying costs by limiting production levels. The result can be high prices and more limited product availability, sometimes only available after perilous delays.

- **Private cooperation instruments:** Pooled procurement can help minimize transaction costs with suppliers by jointly addressing challenges of scale, timing and liquidity. For example, the Implant Access Program is a partnership of public and private organizations that joined to provide volume guarantees for critical family planning technologies available to key countries at roughly 50 percent price reductions. The partnership helped to double annual procurement levels and saved public actors more than \$240 million over its first three years.
- **Science and innovation constraints.** Many policy goals, including some SDGs, can only be achieved through breakthroughs in scientific and technological innovation – for instance batteries to store energy, vaccines to tackle diseases, and crops to withstand extreme weather events. The challenges are particularly acute when the breakthroughs are needed for markets with high switching costs (e.g., from petrol-fueled to electric vehicles) or extremely poor consumers who provide minimal market incentives to motivate private sector research. Governments might be able to support basic research budgets that advance long-term scientific progress, but private actors are often better at generating products for market adoption and can respond to competition-based risk incentives if they believe profits can be accrued by those who first produce a new breakthrough.
 - **Private cooperation instruments:** Some governments have tackled the innovation challenge through “pull” mechanisms such as advance market commitments, which pledge to purchase yet-to-be-developed products when they are created. Thus governments are able to create incentives for dynamic market competitors to solve important social problems and also bear the financial risk inherent in research and innovation processes.
- **Implementation efficiency incentives.** Although specialized public entities are in many cases highly efficient, some government entities have trouble ensuring optimal efficiencies in their service delivery and oversight functions. This might be due to either internal organizational limitations or to lack of incentives for testing new approaches and technologies that can meet societal demand and support learning-by-doing within the relevant institutions.
 - **Private cooperation instruments:** Market operators can often deliver services with the lowest unit costs. While there might be a considerable public monitoring cost to ensuring social mandates are fulfilled, and private entities generally incur higher financing costs than sovereign entities, the aggregate benefits of partnering with private actors for implementation might outweigh the costs if the result is equivalent or better outcomes at the same or lower overall expenditure. This dynamic has frequently been explored with infrastructure services, but is also increasingly common in social sectors, including health and education.

3. General themes

The range of issues outlined above underscores a diversity of problems on which public and private actors will need to cooperate to help achieve the SDGs. In taking stock of the complexity, four overarching points are worth noting:

First, multiple market or government limitations often need to be solved at the same time. For example, policy ambitions to promote clean energy projects might face public balance sheet constraints, private credit constraints, pioneer demonstration constraints, and environmental sustainability imperatives all at once. Sometimes public-private partnerships are also needed to identify where parallel government policies serving separate purposes might need to be aligned to unlock barriers to investment. Each local problem requires its own unpacking of relevant issues.

Second, different problems have different degrees of underlying “public good-ness,” and thus merit differing levels of public action and resources. For instance, problems like virulent disease outbreaks require strong public action, given the presence of large externalities and risks of catastrophic social consequences. Likewise, decreasing the risk of extreme weather events might have positive long-run economic returns that near-term market instruments do not

capture. Meanwhile, solutions to some problems have more inherent opportunities to generate cash flow and market returns, such as investments to promote near-term agricultural resilience, or the installation of low-carbon energy infrastructure.

Third, risk is often the most important constraint to overcome, whether by public or private actors. This is especially the case in less developed market environments, which tend to have a more limited marketplace for risk management instruments, on top of more limited economic and social buffers to manage negative outcomes themselves.

Fourth, as a general matter, less advanced economies tend to face more of the problems that private actors cannot solve on their own, since their markets are less liquid, relevant product spaces tend to be less diversified and specialized, the cost of capital tends to be higher, and there might be local barriers to technology adoption, either for regulatory reasons or due to missing complements in production. They simultaneously face more of the problems that public actors cannot solve on their own, as governments and public institutions tend to have fewer resources of all forms.

This last observation has particular importance in fragile and conflict-affected states. Private investment has tended to bypass these environments, which is commonly accepted as a normal state of affairs due to the level of risk involved. But several studies and experiences are challenging this conventional wisdom by showing that business can be more successful than previously expected in delivering goods and services in fragile contexts. This is generating more confidence that private actors can be valuable partners in these cases when the right kinds of partnership are formed. More extensive experimentation is required to enrich our understanding of how public-private cooperation can promote social, economic, and environmental outcomes in these situations.

4. Kick starting tailored successes

For most of the 17 SDGs, a step-change in progress is required in order to achieve the relevant targets by 2030. In many cases both public and private action and investment will be required, often in direct cooperation. Scaling up success will not be achieved through any single turn-key approach. Instead it will require thousands upon thousands of specialized collaborations in which the means of cooperation are tailored to match the nature of the problems at hand. It will involve sharing and learning from the many pilots that are being done or that could be initiated. Our Global Agenda Council hopes that this short series of documents can help to kick start that effort.

This paper was prepared as part of the Global Agenda Council on Sustainable Development's Knowledge Hub, a group product by Member (and their representatives) who are convened by the 2014-2016 Global Agenda Council on Sustainable Development, organized by the World Economic Forum. A list of GAC-SD Members is available here: <https://www.weforum.org/communities/global-agenda-council-on-sustainable-development>. All co-authors contributed in a personal capacity. The views expressed are not necessarily those of all contributors, who may have had different opinions on some issues.