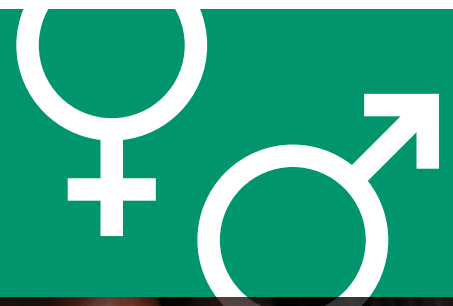# Knowledge Briefs on **Gender** and **CRVS**

Brief 1, Paper 4

The Costs and Benefits of CRVS as a Tool for Women's Empowerment

Dominic Chavez/World Bank

KEY MESSAGES

- **Civil registration and vital statistics (CRVS) system coverage around the world is very poor**, particularly in Africa, Southern Asia, and Eastern Asia. Lack of vital event registration affects people differently, with the most profound effects on women and girls who are more likely to experience economic disempowerment, political disengagement, limited access to services, and life opportunities.

- **The cost of improving these critical systems is relatively modest.** Only US$1.5 billion in development assistance, matched by an equal level of domestic funding, is needed between now and 2030 to build the requisite systems in 77 of the most in-need countries. That is only 1% of current official development assistance (ODA) (Gurría 2018).

- **In spite of a series of generous initiatives launched since 2014, there is still more than an 85% shortfall in the funding needed for CRVS investments.** Fortunately, there is a compelling investment case. Better identification through CRVS systems results in increased access to banking and economic services (producing high economic returns) and supports more targeted and effective social programs and investments to produce cost savings for governments.

- **Improved birth registration and identification systems also have indirect positive effects for women's social and political participation.**

- **Before embarking on programs to upgrade a CRVS system or implement a national ID system, careful country-level analysis is required to assess readiness and capacity.**

1. INTRODUCTION

Civil registration is the system through which governments record vital events in a person's life, including birth, death, marriage, divorce and so on. A civil register gives residents of a country legal identity which can be used to access services and support. A civil registration and vital statistics (CRVS) system is a crucial source of demographic and population data. Furthermore, death registration, including cause of death, is an important source of public health information (**SDSN 2015**). CRVS is the only source of continuous, complete, and reliable data on vital events down to small administrative units. As such, it is a critical input for effective national and sub-national planning and policymaking (**Knowles and Koolwal 2017**). For example, continuously available local area data on mortality by cause is vital for formulating effective policies to address specific health issues. However, "half of all low- to middle-income countries lack functioning systems to register births and other life events. […] In South Asia and sub-Saharan Africa respectively, only 39% and 44% of children have births registered" (**World Bank 2016**).

Graham Crouch / World Bank

CRVS systems are particularly crucial for our understanding of and attention to societal gender dynamics. By recording women and girls, men and boys, and non-binary persons' access to services, education, health, and legal representation, these systems can help us understand societal divisions and inequalities. CRVS is particularly beneficial to women and girls, *"because of additional constraints they face from gender discrimination, increased risk of early marriage and sexual trafficking, and increased vulnerability from widowhood or divorce. The absence of a birth, death, marriage or divorce certificate or of adult identity documentation can have catastrophic effects for vulnerable groups of women and their children, including in particular young single mothers, widows, migrants, refugees and members of minority ethnic or religious groups"* (**Knowles and Koolwal 2017**).

The other two papers in this series, "Leave No One Behind: CRVS, Gender and the SDGs" by Mayra Buvinic and Eleanor Carey of Data2X and "Harnessing CRVS Data for the Gender-Related SDGs: Opportunities and Challenges" by Shaida Badiee and Deirdre Appel of Open Data Watch, unpack the benefits of robust CRVS systems for gender empowerment. These papers detail how CRVS can enable better understanding of societal dynamics, gendered experiences, and opportunities to provide gender and sex-specific services that ensure no one is left behind (as mandated by the 2030 Agenda for Sustainable Development) (**United Nations 2015**). This paper complements the others' contextual analysis by focusing on some of the practical barriers to the expansion of CRVS systems, namely costs, current levels of investment, and shortfall, while also highlighting the immense investment opportunity.

