



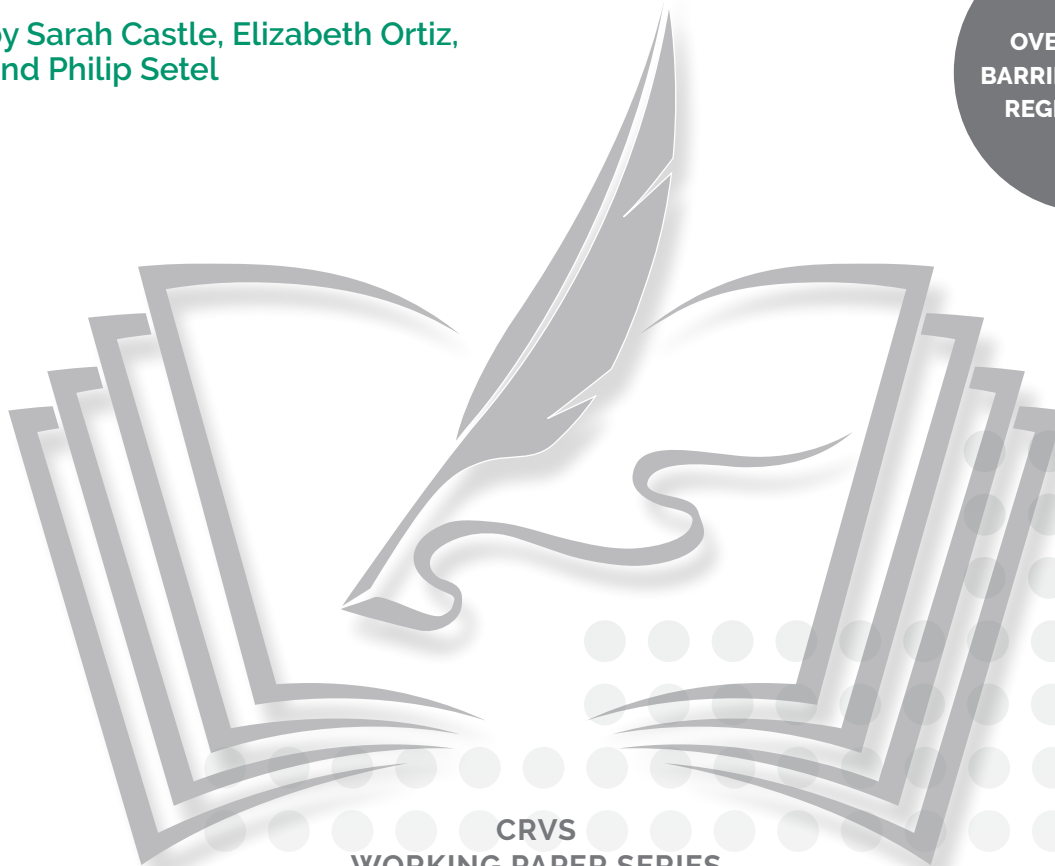
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Demand-Side Factors Related to the **Registration of** **Births, Marriages, and Deaths:** A Literature Review

by Sarah Castle, Elizabeth Ortiz,
and Philip Setel

**OVERCOMING
BARRIERS TO CIVIL
REGISTRATION**



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Executive summary

This literature review seeks to stimulate an evidence-based dialogue on demand-side barriers to the registration of births, marriages, and deaths. Following Ensor and Cooper (2004), we define demand-side barriers as those that influence demand and that operate at the individual, household, and community levels. We examine registration from a life course, rights-based, and whole-of-system perspective, with a focus on gender issues in civil registration.

Robust civil registration and vital statistics (CRVS) systems enhance outcomes and wellbeing at the population and individual levels. Civil registration is foundational to the establishment and management of legal identity, affording the rights and privileges accorded by the state (Centre of Excellence for CRVS Systems 2019). A registered birth is a key that unlocks access to health, education, and welfare services and can enable individuals, especially women, to assert their rights and participate in democratic processes. The vital statistics generated from civil registration are critical for monitoring many of the United Nations Sustainable Development Goals (SDG) targets and indicators, which seek to "leave no one behind." Specifically, SDG 16.9 seeks to assure complete, universal birth registration and establishment of legal identity to attain 100 percent birth registration and 80 percent death registration by 2030 (United Nations Statistics Division 2018).

Global evidence is presented to summarize challenges to registration associated with access and knowledge, cultural beliefs and practices, household and gender dynamics, and socio-political factors. In general, the literature on birth registration is most substantive, followed by death registration, with scant information available on demand-side barriers to registration of marriages in low- and middle-income countries (LMICs). In addition, we provide examples of effective CRVS-related initiatives that improve civil registration practices and increase levels of registration. As gender norms and gender-based discrimination have been shown to have an impact on access to resources, health outcomes, and overall wellbeing, we maintain a consistent focus on gendered aspects of registration throughout the paper.

