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CGD and Support to the Field of Biometric Identification for Development

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About this Case Study

This case study is one of five that were produced as part of an external assessment undertaken between 2020-2022 to examine how the Center for Global Development contributed to influence and impact in some of its areas of work. The case studies detail five notable initiatives from the organization's first 20 years. On a broad level, the case studies also illustrate the complex ways in which policy change happens and is understood retrospectively, the variability of success, and the interdependency of a range of contextual factors in enabling (or hindering) progress.

This external assessment was led by Benjamin Soskis of the Urban Institute's Center on Nonprofits and Philanthropy and overseen by Amanda Glassman with coordination and support from Brin Datema in consultation with CGD's president Masood Ahmed. Each of the case studies were researched and authored by independent consultants to CGD. The full collection of case studies is available at www.cgdev.org/case-studies.

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OVERVIEW

For millennia, governments have sought to identify those who live in their territories, including through the use of civil registries recording births, deaths, marriages, and other major life events. Identification has long been necessary for the collection of taxes, the maintenance of internal security, and for the management of elections, among other purposes, although many countries have lacked a central system of registration that joins these different uses together.

In the last decades, digital technologies have transformed these mechanisms of identification. During the same period, governments have increasingly applied the tools of identification to development-related areas, such as “banking and finance, public payroll management, social transfers and pensions, health-care and health insurance and voter rolls.”¹

This case study examines the role that the Center for Global Development (CGD) has played in that shift, specifically assessing the organization’s impact and influence on identification for development as a coherent and unified development field, as opposed to a collection of isolated country-level initiatives.

The case study is based on 15 interviews with CGD researchers, funders, officials at development agencies, and scholars, all active in the identification for development field, and on a review of the existing literature that touches significantly on identification for development. The case study seeks to gain a mechanistic understanding of CGD’s direct impact and indirect influence on the field, but it stops short of assessing how the policies and practices that CGD helped to advance have shaped development or humanitarian outcomes.

It pays particular attention to the impact of a few key reports published by CGD, especially those co-written by CGD senior fellow Alan Gelb, and to CGD’s contributions to the establishment and development of the World Bank’s Identification for Development (ID4D) initiative, which has become the leading global institution for the promotion of best practices associated with and technical assistance related to ID for development. The study’s ultimate conclusion is that although

the field of identification for development would likely have developed even without CGD’s involvement, CGD can claim significant credit for the speed with which that field has coalesced and matured, and for the ways in which it has constructively engaged and brought into conversation a variety of stakeholders.

The growth of identification for development as a field was possible because of the emergence of new identification systems and the increased variety of their applications. In the last several decades, technological advances, including significantly increased precision in biometric systems, have made it possible to ensure statistical uniqueness in very large populations, which has been recognized as an important factor in minimizing leakages and fraud in service delivery.² Demand for identity management systems was also driven by security requirements introduced after the September 11, 2001, terrorist attacks, and know-your-customer (KYC) standards imposed on the financial services industry.³

In the 1990s and 2000s, many countries began to experiment with applying digital identification, and specifically biometric ID, for development purposes. A proliferation of government and privately run programs of financial inclusion, for instance, required increased attention to the verification of users’ identity. In 1999, South Africa pioneered a version of what historian Keith Breckenridge has termed the “biometric state,” developing a national ID system out of older registries to implement and deliver a cash grant program.⁴

And yet biometric ID was still dominated by, and largely associated with, the security fields. As one foundation staffer who became heavily involved in identification for development recalls, even as late as 2015, “when we spoke about ID in the US or Europe, people would look at us very condescendingly and with a lot of scorn, like, “ID? Are you in 1984?”⁵

But even then, the tide had begun to turn, and the change has been dramatic over the last ten years. There has been “a paradigm shift,” one World Bank official noted, “about looking at ID not as a system of control but as a system of empowerment and service delivery.”⁶

There were several groups of researchers, industry leaders, and development officials whose efforts and interests converged to help propel that shift. The biometrics and other related industries, such as those that manufacture smart cards and other credentials, encouraged the application of digital identity verification and authentication mechanisms to development-related areas. Technologists championed the promise of biometrics. Within the development field, the community that had long emphasized civil registration, often through a rights-based conception of legal identity, appreciated the transformative potential of biometric ID, although some within it were concerned that the technology would lessen reliance on (and thus investment in) civil registration and the accompanying systems for vital statistics. Advances in digital and biometric ID technologies gave a particular boost to those within the development field who emphasized the need for systems easily accessible by adults (without prior government-issued documents), since it allowed for an identity base to be created distinct from a credential-based civil registration process.⁷

AADHAAR AND SDG 16.9

Two specific initiatives provided a particular boost to the field of identification for development. One very significant development in the field's recent history was the establishment of India's unique identification program, Aadhaar, the world's largest identity platform, in 2009. The expressed motivation for the program was long-running frustration with the leakages and fraud that were estimated to eat up more than a third of Indian government services and subsidies that were meant to target the poor. Led by Indian tech entrepreneur Nandan Nilekani, the program did not rely on previous civil registries or use ID cards, as many large-scale identification programs had in the past. Instead, Aadhaar relied on a vast decentralized enrollment network that used a combination of minimal demographic data, fingerprints of all 10 fingers, and an iris scan. Following successful enrollment, each individual was given a unique 12-digit number that served as the primary credential to underpin digital authentication for a range of governmental subsidies, transfers, and services, including

applications through the "India Stack." By 2016, the program had exceeded more than 1 billion enrollments; the figure now stands at more than 1.3 billion.⁸

There is no doubt that Aadhaar drew enormous amounts of attention to the field of biometric ID. It became, as one scholar of identification phrased it, "the 500-pound gorilla in the room," such that many believed that the field of identification for development would "rise or fall on what happens in India."⁹ And, in fact, Aadhaar sparked the interest of many of those who would become leading advocates of identification for development. Robert Palacios, who would help establish the World Bank's ID4D initiative, had been involved in early biometric ID applications in India in 2008 and was engaged in early discussions with a group of experts associated with Nilekani. Himanshu Nagpal, who would champion support for identification for development at the Bill & Melinda Gates Foundation, also reports that the minimalistic and foundational design and successful implementation of Aadhaar in India helped convince him of the importance of biometric ID.¹⁰

Aadhaar was crucial for the growth of the field of identification for development in another important way as well. As CGD's Gelb explains, it was the first substantial identification program to release performance data; past large-scale identification programs had most often been part of national security systems that resisted disclosure. The release of these data allowed for the type of quantitative analysis that helped provide "proof of concept" for a system on the scale of Aadhaar and increased the legitimacy of the identification for development field more generally.¹¹

But even as Aadhaar provided enormous momentum to the field, it also focused attention on the field's vulnerability and highlighted the need for the analysis and normative guidance that CGD and its partners would soon provide. The program provoked controversy, both within and outside the country, due to its unclear legal foundations (it was initiated without authorizing legislation) and the potential to use biometric ID for ethnic targeting, profiling, surveillance, and exclusion. As one foundation official explained, "Once Aadhaar reached national scale, it became clear that other countries would

also utilize digital and biometric technology to identify citizens. This highlighted the urgent need to develop policies and design principles to ensure that such systems were implemented responsibly and with proper safeguards.”¹²

The exceptional nature of Aadhaar—the program was tied neither to national status nor to a particular function, as most other identification programs had been in the past—also complicated its potential as a model. In addition, its prominence worried some of those especially committed to promoting systems of civil registration, since it exemplified the way in which advances in biometric ID technology allowed certain identification programs to move forward even when there were severe shortcomings in civil registries. There were also concerns about the program’s transportability to other nations, and about how other countries might adapt and learn from both its successes and its limitations. All these issues CGD took on, which helped to sustain Aadhaar’s potential to boost the identification for development field.¹³