The costs of building and maintaining robust CRVS systems in countries around the world vary considerably. A conservative estimate covering the 77 recipient and blend countries getting assistance from the World Bank's International Development Association (IDA) finds that at minimum, US$3.3 billion is needed. Approximately 50% of that is expected to be national government contributions, and 5% is expected to come from the international community between now and 2024 (**SDSN 2015**). Fortunately, as this paper demonstrates, there is a compelling investment case, with high economic returns resulting from better identification systems, including increased access to banking and economic services and government cost savings through more targeted and effective taxation and social programs. For governments, there is also a political incentive to act due to the positive effects of identification on political engagement and voter turnout.

2. CRVS COVERAGE

In spite of the importance of CRVS systems for functional governance and our understanding of individual experiences, these systems are woefully inadequate around the world. They levy discriminatory effects upon both women and girls and men and boys (See "Leave No One Behind: CRVS, Gender and the SDGs" by Mayra Buvinic and Eleanor Carey of Data2X from this knowledge brief series).
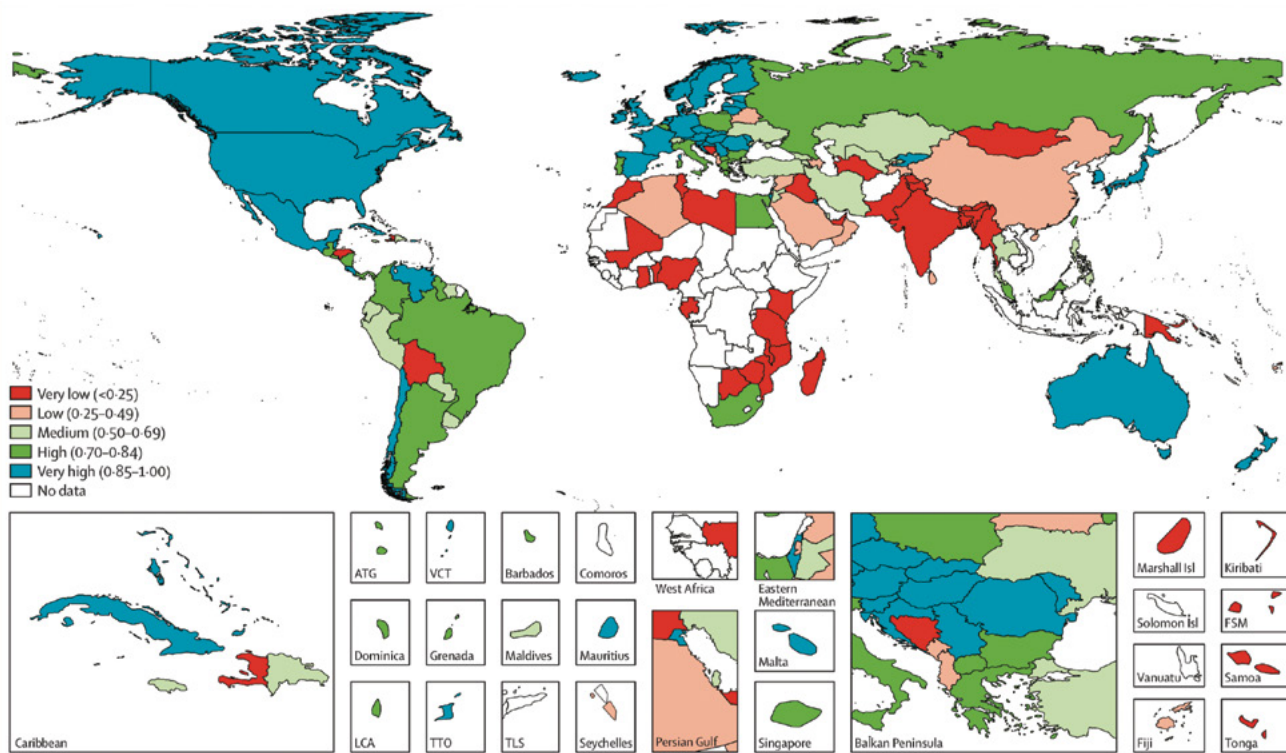
In 2015, the Lancet published a study of global CRVS system coverage that included a vital statistics performance index (VSPI). The VSPI assesses CRVS performance through use of mortality data, ascertained from the Global Burden of Disease dataset. Mortality data is treated as "a proxy for the quality and utility of all of the vital statistics produced by the civil registration system" (**Mikkelsen et al. 2015**).