The scope and implications of underregistration are wide ranging. Birth registration levels tend to be near universal in Western Europe, North America, and the Middle East. About 60 percent of births are registered in South Asia (UNICEF ROSA 2019), increasing to around 91 percent in East Asia and the Pacific (UNICEF 2019). Yet, less than 50 percent of all births are registered in Africa (UNICEF 2019), and evidence suggests that disparities in registration in the region are linked to social inequalities. In terms of death registration, non-registration may have severe consequences that disproportionately affect vulnerable groups. This deprives them of benefits accorded those with a legal identity established through registration and deprives governments of vital statistics that include the most vulnerable. Many deaths in rural areas do not occur in health care settings and are not registered, leading to gaps in information about cause of death. Marriage registration may be complicated by divergent traditional and civil law definitions of what constitutes a union, and child marriages are difficult to prevent if children do not have birth certificates as proof of age.

Registrations of births, marriages, and deaths are interdependent when it comes to their impact on individual and community welfare; solutions to underregistration should address the problem holistically. This review considers civil registration throughout the life course and includes evidence from interventions aimed at improving registration at multiple levels. Strategies include greater integration of birth registration within existing health services, such as immunization and the use of multimedia campaigns.

More research on demand-side factors that impact civil registration is needed. As our analysis will show, aside from some research into birth registration, our understanding of how demand-side factors intersect is based on inference. Despite a recent systematic review of CRVS improvement interventions that found that a demand-side component was included in all documented cases of successful CRVS programs (Suthar, Khalifa et al. 2019), few, if any, studies have been specifically designed to tackle basic questions of meaning, belief, and practice as they pertain to civil registration. Likewise, questions related to incentives and disincentives, and structural factors that may inhibit or foster registration, remain unasked and unanswered.



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Introduction

This literature review is undertaken at a time when multilateral, bilateral, and philanthropic institutions are promoting and investing in the improvement of civil registration and vital statistics (CRVS) systems in low- and middle-income countries (LMICs) at levels unseen before (Foreign Affairs, Trade and Development Canada 2015; World Bank 2017; World Bank 2018; Bloomberg Philanthropies 2020).

To date, most of the global attention has focused on making CRVS systems functional in the 21st century. This has included interventions to

- ▶ establish or enhance the complex interagency coordination necessary;
- ▶ re-engineer outdated or dysfunctional business processes;
- ▶ increase completeness in notification and registration of births and deaths; and
- ▶ improve the quality of cause-of-death data.

However, there has been little, if any, attention paid to addressing the demand-side factors that contribute to underregistration.

A recent systematic review of interventions to strengthen CRVS systems in 25 countries found that in all cases of documented success, both supply- and demand-side components were present (Suthar et al. 2019). Yet, a strong focus on social, cultural, behavioural, economic, and political issues in relation to universal, continuous, permanent, and compulsory civil registration has been notably absent from the literature. Therefore, the purpose of this review is to fill the gap in research and compile a structured synthesis of the evidence, examining factors related to birth, death, and marriage registration.