The other significant development that both signaled the coalescence of a field of identification for development and attracted more interest and attention to that field was the inclusion of identity within the Sustainable Development Goals (SDGs), adopted by all UN member states in 2015. SDG target 16.9 sets out to “provide legal identity for all, including birth registration” by 2030.¹⁴ This was the first time that identity was formally recognized in a development document. CGD’s involvement in the campaign to include identity in the SDGs was minimal; the civil registration community, including those affiliated with several UN agencies, took the lead. SDG 16.9 undoubtedly played a significant role in helping to establish the identification for development field. Nations that signed on to the SDGs would need to monitor progress on legal identity—though birth registration was the only indicator explicitly attached to the target, and there was no consensus as to the definition of legal identity.¹⁵ “The very fact that [countries] all have to produce statistics that basically report to these standards means there’s a common conversation and it creates a market” for research and analysis on identification, notes scholar Breckenridge.¹⁶ Additionally, as will be further discussed below, the inclusion of identity within the

SDGs helped convince at least one of the funders who would become a major backer of identification for development of the promise of the field.¹⁷

Yet the important question for this case study when considering both Aadhaar and SDG 16.9 is whether the momentum generated by these two developments would have by itself done enough to solidify the field of identification for development, such that CGD’s contributions were ultimately extraneous. This does not seem likely, based on the accounts of those consulted for this case study. With respect to Aadhaar and SDG 16.9, both developments increased the prominence of identification for development but left open a host of issues that required further analysis and research and left intact tensions within different segments of the field that required active management.

During this period, few institutions focused on research or advocacy related to identity systems in a sustained way. One that did was the Inter-American Development Bank (IDB). In the early 2000s, according to Mia Harbitz, who coordinated the IDB’s activities in the areas of identity management and registries, encounters with challenges in the administration of conditional cash transfers in Latin America, and a growing appreciation of the difficulty many people experienced in accessing government benefits because they were unable to prove who they were, led the IDB to begin to conceive of identification documents for beneficiaries of bank loans and social programs as potential tools of inclusion. IDB staff began an informal research scan but found little available scholarship. “We scoured the Internet and the library service,” Harbitz recalls, “and found only one publication on birth registration.”¹⁸ IDB formalized civil registration as a working area in 2002, led by Harbitz, and over the next decade, she and her colleagues published a variety of materials on legal identity as a precondition to social inclusion, with a strong focus on civil registration and legal identity.¹⁹

In September 2014, Harbitz, along with representatives from the government of South Korea, the African Development Bank, the Asian Development Bank, and the IDB, helped organize the first International Identity Management Conference,

held in Seoul.²⁰ The conference reflected growing interest in identification in relation to development, and although it focused on civil registration, it addressed other forms of ID as well.²¹

An academic community of historians, sociologists, and political scientists was also beginning to direct more attention to identification. In 2012, Breckenridge and Simon Szreter, their interest stoked by the contemporary growth in the field, published an edited volume about the history of registration, which took particular note of registration's role in the history of development. With the encouragement of Jaap van der Straaten, chief executive of the Civil Registration Centre for Development, a network of scholars developed around this inquiry, and though they were attuned to the ways in which, in the past, registrations systems were not merely instruments of administrative control but were employed by private citizens for their uses, when analyzing expanding state systems of identification they maintained a largely critical perspective, paying particular attention to the dangers such systems posed to privacy, individual rights, and civil liberties. This community was formalized as the Bhalisa network (after the Zulu word for "registry"), which allowed scholars to meet independent of the global multilateral institutions and national governments whose systems they often scrutinized. In 2015, the first meeting of the network was hosted by van der Straaten in the Hague, and subsequent meetings have been held at Wits University in Johannesburg, where Breckenridge teaches, and at Cambridge, where Szreter works.²²

Both the 2014 Seoul meeting and the Bhalisa network are key elements of the counterfactual that considers how the field of identification for development might have progressed if CGD had not engaged in the field. Like nearly all counterfactuals, this one is impossible to answer definitively, but the perspectives of those consulted for this case study suggest that the field would have taken considerably longer to coalesce and would likely have featured less constructive dialogue between various major players. The Bhalisa network has provided important scholarship on identification systems, but its focus has remained largely admonitory and it has to a large extent maintained a critical distance from government and

multilateral development agencies, which has inhibited its ability to shape practice. The IDB and the other agencies that convened in Seoul lacked the reach and resources of the World Bank, whose engagement with identification for development CGD helped to encourage and deepen.²³

CGD RESEARCH AND ANALYSIS

Even as many countries began to use biometric ID in ways that promoted development, a research base that put these various applications into conversation, determining common challenges and best practices, and that could promote the coalescence of a field of identification for development, was slower to emerge. There was, as mentioned above, a community of scholars generally critical of government-run ID systems, along with a number of NGOs dedicated to privacy rights that sought to highlight the dangers of biometric ID and often to halt the spread of its use by government. And there had also been research by development officials and agencies that focused primarily on civil registration but paid less attention to emerging technologies that were transforming the field. But, as one funder who had sought early guidance on the subject explained, there was no think tank with a focus on the intersection of identification and development before CGD entered the space.²⁴

This was the gap that CGD could fill, seeking to apply a systematic, methodologically rigorous analysis to identification systems and their relationship to development that extended beyond the bounds of civil registration. CGD would be positioned in reference to both an advocacy community that defined its relationship to digital ID in largely critical terms, and a community of vendors and technologists who served largely as industry boosters. CGD would be open to promoting the potential benefits of identification for development but also attentive to the risks involved, and the organization could devote itself to solidifying the research base for the emerging field. As one funder described it, CGD would play a "seminal role... in building the field from an intellectual discussion perspective."²⁵

The CGD researcher who has done the most to advance the field of identification for development is senior fellow Alan Gelb. Before joining CGD, Gelb served as director of development policy at the World Bank and chief economist for the bank's Africa region. One of the areas that Gelb worked on at the bank was the development and management of resource-rich countries; he became particularly interested in programs that allowed resource revenue to be channeled directly to residents.²⁶ When he moved to CGD in February 2010, he continued to work on the issue, through the "Oil to Cash" project led by Todd Moss, and soon expanded into an investigation of identification more generally. In order to distribute rents effectively, and to get subsidies to individuals, states had to determine who their citizens actually were. This, Gelb soon realized, proved a considerable challenge in many places; as he has written, there was no way "to identify citizens as unique and, once identified, no way to rigorously authenticate them for payment." He became especially interested in biometrics as one means of meeting this identification challenge and in the ways in which biometric ID could be applied to the field of development.²⁷

So Gelb began a research program at CGD on identification, publishing a series of reports and papers with other researchers: on cash transfers using digital ID, on the links between ID and the SDGs, on Aadhaar, and on ID systems in the context of elections, among other topics.²⁸ The most influential of these was a 2013 paper that Gelb wrote with CGD policy analyst Julia Clark, surveying some 160 cases in which biometric ID had been used for economic, political, and social purposes across more than 70 low- and middle-income countries. The report provided analysis related to a wide range of issues confronting the nascent field of identification for development, including challenges and risks related to exclusionary practices, threats to privacy, and cost-efficiency. In its catalogue of the various development uses that nations had made of identification, the report also helped to shift the understanding of identification for development from one centered on rights to one centered on identification systems as tools whose usefulness and purpose could—and, in fact, had to, in order to win governmental approval—be demonstrated. The paper's main thrust, however, was staked to the promotion of "the value of

adopting a strategic developmental approach to identification, rather than seeing it simply program-by-program as a cost and adopting ad hoc approaches," as many government and development officials had in the past. In making this point, Gelb and Clark introduced the distinction between functional biometric ID systems, which were tied to specific applications, and foundational systems, which were elements of an integrated framework spanning multiple applications.²⁹