The authors justify this on the basis that birth registration levels are generally higher than those of death registration, so death registration is a better proxy for the full functionality of the system (**Mikkelsen et al. 2015**).

The index, which covered 148 countries and territories, scored each country based on the best available year between 2005 and 2012 and grouped them in five distinct performance categories, from "rudimentary" to "satisfactory" (**Mikkelsen et al. 2015**). They concluded that "globally, only modest progress has been made since 2000, with the percentage of deaths registered increasing from 36% to 38%, and the percentage of children aged under 5 years whose birth has been registered increasing from 58% to 65%" (**Mikkelsen et al. 2015**). That means that close to two-thirds of the global population's deaths are unrecorded, and 35% of children never receive a birth certificate (**Mikkelsen et al. 2015**). Setel and colleagues (2007) refer to this as the "scandal of invisibility" arising from the stagnation of civil registration systems (**Setel et al. 2007**).

Figure 1 illustrates the quality of global CRVS systems through the above-mentioned scale. The white and red coloring represents non-existent or very poor-quality systems, which are predominantly located in Africa and Southern and Eastern Asia.

Figure 1: CRVS system coverage on the basis of VSPI scores for best available year between 2005 and 2012

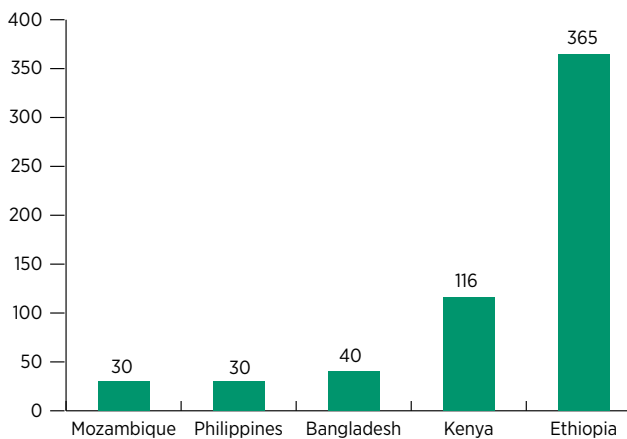Source: **Mikkelsen et al. 2015**; reprinted with permission.

3. CRVS COSTS AND THE FUNDING GAP

Improving the coverage of CRVS systems around the world will require considerable investment. However, calculating the cost of such improvements is difficult. There is large variation in national estimates based on existing capacity, the level of digital infrastructure available across government, the type of registration system in use or planned, and whether it will be coupled with a more technologically advanced identity system (such as smart cards or biometric data collection).

By way of example, in 2014 the World Health Organization (WHO) and the World Bank attempted to estimate the cost of CRVS expansion in 73 priority countries for the Commission on Information and Accountability for Women's and Children's Health (CoIA) (**World Bank and WHO 2014**). They examined CRVS investment plans and found cost estimates ranging from US$30 million to US$365 million over a five-year planning period. (The latter figure came from Ethiopia, which had only just established a National Vital Events Registration Agency in October 2013 - see Figure 2.) "Placing the investment in a population context, the country costs translate into a range of under US$1 per capita in countries such as the Philippines and Bangladesh, to between US$1 and US$4 in Mozambique and Ethiopia. The cost per vital event (births and deaths) ranges from under US$2 to over US$13" (**World Bank and WHO 2014**).

Figure 2: Total CRVS development cost per five-year country plan (US$ million)[a]

Source: National CRVS Investment Plans, WHO 2014.
[a] The total for Bangladesh excludes biometric costs.

More recent studies also show large variations. In 2015, the University of Botswana and Botswana's Ministry of Labour and Home Affairs examined that country's CRVS system and found that, with a recurring annual budget of just US$5.6 million (US$2.50 per capita), the government had substantively improved its CRVS system. For example, it reached a birth registration level of 83% (**Botswana Ministry of Labour and Home Affairs and University of Botswana 2015**). At the other end of the spectrum, a World Bank study in Nigeria estimated that US$4.3 billion (US$23.70 per capita) would be needed to implement the country's national ID program, including an upgrade of its CRVS system (**World Bank 2017**).