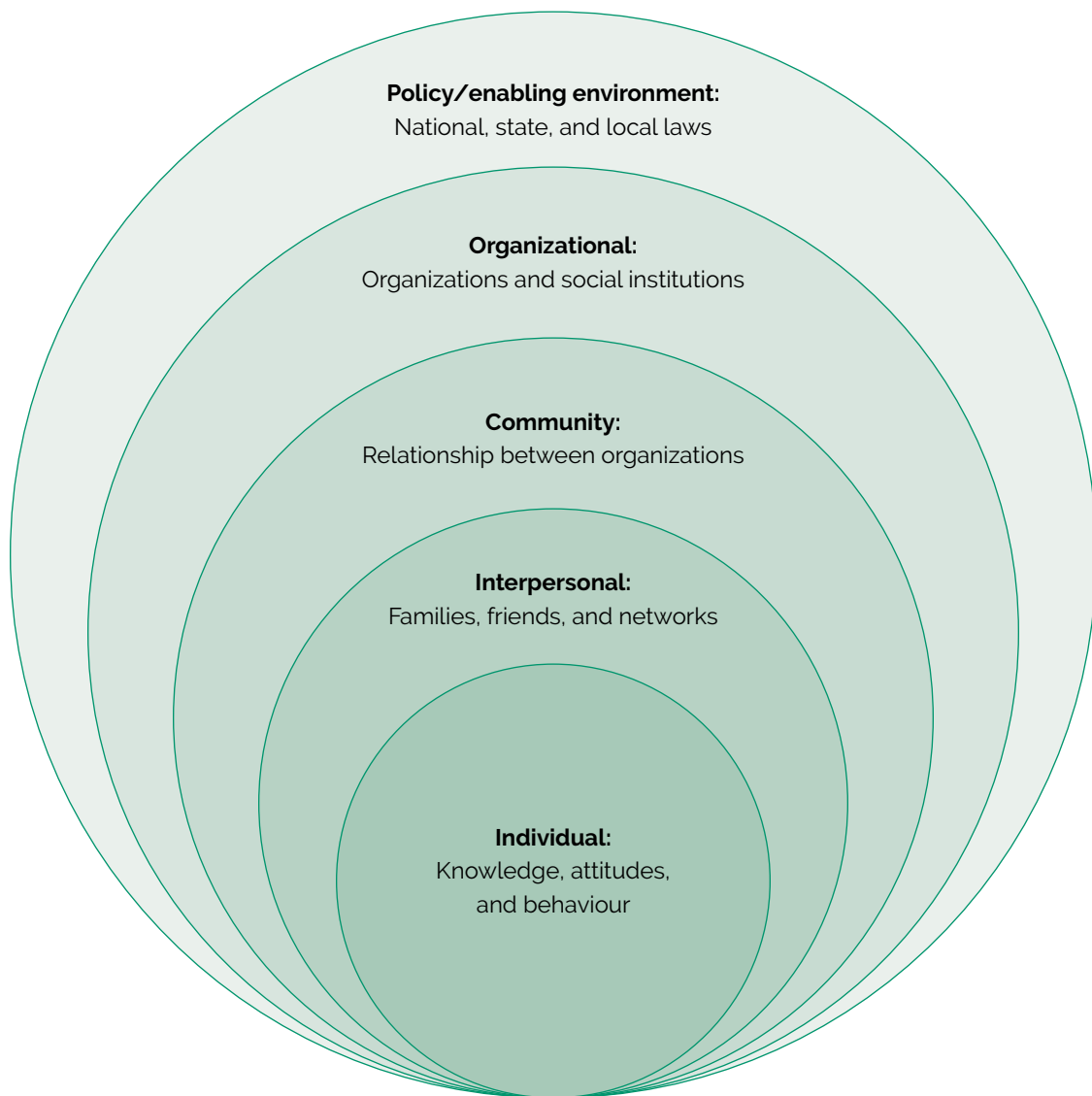
Demand for services has long been part of standard economic equations for optimal health care use (Ensor and Cooper 2004). Typical demand-side factors related to civil registration might include information about

- ▶ civil registration requirements and benefits;
- ▶ education (individual and community level);
- ▶ direct and indirect costs of registration of vital events;
- ▶ household and gender dynamics; and
- ▶ community and cultural norms.

As there is a high degree of interdependency between supply and demand, both variables are included in economic models. A tenet of this review, which draws on health economics, is that both demand- and supply-side interventions are needed to address demand-side barriers to civil registration.

In line with the supply-and-demand paradigm, the socio-ecological framework posits that there is a dynamic relationship among various personal and environmental factors, and that changes at the individual and community levels are heavily influenced by the hierarchical levels above. Thus, we use the socio-ecological model presented in the *United Nations Handbook on Civil Registration, Vital Statistics and Identity Management Systems: Communication for Development* as a starting point for our theoretical framework (Figure 1) (Krieger 2001). We review the current research on supply- and demand-side factors that impact registration and include recommendations for CRVS interventions that have the potential to impact demand. In the case of supply-side solutions, we focus on interventions that directly affect registrants and identify gaps in the literature for further research.

Figure 1: Socio-ecological framework.



Background

As several studies provide detailed information on the definition, purpose, and benefits of CRVS (United Nations Statistics Division 2001 and 2014; Mikkelsen et al. 2015; Bryce et al. 2016), we briefly review these topics in this paper. The objectives of a civil registration system are to

- establish the legal identity of individuals; and
- record the occurrence and characteristics of vital events to produce vital statistics for policy and planning.

The United Nations definition of vital events includes live birth, fetal death, death, marriage, divorce, adoption, acknowledgement of parenthood, annulment of marriage, and legal separation. Vital statistics provide more reliable and up-to-date information than censuses and sample surveys, allow data to be disaggregated by geographic or administrative level, and are relatively low cost. However, there are many challenges in establishing and supporting effective CRVS systems. Systems require high-level political commitment, cross-sectoral support, and significant financial investment.

A functional CRVS system is critical for good governance (Victora et al. 2011; AbouZahr et al. 2015; Lawn et al. 2016; Pillay-van Wyk et al. 2016) and is linked to population health status (Phillips et al. 2015). An ecological study found that birth registration was associated with improved child health outcomes, although an important caveat is that infants born in health facilities are more likely to be registered at birth and have a significant survival advantage compared with those born at home (Målqvist et al. 2008; Nomura et al. 2018). Nevertheless, a recent study that adjusted for healthcare access found that CRVS performance is independently associated with improved health outcomes at both the population and individual levels (Phillips et al. 2015). Further, in settings where socio-political factors, such as statelessness, may negatively influence an individual's ability to be registered, lack of registration is associated with poor health outcomes. Thus, investing in CRVS systems is not only an important goal for individuals, but is also a brings health advantages and protections (Brolan et al 2017).