Although the authors did not explicitly make the case for foundational over functional systems, just articulating and formalizing that distinction, and providing a framework for understanding the differences, represented an important step in pushing the field toward support for the foundational approach, as one World Bank official explained.³⁰ That, in turn, Gelb argues, proved key to the maturation of the identification for development field, since consideration of foundational systems encourages more systematic, cross-sectoral analysis of identification. Much like foundational systems moved beyond an ad hoc, case-by-cash engagement with identification, Gelb and Clark's paper did so analytically.³¹

According to several of those interviewed for this case study, the paper became one of the most influential in the nascent field of identification for development; it was certainly the CGD research product most frequently cited by those interviewed.³² Several mentioned that the functional/foundational distinction that it developed became fully integrated as a key term in the identification for development field. Yet in assessing the impact of the paper, those interviewed often blurred considerations in which the paper reflected the maturity of the field and in which it actively propelled that maturity, making it difficult to attribute specific impact claims to it.³³ "It's rare that I remember the year papers were published," one World Bank official noted, correctly recalling the publication date, "but this one is continuously quoted." Others interviewed regarded the paper as providing a key foundation for the coalescence of identification for development as a field. As Joseph Atick, one of the founders of the digital ID field and the current executive chairman of ID4Africa, explains, "Gelb and Clark... basically documented evidence that was in the

air but needed to be documented or else we would lose the reference point.”³⁴

The paper also impressed Robert Palacios, another of the early leaders in the identification for development field, who was just beginning to plant the institutional seeds that would become the World Bank’s ID4D initiative. “I thought it was the only good piece on the subject out there at the time,” Palacios recalls, noting that it helped provide intellectual guidance and a “great framework” for the bank’s work on identification, and especially its ID4D initiative (discussed below). This paper, Palacios explains, represented the sort of research that bank officials believed was valuable in promoting identification for development but that before the establishment of the ID4D initiative they did not have the capacity to undertake on their own. “I don’t think any of us would have written the first paper, and none of us would have had time to do the Identification Revolution book. Time is an important factor,” he says. Gelb and his CGD colleagues were able to focus on providing an initial evidence base for the field of identification for development in a way that those within development agencies at the time could not.³⁵

As alluded to above, a second, larger report, written by Gelb and researcher Anna Metz, was published by CGD as a book in 2018, *Identification Revolution: Can Digital ID Be Harnessed for Development?*³⁶ The book took on many of the themes of the paper, but in a more comprehensive manner and with greater emphasis on ID systems. It addressed both the benefits and risks that digital identification, including biometrics, posed for development, analyzing the broader enabling environment beyond software or hardware that could sustain identification systems, and providing a handful of robust “frontier” case studies in digital ID. Although all those consulted for this case study recognized the book as an impressive work of synthesis and scholarship, there was less certainty expressed about its ultimate impact on the emerging field. In these assessments, it was more often assumed to have reflected rather than activated the coalescence of the identification for development field, although it is possible (though difficult to conclusively demonstrate) that its comprehensiveness provided a boost of legitimacy for those seeking to promote the field.

Another way in which Gelb’s research helped to solidify the status of identification for development as a field was by helping to secure more substantial streams of funding for it. Those overseeing the work at the two largest private institutional funders of identification for development, the Bill & Melinda Gates Foundation and the Omidyar Network, both cited Gelb’s work as key in making the field a more attractive one for philanthropic investment. When Himanshu Nagpal arrived at the Gates Foundation as a senior program officer focusing on emerging technologies in October 2015, he considered adopting a focus on digital ID for development, having had his interest sparked by the promise it had shown in the Aadhaar program. Hoping to learn more about the topic, he scanned the existing literature and found Gelb and Clark’s paper to be “the best historical and landscaping” text available. “I learned my early ropes from that paper,” he recalls.³⁷

As Nagpal became the leading internal advocate at the Gates Foundation to fund identification for development, he turned to the 2013 paper, as well as to several other of Gelb’s publications, in order to help promote the identification for development agenda within the foundation and to meet some internal pushback to funding it. These reports, as well as the Identification Revolution book, proved “key” in convincing the Gates Foundation to support identification for development, he recalls, not merely because of Gelb’s and CGD’s credibility and reputation within the foundation but also because the research itself helped Nagpal make a case that the field was ripe for investment. “Alan’s work did not convince me [identification for development] is important,” notes Nagpal. But “Alan’s work helped me tremendously in convincing others this is important.” It is definitely possible that the foundation would have supported the field absent Gelb’s work, yet given the range of possible program areas Gates Foundation program officers confronted, and how easily one area deemed risky or lacking a sufficient evidence base could be replaced by another, a strong case can be made for the impact of any contribution, such as CGD’s analysis, that gave a particular area credibility within the foundation.³⁸

As discussed below, the Gates Foundation would ultimately become the first major funder of the World Bank’s ID4D

initiative. Beginning in 2016, as part of a “Citizens and States” project, the Gates Foundation also funded a series of country-based case studies produced by CGD and led by Gelb, on digital ID, payment systems, and mobile connectivity. The work was grounded in surveys and conducted in partnership with local research organizations, such as MicroSave Consulting; CGD managed the cross-country analysis and outreach to multilateral institutions. The foundation regarded CGD as well suited for the work because of its independence (the World Bank, for instance, as one program officer suggested, would have difficulty critiquing government policy in a public manner in countries where it was also negotiating the terms of ID system rollout) and its ability to produce actionable research in a relatively quick time frame (as opposed to research institutions that worked primarily with randomized controlled trials, with a much longer turnaround time).³⁹ Several of those consulted for this case study suggested that a number of the country-based case studies produced by CGD helped inform policymakers in the region who were considering expanding or reforming national ID initiatives, such as Pakistan’s recent commodity subsidy programs⁴⁰ and Bangladesh’s pilot programs using the country’s digital ID platform to improve financial inclusion and government-to-person payment systems. However, additional research is necessary to determine more precisely what the nature of the case studies’ impact might have been.⁴¹

As part of his outreach work, Gelb also engaged in multiple discussions with government officials or their representatives who were considering designing identification systems. One notable example is the work Gelb did with the government of Somalia, which had one of the least-developed national ID systems in Africa. The country had first moved toward the development of a more robust system when its president, Hassan Sheikh Mohamud, sought to hold elections in which individuals voted directly, as opposed to indirectly through clans. This would require reliable voter rolls, which Somalia lacked. The government also realized that an ID system could help in other areas, notably to strengthen KYC compliance for the financial sector to facilitate remittance flows, yet it had little sense of how to begin.⁴²