In spite of the differences between investigated countries, the 2014 World Bank and WHO study managed to develop a methodology for estimating costs for other countries worldwide, adjusting for existing capacities and population. It estimated that US$3.8 billion would be needed to expand CRVS coverage by 2024 in 73 CoIA countries, excluding China and India (**World Bank and WHO 2014**). It included four essential elements of a functional CRVS system in its costing: "(a) development costs (incremental costs or additional funds for establishing and strengthening CRVS systems); (b) incremental recurrent costs for maintaining CRVS systems; (c) international support to CRVS, including sharing knowledge and strengthening the evidence base; and (d) monitoring and evaluation" (**World Bank and WHO 2014**). The costs in each plan were disaggregated into fixed/start-up/capital costs and variable/operating costs.

In 2015, SDSN et al. expanded this analysis in a needs assessment study, "Data for Development: A Needs Assessment for SDG Monitoring and Statistical Capacity Development," covering 77 IDA-recipient countries (**SDSN 2015**). These 77 are a subset of the 100 countries worldwide that still do not have functioning CRVS systems (**World Bank and WHO 2014**), but were chosen as a reasonable proxy for the total number of countries that were likely to need international assistance. Of the initial CoIA countries, 55 were IDA-eligible; the SDSN-led consortium extrapolated to the other 22. Estimates of CRVS system costs in these countries were calculated from the CoIA unit costs after adjusting for population size and completeness of birth registration. Lacking other information on the status of country implementation plans, it was assumed that each of the additional countries would also carry out a comprehensive assessment or need revisions to their plans at an average cost of US$100,000. The report concluded that the estimated total cost for CRVS systems improvements and operations in the IDA and blend countries over a 10-year period (2015 to 2024) would be US$2.75 billion with annual average costs US$275 million. A more policy-relevant estimate might be the 15-year period of the Sustainable Development Goals (SDGs), for which the total cost of CRVS system improvements would be US$3.3 billion with annual costs of US$220 million (see Figure 3).

Figure 3: Estimated financing gap (in USD millions) for improvements to CRVS systems between 2015 and 2030, based on Scaling Up Investment Plan

	2015 to 2019	2020 to 2024	2024 to 2030	15-year total	Financing Gap
Development costs	826	826		**1,652**	1,193
Recurrent costs	288	558	558	**1,404**	53
International support to CRVS including sharing knowledge and strengthening the evidence base [2]	83	83		**165**	165
Monitoring and evaluation [3]	41	41		**83**	83
TOTAL	**1,238**	**1,508**	**558**	3,304	**1,494**

Source: **SDSN 2015**; reprinted with permission.

Figure 3 shows the financing gap based on the initial 10-year cost of U$S2.75 billion and additional recurrent costs incurred between 2025 and 2030, estimated to be about US$500 million, of which 96% is financed through domestic resources (**SDSN 2015**). The CoIA report estimates the financing gap, or the amount of external assistance needed, to be 52% of the total, extending through 2024. When extrapolating the scaling-up investment estimates to 2030, the authors of "Data for Development: A Needs Assessment for SDG Monitoring and Statistical Capacity Development" assumed that initial start costs funded by international development would cease and recurrent expenditures would be funded exclusively by domestic resources. Using this logic: Of the US$3.3 billion required for CRVS system improvements across 77 countries, US$1.5 billion will be required from the international community between 2015 and 2030.

In recent years there have been a number of efforts to increase investment in CRVS systems. In 2014, the UN Secretary-General convened the Every Woman Every Child Summit in Toronto, Canada to draw attention to the urgent issue of maternal, newborn, and child health. The summit was followed by a commitment from the Government of Canada, the Government of Norway, the United States Agency for International Development (USAID), and various other entities to establish the Global Financing Facility (GFF) to support the health of women and children. Canada made commitments of US$200 million to the GFF, of which US$100 million was committed to improving CRVS systems (**Government of Canada 2015**).

In 2017, Bloomberg Philanthropies' Data for Health Initiative committed US$100 million to 20 low- and middle-income countries over four years. The aim of this initiative is to strengthen the quality of health data and data use, including increasing birth and death registration and improving the quality of cause-of-death data, which is critical to understanding maternal mortality. Public health organization Vital Strategies, co-funded by Bloomberg Philanthropies and the Australian Government, is the implementing partner. It serves as an interesting implementation partnership as it includes the funders as well as other expert groups such as the CDC Foundation, Johns Hopkins Bloomberg School of Public Health, the University of Melbourne and the WHO (**Vital Strategies 2018**).