Although there are many challenges in improving CRVS systems, the centrality of universal and continuous CRVS is now appreciated. It is widely recognized that

- the benefits of CRVS must extend to all at birth;
- marriage and death registration and certification are important for the protection of women;
- mortality data are critical for development planning; and
- we must rely upon CRVS data to measure progress for many of the Sustainable Development Goals (SDGs).

Ambitious targets have been set. The SDG target is

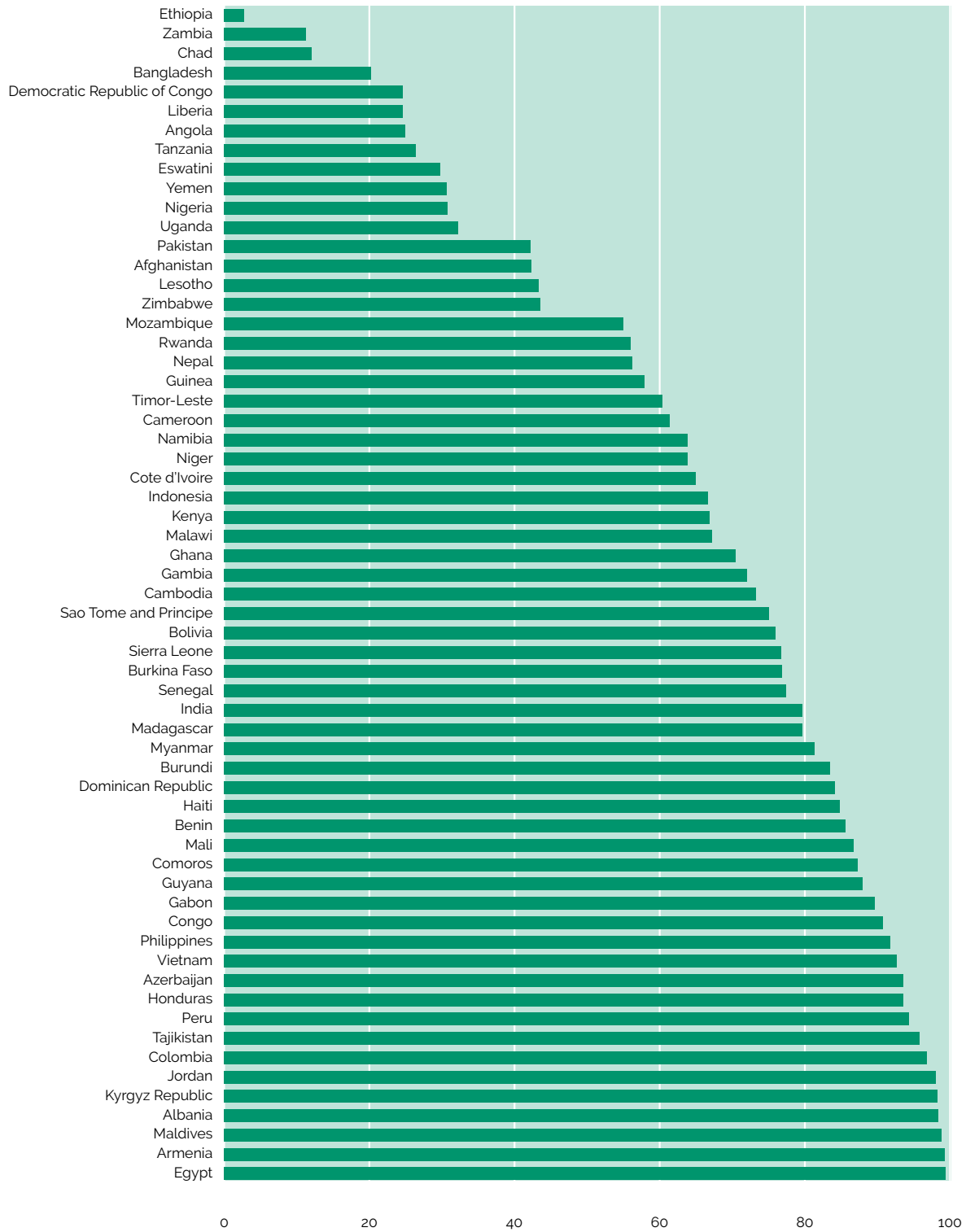
- 100 percent for birth registration (SDG 16.g); and
- 80 percent for death registration (United Nations Statistics Division 2018).