According to Gelb, an official from an NGO that was close to the president’s office, Terra Incognita, reached out to Gelb and let him know that they had been closely studying his work and were hoping he would help them put together a proposal that could be sent to the World Bank or another organization to assist with developing an ID system.⁴³ Gelb agreed; he encouraged them to pursue a more foundational ID system and helped to edit a proposal that was ultimately sent to the World Bank. At the end of 2016, the bank joined with the United Nations Development Programme (UNDP) and the International Organization for Migration (IOM) to conduct “a joint pre-assessment for a first-ever national and voter identification program for Somalia.” The World Bank ultimately agreed to support the design and implementation of a foundational ID system in Somalia, with ID4D offering diagnostic and then technical assistance. It’s quite possible that the Somali government would have ultimately received World Bank support for a foundational ID system without Gelb’s assistance, but it also seems likely that Gelb’s involvement helped to speed this process up and to guarantee that Somalia would seek to establish a multipurpose system applicable beyond voting rolls. More research, however, is necessary to determine how much causal weighting should be granted to Gelb in this case.⁴⁴

THE WORLD BANK’S ID4D INITIATIVE

The World Bank’s ID4D initiative, officially launched in mid-2014, is now the leading institutional forum for the promotion of best practices associated with and technical assistance related to identification for development; a significant proportion of the impact that CGD can claim in the identification for development field has been achieved through its role in shaping and partnering with the ID4D initiative. The history of the initiative’s founding is instructive; indeed, CGD’s and the World Bank’s engagement with the identification field emerged out of the same stimuli, and the two organizations developed what one World Bank ID4D official termed a “symbiotic” relationship, which boosted CGD’s reach and strengthened ID4D’s effectiveness and impact.⁴⁵

There were significant challenges to setting up a formal structure within the World Bank to address identification for development. First, in some countries, many bank officials did not have close relationships with the officials and institutions that had previously developed the most experience and closest associations with identification, such as ministries of the interior, which also encompassed security and policing matters or electoral commissions; World Bank officials more traditionally dealt with institutions involved in finance, infrastructure, health, or education. As Gelb notes, bank officials who wished to dive into the identification space were initially required to “deal with a whole new set of counterparts that you’ve never had relationships with, and that made many people feel uneasy.”⁴⁶

Second, identification for development is a cross-cutting issue, and as such, it did not fit neatly into the preexisting sectoral divisions around which the bank, and its regional and country work, had long been organized. Much as Gelb and CGD researchers had begun to approach identification for development with a wider lens, focusing less on single applications and more on foundational systems, the bank would ultimately structure its program on identification for development as a cross-cutting, cross-sectoral initiative. In these ways, CGD’s research focus and ID4D’s institutional configuration aligned with and reinforced each other.⁴⁷

As noted earlier, Robert Palacios had first become interested in biometric ID through his work in India with a subsidized health insurance program that used a biometric smart card and with the Aadhaar program. When he became global lead in the World Bank’s Social Protection group in 2010, Palacios worked with other bank staff to deepen the bank’s engagement with identification, including with Mariana Dahan, who initially coordinated the work. The group reached out to practitioners with expertise in the field, including technologists from Silicon Valley and leading biometric entrepreneurs such as Joseph Atick, who would later establish ID4Africa, and to researchers such as Gelb. Palacios contacted Gelb after reading his work on the possibility of using biometric ID to distribute oil revenues; according to several of those consulted for this study, Gelb’s deep experience with the bank as

an institution and the trust he enjoyed from high-level bank officials proved especially valuable. Yet Gelb’s status as a non-World Bank researcher was also helpful, as he was regarded by many of those inside and outside the bank as a neutral analyst in the identification for development field.⁴⁸

Palacios, Gelb, and Clark organized a workshop in September 2011 for bank staff on biometric ID technology in developing countries, which explored some of the identification-related projects that the bank had already adopted that used biometric technology.⁴⁹ Clark, now at the World Bank’s ID4D initiative, credits this workshop with “generating momentum for a more holistic and cross-sectoral World Bank approach to the topic.” Palacios also asked Gelb and Clark to research how many projects at the bank already involved identification. Gelb and Clark determined that there were several projects that did so, but there was little coordination or communication between them. At the time, the bank’s engagement with identification mirrored the functional approach that many countries had taken to identification, embracing one-off programs without developing a cross-sectoral, “foundational” system.⁵⁰

As an initial move toward such a system, the bank decided around this time to convene technical specialists from six of the initial bank cross-sectoral verticals (Transport and ICT, Health, Governance, Social Protection, Finance, and Gender) to form a working group to study identification for development. This working group institutionalized the mandate for a cross-sectoral approach to identification for development and served as the institutional seed out of which the more robust ID4D initiative would germinate.

The working group produced a steady stream of research, with Gelb and CGD researchers closely involved. In September 2012, Gelb and Clark presented at a workshop in Bangalore, India, organized by the World Bank on the implementation of social programs. According to Gelb, the conference, which brought together representatives from more than 25 countries, was one of the first to look at identification for development across a broad range of countries. In Bangalore, Gelb and Clark presented material that would become their 2013 paper, discussed above. From 2014 to 2016, the World Bank

produced a number of country assessments of ID systems, including several in partnership with Gelb (in Kenya, Ethiopia, and Tanzania). During these seminal years, CGD's and ID4D's engagement with identification for development advanced in tandem.⁵¹

It was not until 2014 that ID4D became a structured initiative within the bank, with a formal governance structure of directors meeting monthly and a working group of technical specialists from all the involved global practices. Around this time, Gelb shared with ID4D a database of ID systems, including information on data privacy laws, that CGD had been compiling from secondary sources for the last several years, to help with ID4D's own data collection efforts; CGD's database would serve as the foundation of ID4D's significant data collection program.⁵²

In October of the following year, ID4D brought in Vyjayanti Desai, a longtime bank official with an extensive operations background, to manage the initiative. Desai's arrival was cited by many of those consulted for this case study as an important moment for the identification for development field. One of the most important developments early in Desai's tenure was the establishment of a Multi-Donor Trust Fund to support the ID4D initiative's work, so that it would not need to rely on World Bank country trust funds, which had proved much less reliable. The Gates Foundation became the first donor to the fund in fall 2016; the Omidyar Network joined the following year, with the governments of Australia (2018), the UK (2019), France (2020), and Norway (2021) contributing as well.⁵³ According to the program officer responsible for the Gates Foundation grant, Himanshu Nagpal, Gelb's research was essential in securing it, and in convincing colleagues the field was ripe for investment. "If Alan had not done that work, I could not have sold it internally. I would not have been able to recommend a \$10 million investment at the onset... If that work was not there, then the agenda would have been pushed back by a few years, [or] it might've started much smaller in terms of ID4D, and then fizzled out, because often if you don't give enough runway, programs can expire."⁵⁴

There is another significant contribution CGD made to the development of the World Bank's ID4D initiative worth noting. Two key staffers to the ID4D team, Julia Clark, now senior economist at ID4D, and the lead author of ID4D's *Practitioner's Guide*,⁵⁵ and Anna Metz, a program officer, had, prior to joining the World Bank, also worked closely with Gelb as researchers (and coauthors) at CGD. ID4D benefited not merely from Gelb's research expertise but from the training and mentorship that he provided at CGD as well.⁵⁶

THE FORGING OF THE PRINCIPLES ON IDENTIFICATION FOR SUSTAINABLE DEVELOPMENT

At the time of ID4D's establishment, identification for development was not, like many of the other key agendas that the World Bank focused on, "fragmented across many [development] institutions," which meant that there were significant "multipliers" to the global advocacy role that the bank's ID4D initiative was able to play. Through ID4D, CGD's impact was in turn also amplified.⁵⁷

One of the most significant contributions of the World Bank's ID4D initiative, and one in which CGD researchers played a major role, was the convening of organizations to draft the Principles on Identification for Sustainable Development, first released in February 2017 and revised in February 2021.⁵⁸ Prior to the release of these principles, there was little normative guidance on best practices in building ID systems to support development outcomes that had even moderately wide acceptance.⁵⁹ Many of the early leaders in the field, including Gelb, recognized this lack. It is very likely that even absent Gelb's efforts, the bank would have chosen to develop principles to guide identification for development. But even if Gelb cannot take credit for originating the project itself, there was a strong belief among those consulted for this case study that he played a vital role that few if any others might have been able to assume in helping to convene a broad range of organizations to craft those principles.