These are generous initiatives; however, both focus on just a handful of countries, leaving more than 85% of current needs unmet. As such, it is crucial that a compelling case is made to increase investment in global CRVS systems. Section 4 highlights some of the evidence of the powerful economic, political, and social impacts of a robust CRVS system and explains why it is a judicious long-term investment for the public sector, as well as an area of substantive economic return for private investors.

4. MAKING THE CASE FOR INVESTMENT

The need to scale up investment in CRVS systems is clear. With a shortfall of over 85% of the required funding, innovative partnerships and fundraising models will be required. In particular, it is imperative to show national governments the centrality of functional CRVS systems for effective governance and administration and for economic growth; to show the international community the ripple effects of investing in CRVS for other social and economic outcomes; and to show private investors the opportunities for business development in various technologies related to identification. The following section considers the economic, political, and governance benefits that can be derived from building strong CRVS systems, with particularly positive effects for women's empowerment and for national economies and societies as a whole.
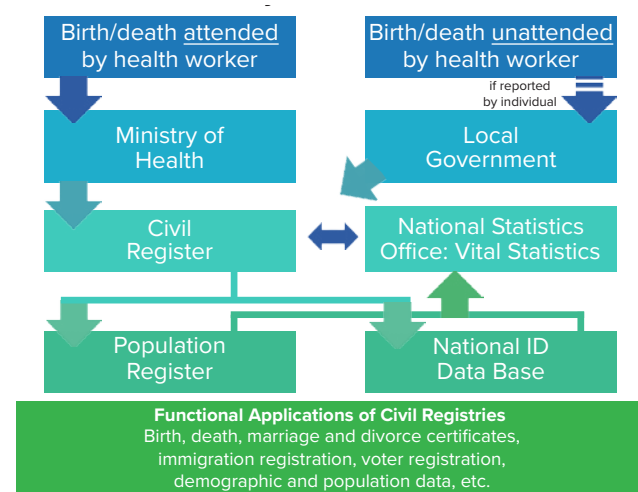
A. Economic returns

The first and most fundamental contribution of a CRVS system is that it can help provide a detailed record of the whole national population, complementing the national census. It provides a thorough picture of individual circumstances,

such as whether individuals are married, divorced, or have children. This information is essential for a robust and efficient national taxation system, which can be adjusted to take into account personal circumstances including number of dependents. Aggregate statistics compiled from CRVS records can also complement the census by providing total population numbers, disaggregated by age, gender, and other factors.

With a functional CRVS system, governments can also build robust ID data bases, including birth registration number, voter IDs, and passport information. These have the potential to improve the quality of government services for individuals (see Figure 4). ID databases can take many forms, from simply a number linked to a birth certificate or a permanent tax record, to an interlinked biometric system (as in India or the Philippines), which includes information on voter ID, driving licenses, addresses, passport information, immigration status, and other identifying information.[1]

Figure 4: The Flow of Information within a Functional CRVS System

Source: Compiled by author.

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1   This paper does not consider the merits or demerits of any such approach, but for a good summary of the pros and cons of national ID systems, see **Jacob 2018**.

Getting CRVS systems right (and, for example, using them to build ID databases) can have huge impacts on tax revenues while generating savings through improved efficiency. For example, a new national identification system in the Philippines is expected to generate cost savings of up to 2% of the country's GDP over a 5-year period due to more efficient allocations. This equates to US$6.09 billion based on 2016 GDP estimates from the World Bank (Mayhew 2016). The biometric system will consolidate and eventually replace all of the information gathered from 33 different identification card systems managed by a variety of different agencies. The new system will collect a person's common reference number and basic information, including biometrics, voter status, passport number, taxpayer identification number, and health insurance number (**Espey 2018**).