Given that births are registered more frequently than deaths, regional levels of birth registration point to the scale of underreporting. In 2012, the World Health Organization (WHO) indicated that only five African countries collect civil registration information on more than 25 percent of the population (Ye et al. 2012). This means that most people in sub-Saharan Africa are born, live, and die without any record of these vital events. The result is that few countries in sub-Saharan Africa use civil registration as the source of vital statistics (United Nations 2012; Population Reference Bureau 2008). Among the 14 countries in the region citing civil registration as the source of vital statistics data, only four have more than 90 percent coverage of vital events, and these countries are all small island states Cape Verde, Mauritius, Reunion, and Seychelles (United Nations Statistics Division 2012).

Contemporary demand-side challenges to civil registration in many LMICs are rooted in colonialism (Gourou 1955; Leach 1961). Contested beliefs about when personhood is established, who is entitled to personhood status, the processual nature of many marriage customs, views on mortality, and gender dynamics all clashed in the context of colonial power and administration. As registration was often tied to forced labour, civil registration is still perceived as a tool of state and social control (Jewkes and Wood 1998). In some countries, vestigial colonial-era legislation has, until recently, still been in effect, and registration of Indigenous populations has not been compulsory. The longstanding neglect of civil registration by LMIC governments, along with a heavy reliance on donor-funded household surveys to replace the statistical function of CRVS (AbouZahr et al. 2017), may be informed by this legacy.

While Western Europe and North America have complete birth registration, and the Middle East has attained near universality, only 57 percent of births are registered in sub-Saharan Africa, on average. Demographic and Health Survey (DHS) data for countries in Africa from 2005 to 2017 are presented in Figure 2. Not only are levels of registration low in LMICs, but there are significant disparities in registration and birth certification among sub-groups. Research that assesses birth registration across 94 countries found that registration is lower among children living in households in the poorest quintile than those in the highest wealth quintile (Bhatia et al. 2017). In line with the DHS results, a separate study from Nigeria found that children with educated parents, from wealthier households, and in urban areas were more likely to have their births registered (Adi et al. 2015).

Figure 2: Percentage of children under 5 who were registered in low- and middle-income countries (DHS data 2005–2017).



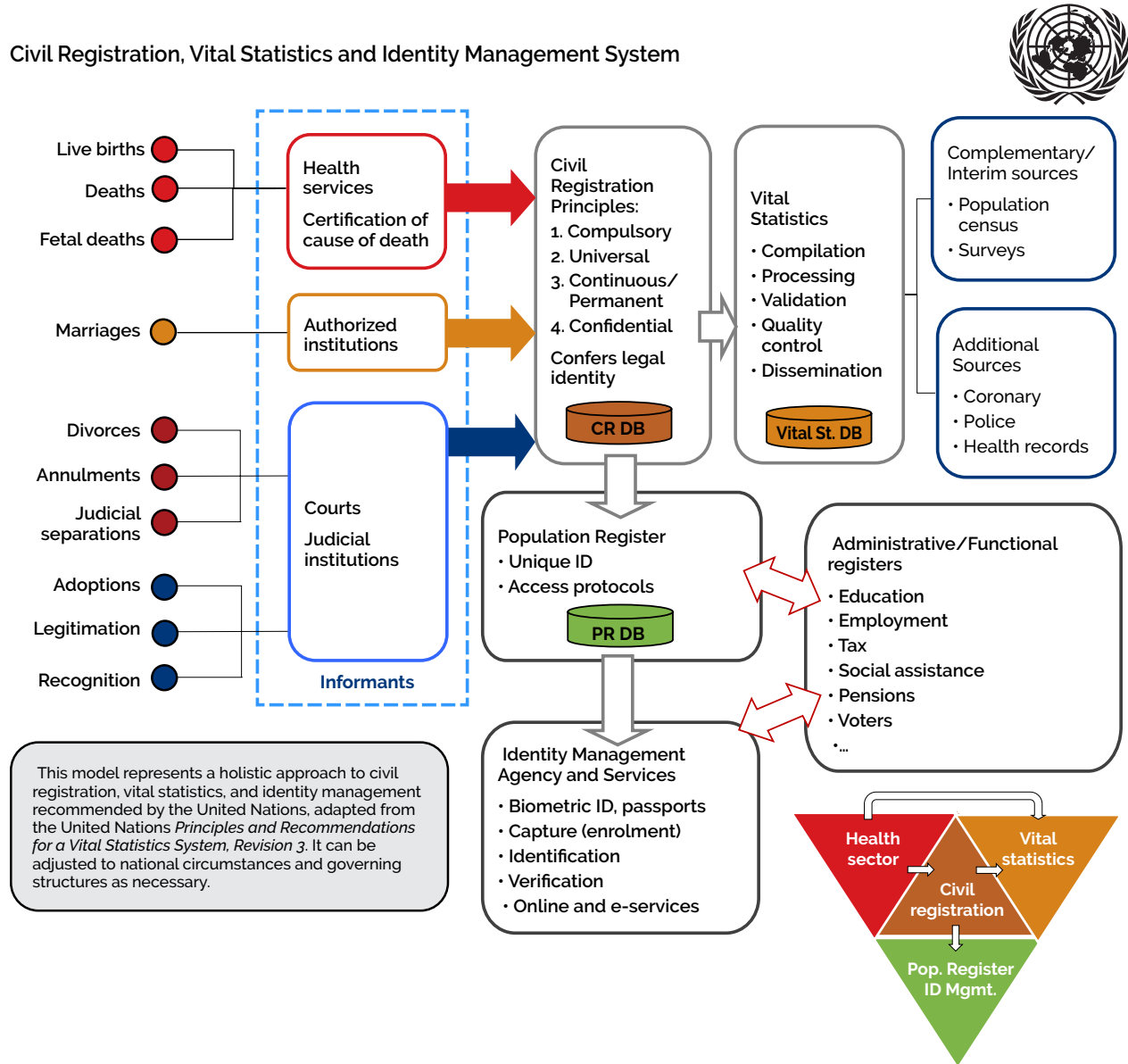
Source: Demographic and Health Survey, 2005–2017