Gelb describes the idea of devising principles to guide the field of identification for development as an extension of the thinking he hoped to encourage with his work on identification systems, an approach that moved beyond a focus on individual applications and that encouraged a more normative framework. In several of his early papers on identification for development, including “Identification for Development: The Biometrics Revolution,” Gelb and his coauthors discussed emerging best practices, which balanced the risks and rewards of biometric ID systems. While researching what would become *Identification Revolution*, Gelb and future ID4D program officer Anna Diofasi (now Metz) began to think more rigorously about distilling those observations into a more formal system of general principles. In February 2016, they published an essay, “Using Identification for Development: Some Guiding Principles,” that they claim represents the earliest public version of such principles.⁶⁰ But, according to Gelb, this “guiding principles” essay would have had little effect on practice in the field as a stand-alone document. He appreciated that achieving broader impact would require working through an institution with greater resources, leverage, visibility, and convening power and a broader operational mandate.⁶¹

Around the same time that Gelb and Diofasi were developing their “guiding principles,” several other leaders in the emerging field of identification for development were also coming to the realization that the field needed normative guidelines alongside the technical standards that had already been developed.⁶² One of these individuals was Omidyar Network’s C.V. Madhukar, who in 2016 became the global lead for the foundation’s digital identity work as the organization became increasingly more engaged in the field. In 2015, in conversations with another senior Omidyar Network partner, Mike Kubzansky, Madhukar had discussed the field’s lack of normative standards or safeguards. “Even as the evidence pointed to the importance of formal identification,” Madhukar later wrote, “we began to notice that in many cases, there was an inadequate understanding among key stakeholders on what ‘good’ looks like in this space.” Kubzansky and Madhukar agreed—and communicated to ID4D staff—that it would be worthwhile to encourage the production of such standards

and that the Work Bank’s ID4D initiative was best positioned to convene organizations to begin the effort.⁶³

The World Bank ID4D initiative had in fact already considered creating a set of guidelines. It took the step of bringing together a group of organizations to develop the principles and asked Gelb to help with the drafting and convening. Gelb worked closely with his former CGD colleague Julia Clark (who would join ID4D as a full-time staffer in 2016), using the CGD “principles” as a foundation, to create an initial draft. Beginning in April 2016, the World Bank brought together more than 15 stakeholder organizations, including representatives from UNICEF, UNDP, UNHCR, the African Development Bank, the Gates Foundation, the World Bank, and the Omidyar Network, to jointly craft a revised version.⁶⁴ (CGD was the only research organization among the group.) The World Bank and CGD were identified as the facilitators of the project,⁶⁵ and though it was clear that the bank’s convening power was crucial in the process, it was important to the organizers that the principles not be conceived as belonging to the World Bank or to CGD specifically. Rather, they were principles developed and adopted by the wider development community. In that respect, the drafting of the principles was itself an exercise in field building. “It brought together a number of stakeholders around the table for a shared vision,” explains Desai.⁶⁶

Working closely with ID4D, Gelb played a central role in that process, drafting potential language, facilitating meetings of stakeholders, managing the disagreements that emerged between them, soliciting feedback, and then incorporating comments in subsequent revisions. Among those interviewed for this case study, there was wide agreement regarding both Gelb’s centrality to the process and the skillfulness with which he managed the various, sometimes contending perspectives of the organizations consulted.⁶⁷ Madhukar explains, “I know in every one of these meetings that we had on writing up the principles... [Gelb] would play a critical role in listening to everybody, getting the right wording, putting that in.”⁶⁸ Another stakeholder called Gelb “the mature statesman” who could find consensus among multiple stakeholder perspectives. Another funder commented, “The process [Gelb and Clark] ran was just

magnificent. It was extremely inclusive; everyone was heard, and every input was considered carefully.”⁶⁹

The entire process took more than eight months, involving many informal discussions (over the phone and email) and culminating with a few formal meetings, including in Rwanda to coincide with the 2016 ID4Africa meeting (see below) and in Washington, DC. The group initially compiled a larger number of principles but decided to whittle the list down to 10, which were officially launched as the Principles on Identification for Sustainable Development in February 2017. Twenty-five organizations endorsed the original principles, while as of January 2022, another five have endorsed a revised version, released in February 2021.⁷⁰ Especially significant was the fact that several major UN agencies, including UNDP, the United Nations Economic Commission for Africa, the United Nations High Commissioner for Refugees, UNICEF, IOM, the International Telecommunication Union, the United Nations Capital Development Fund, and the World Food Programme, signed on to the principles. As one UN official who was a participant in the negotiations over the principles recalled, the UN stakeholders believed it was “a very, very good idea for some UN agencies to be involved” in the process, because there were no extant standards or guiding principles to address government-run digital ID schemes, and identification and civil registration were vital to many of these agencies’ agendas. Despite some reservations based on disagreements over the weighting given to birth registration versus the registration of unregistered adults, the UN representatives were convinced of the significance of the principles in promoting best practices for the field.⁷¹

What might have happened if Gelb had not assisted with the drafting of the principles? As discussed above, the World Bank would almost certainly have initiated the process of developing them, even without CGD’s early efforts. Yet, given CGD’s centrality to the process, and the process’s delicacy, it’s highly likely that it would have taken much longer, with the potential to flounder on some of the more contentious issues, without Gelb’s involvement; it’s even possible that no formal principles would have been formally issued, or that they would have been less widely adopted.

Therefore, CGD can take some credit for the impact the principles have had on the field; this in fact represents the strongest case for impact on the identification for development field that CGD can point to. Soon after their launch, ID4D began to incorporate the principles into its work. According to Desai, they “became much of a north star for the work that we were starting to do at the country level... It’s fundamental to all our engagement and discussion and dialogue.” As Clark explains, “Since the principles were created, they have been heavily integrated into the design of projects and countries’ strategic frameworks, and in some cases referenced explicitly in World Bank financing agreements.” Similarly, according to one individual involved in the identification for development field, other development organizations have informally tied financing to the satisfaction of the principles. “If you violate some of these principles you are not likely to get funded,” the individual states.⁷² Daniel Radcliffe, deputy director of Financial Services for the Poor at the Gates Foundation, suggests that the principles were also key in recruiting additional funders to the identification for development field who were concerned about the risks of ID technology. The principles “gave the Gates Foundation and other donors confidence that the World Bank and the broader field were getting serious about harnessing the benefits of digital ID, while also mitigating the risks posed by these systems,” he explains. It is difficult, however, to prove with any definiteness that absent the principles, those funders would not have supported the field.⁷³

In March 2021, Desai and Clark outlined several examples of countries that have used the principles “to design new ID systems or reform existing ones”:

In Nigeria, the National Identity Management Commission (NIMC) has used the Principles to shape its Strategic Roadmap to reform and improve the national ID system. Among other reforms, this includes plans to address many of the current challenges that people face to registration (e.g., removing legal barriers related to eligibility and reducing documentation requirements) and minimize data collection (for example, country intends to reduce the number of attributes collected from 80 to 10 as part of the new approach).