For the private sector, the expansion of CRVS and subsequent ID systems is a huge business opportunity. The private sector has a major role to play in providing new solutions responding to the information needs of CRVS systems. For example, the information and communications technology (ICT) sector can expand mobile coverage to the entirety of sub-Saharan Africa while coupling this coverage with other services like local smart health services. In more than 60 countries in the world, including India and the Philippines, biometric technology for iris-scanning, fingerprinting, and photographs are being employed for national ID programs (**Gelb and Clark 2013**, **Gelb and Metz 2018**), and 59 countries (some of which are included in the 60 above) are also deploying "smart cards" (**Pala 2018**) that will cover approximately 3.5 billion citizens by the end of 2021, according to digital security company Gemalto (**Gemalto 2018**).

Finally, CRVS systems have beneficial individual economic effects. Of the 1.7 billion of unbanked adults globally, 56% are women (according to the World Bank) and in developing economies, women remain 9% more likely to be unbanked than men (**Sahay and Cihak 2018**). Nearly one in six unbanked female adults lack documentation and cite this as the primary reason that they do not have a bank account (**Hanmer and Dahan 2015**). That is approximately 158 million people around the world without access to financial services, purely because of a missing birth certificate or equivalent form of personal identification.

As an example, the garment industry in Bangladesh accounts for 80% of the country's exports, and 85% of the workers there are young women. The majority of these women do not hold birth registrations or other forms of ID, and less than 20% of these workers have access to bank accounts. This means that they receive payment in cash, making it difficult to track and contest payments. This allows factory owners to exploit these women, both with regards to their hours and their pay (**Cairns and Iskenderian 2015**).

Giving these missing women access to identification and resultant financial services could have huge impacts upon their economic productivity and wellbeing, as well as that of the global economy. The relationship between gender equality and economic growth is well documented (**World Economic Forum 2015**). According to one estimate, 27% of GDP growth is wasted due to gendered economic inequality (**Cairns and Iskenderian 2015**). There have been a variety of studies looking at the effects of women's financial inclusion upon economic growth. For example, in 2005 the World Bank estimated that unequal education and employment opportunities were limiting

Sub-Saharan Africa's economic growth by 0.8 percent per year between 1960 and 1992. They applied these calculations just to Uganda to suggest that the country could gain as much as 2 percentage points of GDP growth a year by eliminating gender equality within the education system and in access to jobs (**World Bank 2005**).

B. Political participation

In addition to the economic incentives for expanding CRVS and identity systems, there are clear political incentives. Aside from the fundamental human rights arguments, denying people identification limits their political engagement and their ability to vote. In the USA, the National Democratic Institute (NDI) discovered the gap in birth registration and ID documents make women less likely to register as voters or candidates, leaving women out of political decision-making and leadership roles (**Hanmer and Dahan 2015**). In contrast, when women have access to identification they report increased political engagement, actively exercising their right to vote, and enjoy the legal protection of being registered as a citizen. This was the case in Pakistan after the expansion of the country's Computerized National Identify Card scheme (**Hanmer and Dahan 2015**). CRVS systems are also crucial for an accurate voter record, as identity registers are the basis upon which the electoral roles and voter lists are often developed (**Nielsen et al. 2014**).

C. Efficient government

For governments, the benefits of a robust CRVS system not only for gender equality but also for efficient governance are clear. Along with the census, CRVS and identification systems provide accurate, disaggregated population counts that serve as both numerator and denominator for many national indicators. Putting in place strong CRVS systems can help build a digital reporting system across government and

improve administrative record quality. As CRVS systems monitor births, deaths, and marriages, they can also complement other official statistics to help define and target services, such as child support and government pensions. But perhaps most fundamentally of all, CRVS systems are the backbone of an effective health system.

Cause of death is a vital measure for an effective health service to assess preventable diseases and conditions. When deaths are registered with accurate cause of death information, they can reveal diseases for which women or men bear a disproportionate burden, helping policymakers develop targeted public health interventions.

"Health systems worldwide depend on reliable information about causes of mortality to be able to respond effectively to changing epidemiological circumstances. Such responses depend critically on accurate data to guide decision-making. Within a health information system, accurate and timely data on the cause of death are fundamental for programme and policy development and for measuring change in the magnitude and distribution of ill-health and disease in populations" (**Rampatige et al. 2014**).