Accessing civil registration poses cross-cutting challenges that may be financial and geographic. The financial obstacles generally involve both direct costs, such as registration fees, and indirect costs, including time off from work and travel expenses (Fagernäs and Odame 2013). The indirect costs disproportionately affect poorer areas. According to the 2006 Multi-Indicator Cluster Survey in Ghana, the most common reasons for not registering a birth were the high cost of registration, distance to registration locations, and a lack of awareness that children should be registered (Fagernäs and Odame 2013). A study in Tanzania examined reasons for non-registration after families notified the village executive of a death but did not reach out to the district civil registrar to register the event. The main reasons for not registering the death included moving out of the district, transportation issues, an unwilling household, and cost (Kabadi et al. 2013).

The registration process itself is where demand- and supply-side factors meet. The conceptual model in Figure 3 presents the holistic approach to CRVS and identity management that the United Nations recommends (United Nations Statistics Division 2014). The framework shows the complexity of CRVS systems with their interdependent actors. Institutions able to register vital events include courts, health services, and specially designated registration offices. The process to register a vital event often mirrors this intricacy and can be difficult to navigate. To add to the complexity of coordination within the CRVS system, civil registration is a source of income for local governments in decentralized settings, and that includes budget allocations. For example, in Burkina Faso, Madiès and Dafflon (2011) projected that expenditure included the cost of registers, civil registration documents, and civil servants' salaries. Revenue included the fees for the delivery of birth, marriage, and death certificates. This could be a source of tension, as was the case in Benin, where the civil registration administration subverted the role of local community leadership in registration and private fee collection (Lorin 2016).

Lack of registration of vital events has detrimental implications for the health and rights of women. Where deaths are not registered, it can be difficult for spouses, children, and families to inherit assets, or for the surviving spouse to remarry legally — depriving families of assets, reducing household income, and thus increasing poverty. As well, the property and custody rights of women are deeply impacted by marriage and divorce registration. Marriage registration can assist widows in inheritance disputes in many settings where local patriarchal and patrilineal customary rules govern family resources and women's access to land (Toktas and O'Neil 2015; Willis 2018). Identity documentation — needed to access rights, services, and protections — depends on birth registration in most settings and is disproportionately lacking among women in LMICs. Civil registration is therefore a vehicle for women's empowerment and facilitates their ability to contribute to and benefit from development (AbouZahr et al. 2015; AbouZahr et al. 2019). At a population level, gender-disaggregated data on mortality and the causes of deaths occurring are critical for government and health systems to appropriately respond to the health needs of women.

Figure 3: Model of a holistic approach to civil registration, vital statistics, and identity management recommended by the United Nations (as adapted in Centre of Excellence for CRVS Systems 2019).



Civil registration is also an important mechanism for enforcing child protections. Millions of children are married without any documentation of birth or marriage, and deaths are more likely to be unreported among children who are unregistered. Generally, children who do not live with either parent, including orphans, tend to have the lowest levels of registration (UNICEF 2005; Assaf and Pullum 2018). Little is known about barriers to registering orphans or unaccompanied children, particularly in crisis settings (Nsagha and Thompson 2011). Evidence suggests that lack of registration among orphans makes them more vulnerable and limits their socio-economic opportunities (UNICEF 2006). However, a UNICEF study underscores significant gaps in the literature regarding how birth registration affects children and youth. Addressing these gaps would require a shift from studying the impact of lack of registration to focusing on the effectiveness of birth registration to uphold rights (Pais 2009).