In the Philippines, the Principles helped anchor the PhilSys Implementation Plan,⁷⁴ which adopts inclusive registration pathways for Filipinos without any documentation, architecture based on open source and open standards, and privacy enhancing technologies, such as tokenization to protect the permanent unique identifier. Others, such as Benin, Ethiopia, Guinea, Samoa, Somalia, South Africa, Timor-Leste, and Togo have also included and localized the Principles into their ID policies and strategies.⁷⁵

In a video prepared by ID4D, the director-general of Nigeria's National Identity Management Commission called the principles "a guiding framework" for Nigeria's digital ID ecosystem project.⁷⁶

As the above examples suggest, the principles have become key elements in the establishment of identification systems for nations working with the World Bank. But there is evidence that the reach of the principles has become even broader, achieving something close to normative status. In Ethiopia and in South Africa, governments incorporated the principles into the design or redesign of their ID systems, even though they were not at the time working with the World Bank on identity, or even consulting with ID4D officials unofficially. In an initial explication of its identity management policy, South Africa, for instance, explained that the principles that would guide the policy framework "are influenced and derived from the... principles on identification for sustainable development."⁷⁷

Additionally, the principles have been invoked by multilateral institutions, NGOs, and civil society organizations as an advocacy tool to promote best practices in digital ID for development.⁷⁸ In 2019, for instance, Privacy International cited the principles in an affidavit in support of the Nubian Rights Forum's petition to the High Court of Kenya to challenge the implementation of the government's planned digital ID system, based on issues involving data privacy and security, among others.⁷⁹

At least one interviewee, who has considerable experience in the identification for development field, did introduce a note of caution when discussing the impact of the principles, noting that one could not assume that government practice itself

would be reshaped by them. "When you come to designing a project and getting into the nitty-gritty details, it's very difficult to anchor some of these principles in reality," the source explained, "but they work superbly when it comes to presenting the field, presenting the issues."⁸⁰ If it is not yet clear how identification practices have been reshaped by the promulgation of the principles, the extent that they have been formalized in regulatory frameworks and invoked in legal challenges already signals their potential to have a significant impact on government policy in the years to come.

ID4AFRICA

Similar to his role with the World Bank's ID4D, Gelb supported the creation and development of ID4Africa. ID4Africa is an organization founded in 2014 that brings together governments, development partners, and the ID industry to shape and promote best practices in the field of identification for development. ID4Africa was started and is currently directed by Joseph Atick, another pioneer in the digital ID field with long experience as a tech entrepreneur and an expert in biometrics.

As conceptualized by Atick, ID4Africa was created to serve as a deliberate complement to the World Bank's ID4D even before the initiative was officially launched; as an NGO, ID4Africa could move faster and be more responsive and flexible than the bank (Atick has compared it to the Marines and the bank's ID4D to the Navy) and could initiate and support country-level efforts to develop identification systems that the bank and other development partners could later formalize, especially if there was a possibility of the country applying for a World Bank loan. ID4Africa would also serve as a forum where vendors and biometric industry representatives, government officials, donors, and development partners could come together to discuss common issues and concerns, institutionalizing a cross-country analysis of identification for development in Africa that Atick and Gelb have mentioned is especially helpful to engage industry issues like vendor lock-in.⁸¹ In 2015 in Tanzania, ID4Africa held its first annual gathering, with 300 participants. At its most recent in-person meetings, it brought

together some 1,500 participants from 46 African countries (it has functioned remotely since 2020).⁸²

Much like the World Bank's ID4D initiative, ID4Africa has had a symbiotic relationship with Gelb and CGD. Gelb sits on the organization's advisory board, has frequently provided key content (including keynote addresses and the lead paper for its almanac, which is distributed to all participants), and continues to advise Atick. At the same time, ID4Africa general meetings served as powerful dissemination vehicles for CGD research, allowing it to reach leading government officials in dozens of countries and providing a forum for informal conversations and consultations.⁸³ It's also worth noting ID4Africa's role in Nigeria's development of a national identification system, which used the Principles on Identification for Sustainable Development as a framework and which was cited by several of those consulted for this case study as a leading example of ID4D's impact in the field through the dissemination of the principles; the principles were frequently discussed at ID4Africa general meetings, and the two leading figures on Nigeria's National Identity Management Commission, Aliyu Aziz and Hadiza Dagabana, are the country's ID4Africa ambassador and deputy ambassador, respectively.⁸⁴ Here, as with the World Bank's ID4D initiative, the evidence suggests not that ID4Africa could not have been established without Gelb but that his deep engagement with ID4Africa played an important role in bolstering the organization's own impact in the region. It is difficult to disentangle the lines of causality between them, but it is clear that CGD, the World Bank's ID4D initiative, and ID4Africa have been symbiotically related and together have made significant contributions to advance the field of identification for development.

CONCLUSION

Given the broader technological and political trends that have emerged over the last several decades, which have encouraged the spread of identification as an instrument of development, it is quite likely that many countries would have ultimately embraced more multipurpose national identification systems, which would have in turn encouraged a more systematic

analysis of identification for development, even without CGD's engagement. Yet it is not necessarily the case that a coherent field of identification for development would have emerged out of this growth, with a substantial evidence base; a strong normative framework to accompany technical guidelines; and networks linking government and development officials, researchers and advocates, and industry leaders. At the very least, the above account suggests that CGD and the work of Alan Gelb can claim a significant degree of credit for the current strength of that field. In fact, the compounding, mutually reinforcing influence of both the institution and the individual is a key theme of this case study. As one funder noted, "You replace Alan with somebody else in CGD, they may not be able to do it. You put Alan without CGD, he may not be able to do it. It's the platform of CGD and Alan" together that resulted in the significant impact their work produced.⁸⁵

Sources repeatedly explained that influence in terms of the "credibility" of both CGD and Gelb, which extended to the identification for development projects Gelb worked on. This credibility in turn seemed to stem from how each could claim both insider and outsider status. They were close enough to development agencies on both a multilateral and country-based level to offer actionable guidance but sat at enough remove that their research and analysis were largely considered independent and judicious, positioned somewhere between the role of critic and booster.⁸⁶

In the last half decade, the field of identification for development has continued to grow, as existing institutions expand their operations and new institutions enter the field. Most notably, in January 2018, the UN secretary-general's Executive Committee requested that the deputy secretary-general's office "convene UN entities to develop, in collaboration with the World Bank Group (GFF/ID4D), a common approach to the broader issues of registration and legal identity." This led to the establishment in September 2018 of the UN Legal Identity Task Force, in which "13 UN agencies, under the chairmanship of UNDP, UNICEF and the UN Department of Economic and Social Affairs, are working together to try to assist Member States achieve SDG target 16.9."⁸⁷

The fact that the identification for development field is now more crowded also makes it more difficult to isolate CGD's ongoing, distinct contributions to the field's coalescence and growth. In an indirect and admittedly imprecise way, however,

CGD, as one of the pioneers in the field, can take some credit for a situation in which credit is now that much harder to allocate to any one institution.