Dominic Chavez/World Bank

However, less than half of all deaths in the world are registered. Data from China and Rajasthan, India indicate that female deaths are less likely to be registered than male deaths (**Knowles and Koolwal, 2017**). This can hide considerable health service inequalities, such as the quality of maternal healthcare. A major challenge is that much global data on maternal mortality is estimated based on surveys or models, as CRVS systems are weak or lack coverage (for example, in Indonesia) (**Joint Committee on Reducing Maternal and Neonatal Mortality in Indonesia 2013**). Estimating maternal mortality from surveys is difficult and expensive. Complete registration of deaths, including maternal deaths, provides more accurate information on the health status of mothers and their children (**Appel and Wahabzada 2016**). Without this information, governments cannot design targeted health services and investments, thereby preventing them from using limited public resources most efficiently and effectively.

Mohammad Al-Arief/The World Bank

5. CONCLUSION AND RECOMMENDATIONS

Scaling up CRVS and identification systems worldwide is an urgent imperative for economic growth, political engagement, and perhaps most importantly gender equality and women's empowerment. The cost of this scaling is relatively modest; between 2015 and 2030, only US$1.5 billion is needed from donors, with an equal investment of domestic resources to build the requisite systems in 77 of the most in-need countries. That is 1% of current ODA (**Gurría 2018**). Entities like Bloomberg Philanthropies and the Government of Canada have shown strong political leadership, investing US$200 million dollars in CRVS expansion programs in a series of priority countries. But there is still a long way to go to ensure identification for all people worldwide, as well as effective vital statistics systems.

Fortunately, there is a compelling case for investment. For example, identification could lead to upwards of 158 million women being able to access bank accounts and financial services. Meanwhile, CRVS systems can underpin ID databases, and together these can support more sophisticated taxation systems. These systems have huge cost saving potential, such as in the Philippines (expecting cost savings of 3% of the country's GDP over 5 years through the implementation of its own national ID system). Robust CRVS systems can enable more judicious use of limited resources on public services, such as healthcare and child support, and can motivate higher voter registration. For companies, there are huge opportunities in a functional CRVS system leading to more advanced ID systems technology, as demonstrated by the 60-plus countries worldwide now moving to biometric ID systems or employing smart cards. For the international community, investing in building

effective CRVS systems ensures not only that we count the uncounted, but also that we empower more women and girls around the world. With CRVS, we can institute the building blocks for effective social and economic policies to leave no one behind.

Recommendations:

- **More documented examples like those above are needed. The economic case for investing in CRVS systems should be sufficiently strong to ensure that governments make the required investment and that international partners mobilize sufficient expertise and short-term investments to get CRVS systems on track to a sustainable future** (World Bank and WHO 2014). Low- and middle-income countries have the opportunity to benefit from the data revolution and move more quickly from paper-based systems to new ICT systems that are much less costly to maintain. New technologies create the potential to move from old, high-cost, inefficient systems to new, low-cost, highly efficient systems. Such a change will require capital investment and the development of adequate new capacity, but first a stronger understanding of the costs and returns on these investments are needed.

- **Political support is essential to ensure investing in CRVS systems is seen as an essential long-term solution and not an afterthought. Strongly documented economic benefits and costing can help promote political support.** Several options are being considered to assist governments in priority countries to fill the financing gap for strengthening CRVS systems (World Bank and WHO 2014). However, no matter what model is chosen for the international financing and governance arrangements, the key to success will be country-level political commitment and leadership.

- **Countries should begin their process with an assessment of the readiness for investment. Similar to the Open Data Readiness Assessment, it is a starting point to ensure investments are aligned with national priorities, address the weaknesses in the system, capitalize on its strengths, and are based on a clear institutional framework and functioning coordination mechanism.** Investments need not be limited to domestic and international funding, but rather should include private sector partnerships (World Bank, n.d.).

- There is an opportunity to build the political and economic case for CRVS by strengthening links between CRVS and current global data financing agendas. **Relevant stakeholders should take advantage of the momentum in the development data revolution to prioritize domestic and international resources for CRVS in plans for modernization of international statistics systems and national development and statistical plans.** The need for better financing for data is reflected in global agendas such as the UN Cape Town Global Action Plan and the recent UN World Data Forum Dubai Declaration (UN High-level Group for Partnership Coordination and Capacity-Building for Statistics for the 2030 Agenda for Sustainable Development 2017; UN World Data Forum 2018).

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