In this context, new investments in CRVS improvements have been made to support the diffusion and implementation of best practices. After decades of neglect, global institutions recognize the potential impact of strengthening CRVS systems; significant resources have been mobilized to improve CRVS quality, coverage, and completeness in LMICs. In 2014, the Global Financing Facility launched an initiative to support country-led efforts to improve the health of women, children, and adolescents through innovative approaches that included strengthening CRVS systems to measure and monitor progress (Fernandes and Sridhar 2017). The World Bank Global CRVS Scaling-Up Investment Plan (2015–2024) focused on civil registration to improve health, women's status, legal protections, accountability, business, commerce, and aid effectiveness. Private foundations have also invested in CRVS, with programs such as the Bloomberg Philanthropies Data for Health Initiative supporting government-led CRVS improvement in LMICs.

However, the focus on supply-side solutions has neglected social dimensions of registration that can be addressed only by directly affecting demand-side factors related to CRVS. The present paper discusses key demand-side barriers to birth, death, and marriage registration. The challenges are organized in schema that reflect difficulties related to knowledge and access, household and gender dynamics, cultural beliefs and practices, and socio-political factors.

Methodology

The literature reviewed was accessed via Popline, Medline, and internal databases from UNICEF (primarily on birth registration) and selected academic institutions. We also include evidence generated via a search of websites of international health and development agencies whose mandates cover aspects of CRVS. Keywords used in search engines included “civil registration,” “vital registration,” “vital statistics,” “births,” “marriages,” and “deaths.” Preference was given to papers, reports, and articles in English and French that systematically addressed CRVS with a focus on LMICs. Literature that had a reference period prior to 1998 or generated vital statistics from sources other than civil registration systems were excluded.

Overall, 110 documents were reviewed that substantively discussed factors related to civil registration demand, supply, or both. Table 1 presents the documents reviewed by supply-and-demand topic and CRVS topic area. (The categories are not mutually exclusive.) Most papers were peer-reviewed articles from academic journals ($n = 62$) or reports and bulletins from international agencies, such as UNICEF, United Nations Population Fund, and WHO ($n = 23$), and other non-governmental organizations (NGOs) ($n = 22$). Three of the papers were classified as “other,” including doctoral research. In general, the literature on birth registration is most substantive, followed by death registration, with limited information available on demand-side obstacles to registration of marriages in LMICs.

From Table 1, it is apparent that birth registration is much better documented than marriage or death registration. Given the lack of rigorous studies dealing directly with the topics of concern in this review, we have drawn heavily on social, public health, and ethnographic research to make inferences and articulate hypotheses about how demand-side factors may affect registration.

Table 1: Documents and publications reviewed (n = 110).

	Demand Side				Supply Side			
	Births	Marriages	Deaths	General	Births	Marriages	Deaths	General
Peer reviewed journal articles, book chapters	22	19	4	5	6	4	14	16
UN, WHO, WB and other reports	4	1	0	0	10	4	2	22
INGOs and NGO working papers, policy papers	8	3	0	0	3	0	0	5
Other (e.g. doctoral dissertations)	2	2	1	0	4	0	1	2

Findings

Birth registration

Conceptualization of personhood

For administrative purposes, birth is an event that simultaneously bestows personhood and entitlement to a legal identity. In many settings, birth does not immediately bestow an individual with the status of full and complete personhood. These incompatible cultural world views about personhood can affect registration. In the late 20th century, Jewkes and Wood (1998) noted in South Africa that the civil registration system's insistence on precise birth dates diverged from local notions of personhood both before birth and in the years following. Personhood in this setting was viewed as a process, rather than a status that is achieved through the biological event of a live birth. This clash, along with lingering resentments over personal information being used as a tool to control the movement of populations, contributed to negative views of registration and hence, low registration completeness.

Knowledge and awareness

Studies from the Africa region indicate that many mothers and caregivers are still unaware of the benefits of birth registration. Table 2 presents levels of awareness among mothers and caregivers across four West African countries. While the women and caregivers interviewed in these studies had knowledge of the registration process, and most had registered some of their children, they had limited understanding of why registration was necessary. The results of these studies highlight opportunities for targeted communication about the importance of birth registration, not only to establish identity, but to access education and social benefits and to support economic mobility.

Table 2: Birth registration knowledge among mothers and caregivers of children under 5.