Notes

- 1 Alan Gelb and Julia Clark, "Identification for Development: The Biometrics Revolution" (Working Paper 315, CGD, Washington, DC, 2013), 52, www.cgdev.org/sites/default/files/1426862_file_Biometric_ID_for_Development.pdf.
- 2 Statistical uniqueness refers to a situation in which the probability that any one individual can have multiple identities is very small.
- 3 For more on this context, see Alan Gelb and Anna Diofasi Metz, *Identification Revolution: Can Digital ID Be Harnessed for Development?* (Washington, DC: CGD, 2018), 9–23, www.cgdev.org/publication/identification-revolution-can-digital-id-be-harnessed-development.
- 4 Keith Breckenridge, *Biometric State: The Global Politics of Identification and Surveillance in South Africa, 1850 to the Present* (Cambridge, UK: Cambridge University Press, 2014).
- 5 Interview with funder.
- 6 Interview with Jonathan Marskell, June 30, 2021.
- 7 Email from Alan Gelb, December 13, 2021.
- 8 See Shankkar Aiyar, *Aadhaar: A Biometric History of India's 12-Digit Revolution* (Chennai, India: Westland Publications, 2017); Gelb and Metz, *Identification Revolution*, 169–178. Aadhaar figures, as of December 16, 2021, are taken from https://uidai.gov.in/aadhaar_dashboard.
- 9 Interview with Keith Breckenridge, May 18, 2021.
- 10 Interview with Robert Palacios, May 14, 2021; interview with Himanshu Nagpal, May 21, 2021.
- 11 In 2013, Alan Gelb and Julia Clark published a policy paper that used the Aadhaar data to provide estimates of the feasibility of achieving (statistically) unique identification in large populations (determining, ultimately that it was feasible), and that derived estimates of the accuracy of the biometric technology that could be scaled to countries with different-sized populations. See Alan Gelb and Julia Clark, *Performance Lessons from India's Universal Identification Program* (Washington, DC: CGD, 2013), www.cgdev.org/publication/performance-lessons-india-s-universal-identification-program; Gelb and Clark, "Identification for Development," 10; interview with Alan Gelb.
- 12 Aiyar, *Aadhaar*, 75; interview with Daniel Radcliffe, May 13, 2021.
- 13 Gelb and Metz, *Identification Revolution*, 172; Gelb and Clark, "Identification for Development," 1.
- 14 "Goal 16," UN, <https://sdgs.un.org/goals/goal16>.
- 15 Interview with Alan Gelb, June 30, 2021; Gelb and Metz, *Identification Revolution*, 2–3.
- 16 Interview with Keith Breckenridge, May 18, 2021.
- 17 C.V. Madhukar, "Thank you, ON!" LinkedIn Blog, June 15, 2021, www.linkedin.com/pulse/thank-you-cv-madhukar; email from UN official, December 17, 2021.
- 18 Interview with Mia Harbitz, July 8, 2021.
- 19 See, for instance, Bettina Boekle-Giuffrida and Mia Elisabeth Harbitz, "Democratic Governance, Citizenship, and Legal Identity: Linking Theoretical Discussions and Operational Reality" (working paper, Inter-American Development Bank, Washington, DC, 2009); Steve Brito, Ana Corbacho, and René Osorio, *El registro de nacimientos: La llave para la inclusion social en América Latina y el Caribe* (Washington, DC: Inter-American Development Bank, 2013). The Asian Development Bank also began to publish on the field. See Caroline Vandenabeele and Christine V. Lao, eds., *Legal Identity for Inclusive Development* (Manila, the Philippines: Asian Development Bank, 2007), www.adb.org/sites/default/files/publication/29046/legal-identity.pdf. Interview with Mia Harbitz, July 8, 2021.
- 20 No representative from CGD attended the conference.
- 21 *Proceedings of the International Identity Management Conference, Seoul, Korea September 23–25, 2014* (Washington, DC: Inter-American Development Bank, 2015), <https://publications.iadb.org/publications/english/document/International-Identity-Management-Conference-Proceedings.pdf>.
- 22 It's important to note that the Bhalisa network and the network outlined in this report with CGD, ID4D, and ID4Africa at its hub were not entirely separate domains and overlapped at several points. CGD's Alan Gelb, for instance, attended all three of the Bhalisa meetings and presented work at them. Email from Alan Gelb, January 4, 2022; Keith Breckenridge and Simon Szreter, eds., *Registration and Recognition: Documenting the Person in World History* (Oxford, UK: Oxford University Press, 2012); interview with Keith Breckenridge, May 18, 2021.
- 23 These two strands do converge, since Harbitz met with Robert Palacios and others in the early period of the establishment of the bank's ID4D initiative, and after her retirement from the IDB in 2015, she was hired as a consultant by the World Bank to assist with its identification for development work. Interview with Mia Harbitz, July 8, 2021.
- 24 Interview with C.V. Madhukar, June 23, 2021.
- 25 Ibid.
- 26 Gelb's views on this subject were published in Alan Gelb, *Oil Windfalls: Blessing or Curse?* (New York: Oxford University Press, 1988).
- 27 Email from Alan Gelb, November 22, 2021; internal CGD memo from Alan Gelb.

- 28 Alan Gelb and Caroline Decker, "Cash at Your Fingertips: Biometric Technology for Transfers in Developing and Resource-Rich Countries" (Working Paper 253, CGD, Washington, DC, 2011), www.cgdev.org/publication/cash-your-fingertips-biometric-technology-transfers-developing-and-resource-rich; Mariana Dahan and Alan Gelb, "The Role of Identification in the Post-2015 Development Agenda," CGD, July 1, 2015, www.cgdev.org/publication/role-identification-post-2015-development-agenda; Alan Gelb and Julia Clark, "Building a Biometric National ID: Lessons for Developing Countries from India's Universal ID Program," CGD, October 15, 2012, www.cgdev.org/publication/building-biometric-national-id-lessons-developing-countries-india%E2%80%99s-universal-id-program; Alan Gelb and Anna Diofasi, "Biometric Elections in Poor Countries: Wasteful or a Worthwhile Investment?" (Working Paper 435, CGD, Washington, DC, 2016), www.cgdev.org/publication/biometric-elections-poor-countries-wasteful-or-worthwhile-investment.
- 29 Gelb and Clark, "Identification for Development," 20, 52.
- 30 Interview with Vyjayanti Desai, May 14, 2021.
- 31 There was also a convergence with practitioners and vendors such as Joseph Atick who had been promoting multiple-application digital ID systems for several decades. Interview with Alan Gelb, June 22, 2021.
- 32 Gelb has also pointed out that the paper is cited in the [Wikipedia entry](#) for "Biometrics." Internal CGD memo from Alan Gelb.
- 33 The foundational category has met with some opposition from those who wish to focus on bolstering nations' civil (and especially birth) registration systems, because they believe it unfairly implies that such systems are themselves deficient in being insufficiently foundational.
- 34 Interview with Jonathan Marskell, June 30, 2021; interview with Joseph Atick, May 27, 2021.
- 35 Interview with Robert Palacios, May 14, 2021.
- 36 Gelb and Metz, *Identification Revolution*.
- 37 Interview with Himanshu Nagpal, May 21, 2021.
- 38 Omidyar Network's Madhukar has similarly suggested that Gelb's research helped make identification for development "more acceptable" for funders. Interview with C.V. Madhukar, June 23, 2021; interview with Himanshu Nagpal, May 21, 2021.
- 39 Interview with Daniel Radcliffe, May 13, 2021.
- 40 "PM Imran Announces 'Biggest Welfare Package in Pakistan's History' to Mitigate Inflation Impact," Dawn, November 3, 2021.
- 41 Interview with Syed Ali Mahmood, senior program officer, Bill & Melinda Gates Foundation, November 24, 2021; email from Mitul Thapliyal, partner, Microsave, December 15, 2021.
- 42 Interview with Alan Gelb, June 30, 2021; Gelb and Metz, *Identification Revolution*, 12, 25.
- 43 I have not been able to speak to anyone at the organization who could verify this account or to assess how important Gelb's assistance was in developing the successful proposal.
- 44 Gelb and Metz, *Identification Revolution*, 12, 200; interview with Alan Gelb, June 30, 2021; "Country Engagement," ID4D, <https://id4d.worldbank.org/country-action/map>.
- 45 Interview with Julia Clark, May 13, 2021.
- 46 Interview with Alan Gelb, June 22, 2021.
- 47 Annie Lowrey, "World Bank to Lift Lending to Developing Countries," *New York Times*, April 1, 2014; interview with Alan Gelb, June 22, 2021.
- 48 Interview with World Bank staff.
- 49 Program of September 2011 workshop, supplied by Julia Clark.
- 50 Interview with Julia Clark, May 13, 2021; email from Alan Gelb, November 22, 2021.
- 51 Draft agenda from International Conference on Implementing Social Programs; interview with Robert Palacios, May 14, 2021; interview with Alan Gelb, June 22, 2021.
- 52 Email from Alan Gelb, November 22, 2021; "ID4D Data: Global Identification Challenge by the Numbers," ID4D, <https://id4d.worldbank.org/global-dataset>.
- 53 "Partners," ID4D, <https://id4d.worldbank.org/who-is-involved>; email from Vyjayanti Desai, November 1, 2021.
- 54 Interview with Himanshu Nagpal, May 21, 2021.
- 55 ID4D, *Practitioner's Guide* (Washington, DC: World Bank, 2019), <https://documents1.worldbank.org/curated/en/248371559325561562/pdf/ID4D-Practitioner-s-Guide.pdf>.
- 56 Interview with Alan Gelb, June 22, 2021; interview with Vyjayanti Desai, May 14, 2021; interview with Robert Palacios, May 14, 2021.
- 57 Interview with Vyjayanti Desai, May 14, 2021.
- 58 "Principles on Identification for Sustainable Development: Toward the Digital Age" (February 2021), ID4D, <https://id4d.worldbank.org/principles>.
- 59 Interview with Julia Clark, May 13, 2021.
- 60 Alan Gelb and Anna Diofasi, "Using Identification for Development: Some Guiding Principles," CGD, February 22, 2016, www.cgdev.org/publication/using-identification-development-some-guiding-principles.
- 61 Interview with Alan Gelb, June 22, 2021.
- 62 Interview with UN official; interview with Jonathan Marskell, June 30, 2021.
- 63 Interview with C.V. Madhukar, June 23, 2021; Madhukar, "Thank you, ON!"
- 64 As the World Bank described the process, the principles "were developed through a consultative process coordinated by the World Bank Group and Center for Global Development." World Bank, "Inclusive and Trusted Digital ID Can Unlock Opportunities for the World's Most Vulnerable," August 14, 2019, www.worldbank.org/en/news/immersive-story/2019/08/14/inclusive-and-trusted-digital-id-can-unlock-opportunities-for-the-worlds-most-vulnerable. Alan Gelb, Vyjayanti T. Desai, Julia Clark, and Anna Diofasi, "Ten Principles on Identification for Sustainable Development," CGD Blog, February 8, 2017, www.cgdev.org/blog/ten-principles-identification-sustainable-development.
- 65 See February 2017 *Principles on Identification for Sustainable Development: Toward the Digital Age*, www.oas.org/es/sap/dgpe/PUICA/docs/web_final_ID4D_IdentificationPrinciples.pdf.
- 66 Interview with Vyjayanti Desai, May 14, 2021.
- 67 The clashes often centered on how to prioritize birth registration versus the registration of unregistered adults.
- 68 Many of those consulted for the case study also cited the important role played by former CGD staffer Julia Clark in helping to draft the principles. Interview with C.V. Madhukar, June 23, 2021.
- 69 Interview with Joseph Atick, May 27, 2021; interview with Himanshu Nagpal, May 21, 2021.
- 70 Interview with Himanshu Nagpal, May 21, 2021; "Principles on Identification for Sustainable Development: Toward the Digital Age" (February 2021), ID4D, <https://id4d.worldbank.org/principles>.
- 71 Interview with UN official; email from Julia Clark, November 24, 2021.
- 72 Interview with Vyjayanti Desai, May 14, 2021; interview with Julia Clark, May 13, 2021; interview with anonymous source.
- 73 Interview with Daniel Radcliffe, May 13, 2021.

- 74 "In its approved Implementation Plan dated 06 March 2019, the project framework has brought forward four (4) outcomes to contribute in achieving the abovementioned impact. This framework was anchored to the Ten Principles on Identification for Sustainable Development Towards the Digital Age, zeroing in inclusion through universal coverage and accessibility, design that is robust, secure, responsive and sustainable, and governance that builds end-user trust by protecting privacy and user rights." Philippine Statistics Authority, "Philippine Identification System (Philsys) Project Information Memorandum: Systems Integrator," May 6, 2020, <https://psa.gov.ph/content/philippine-identification-system-philsys-project-information-memorandum-systems-integrator>. See also Philippine Statistics Authority, "Procurement of Consultancy Services as a System Integrator for the Supply, Delivery, Installation, and Maintenance of the Philippine Identification System (PhilSys)," 5, https://procurement.psa.gov.ph/sites/default/files/002%20Vol2%20SI%20BID%20DOCS_1.pdf. ("The PhilSys will adopt and create international best practices in terms of inclusion, design, technology neutrality, performance, interoperability, cost-efficiency, data protection, privacy, and cybersecurity. In doing so, the PhilSys will observe the Principles on Identification for Sustainable Development as a guiding framework for maximizing its developmental impact while mitigating risks.")
- 75 Vyjayanti Desai and Julia Clark, "10 Principles for Good ID: A 2021 Refresh," *World Bank Blogs*, March 3, 2021, <https://blogs.worldbank.org/voices/10-principles-good-id-2021-refresh>.
- 76 According to Joseph Atick, the government incorporated a data protection law into its national ID system in part due to a push from ID4D, and with the principles as a guideline. "Nigeria is the leading country that's absorbing all the principles," he states. Interview with Joseph Atick, May 27, 2021. The ID4D "Practitioners" video can be found at <https://id4d.worldbank.org/id-stories>.
- 77 ID4D later provided technical advice for Ethiopia's ID system. South Africa, Department of Home Affairs, "Draft Official Identity Management Policy," December 31, 2020, www.gov.za/sites/default/files/gcis_document/202101/44048gon1425.pdf; interview with Robert Palacios, May 14, 2021; interview with Vyjayanti Desai, May 14, 2021.
- 78 In the ID4D "Practitioners" video, Melanie Khanna, the section chief for statelessness for UNDP, called the principles "another arrow in our quiver when it comes to the tools we have at our disposal to advocate with governments," though she did not make any firm impact claim on their behalf.
- 79 Affidavit of Thomas Fisher to High Court of Kenya, <https://privacyinternational.org/sites/default/files/2019-05/Kenya%20affidavit%20website%20version.pdf>.
- 80 Interview with Mia Harbitz, July 8, 2021.
- 81 Interview with Alan Gelb, June 30, 2021; interview with Joseph Atick, May 27, 2021.
- 82 Interview with Joseph Atick, May 27, 2021.
- 83 Interview with Alan Gelb, June 30, 2021.
- 84 Interview with Joseph Atick, May 27, 2021.
- 85 Interview with Himanshu Nagpal, May 21, 2021.
- 86 Interview with Joseph Atick, May 27, 2021.
- 87 The European Union has also recently announced a digital ID program. "European Digital Identity," European Commission, https://ec.europa.eu/info/strategy/priorities-2019-2024/europe-fit-digital-age/european-digital-identity_en; "United Nations Legal Identity Agenda," UN, <https://unstats.un.org/legal-identity-agenda>.



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