Country	% of mothers and caregivers with awareness of importance of registration
Nigeria (2016)	27
Mali (2015)	29
Sierra Leone (2017)	36
Côte d'Ivoire (2016)	44

Sources: Statistics Sierra Leone 2018; Nigeria National Bureau of Statistics and UNICEF 2017; Côte d'Ivoire Institut National de la Statistique 2016; Mali Ministère du Plan et du Développement 2016

Education

Several studies reported that navigating the CRVS system was a key barrier to birth registration, particularly among parents who had lower levels of education. LeVine et al. (2011) note that education enables an individual to negotiate bureaucracies, including the registrar's office, in formal, unfamiliar settings outside of the family or home community. In Laos, birth registration increased with the mother's level of education: only 66 percent of children of mothers with no education were registered, compared with 75 percent of children of mothers with primary education, 84 percent of children of mothers with secondary education, and 94 percent of children whose mothers had achieved higher education (Bhatia et al. 2017). Findings from a 2018 DHS study indicated that higher levels of educational achievement among women were also associated with greater birth registration at the household and community levels (Assaf and Pullum 2018). In line with these studies, psychosocial research in Mali measured assertiveness and self-confidence: it asked women, "Would you feel able to get a birth certificate for your child?" The results suggest that confidence to navigate the CRVS system was strongly correlated with maternal education (Simon et al. 2002). The relationship between maternal education was stronger than the link between birth registration and the father's education level (Nomura et al. 2018).

Gender

To better understand the relationship between gender and birth registration, we examined evidence concerning gendered patterns of registration, household decision-making, and acknowledgement of paternity. The study, which used data from the 2018 DHS, highlighted important gender differences in registration: coverage was significantly lower among girls than boys in eight countries (Armenia, Costa Rica, Guinea-Bissau, Namibia, Niger, Sudan, Tajikistan, and Thailand), and the largest gap was in Sudan, where birth certification was 3.4 percent lower among girls. Levels of registration were higher among girls in three countries (Kyrgyzstan, Sierra Leone, and Vanuatu) (Bhatia et al. 2017).

Few country-specific studies focus on gender gaps in registration coverage. China is a notable exception, where it appears that girls were systematically underregistered because of a policy that limited most families to one child; preference for registration was given to boys (Shi and Kennedy 2016). While the China case is extreme, it points to a general sense in the literature that, given difficulties accessing and navigating registration, parents may not always be willing or able to register all their children. Indeed, some parents choose to register a child based on who they believe could help support their family in the future, potentially contributing to gender disparities in birth registration (Rodríguez 2016).

Gender dynamics at the household level reflect prevailing socio-cultural beliefs that restrict women's agency to register their child. A multi-country survey conducted by Plan International found that even where provisions grant women equal rights to register the birth of their child, there was a lack of support to enforce those laws (Plan International 2012). Prejudice and traditional customs prevented women from accessing those rights. In addition, lower educational attainment among women contributed to difficulty in navigating the CRVS system (Cappa et al. 2014).

The broader effect of gender discrimination on birth registration may be most acute for single mothers. In many settings, the law requires the father's presence to register a birth. For example, in Bhutan, the father's name is required for registration, and in Indonesia, a marriage certificate is required to register a child's birth (UNICEF 2014). In Laos, Nepal, and some areas of Pakistan, the law specifies that if a birth takes place at home, the head of the household has the primary responsibility to register the child. In most cases, this will be the father of the child; for single mothers, it will be their father or another male relative. Given that women are rarely heads of household in these settings, local norms and customs create additional challenges for mothers to register their children. In several other countries, including the Dominican Republic, Ecuador, and Sudan, the mother is able to register a birth only if the father is absent (Sennott et al. 2016). In some countries, children living only with their father had the highest rates of registration. The literature highlights important gender differences in birth registration that require legal and social empowerment for women to have equitable access to birth registration.

Cultural context

Culturally-based views of the life course often clash with bureaucratic event-based CRVS procedures. For example, in Mali, Senegal, and other countries in West Africa, a new mother and baby are traditionally secluded in the mother-in-law's room for 40 days after the birth, and the child's name is not given until the seventh day of his or her life. These practices may impede swift registration of children at birth in health facilities (Sangho et al. 2015).

Other practices, such as fostering, can subvert the intended function of a CRVS system. In many African countries, children are fostered and raised by individuals other than their biological parents. This may be done to furnish kin (such as aging grandparents) or other foster/adoptive parents with household labour, to facilitate the child's formal or Koranic education, or to support childless women. In Niger, Guillermet (2007) notes that adoptive parents may seek to seal these constructed kinship ties by seeking a birth certificate on which the child is registered as theirs. A fictive kinship may be enshrined in a birth certificate that in principle gives the child certain rights (such as inheritance) but simultaneously erases the child's past and natal identity in the official record.

Socio-political factors

While there is historical precedence for marginalized groups to mistrust registration, given the relationship between civil registration and the colonial state in LMICs, there continue to be well-substantiated fears about how the state may use identity data to persecute vulnerable groups. In some countries, registration forms include ethnic, religious, or citizenship status identifiers that may place groups at risk. Also, as birth certificates are often used to access other documents, parents may fear discrimination if demographic or ethnic information is recorded (Brewer et al. 2015). For example, identity cards can be used to highlight the previous nationality of citizens (Lynch and Southwick 2008) or identify a foreign national, determining how that person will be treated within the justice system (Plan International 2016). In Asia, migrant youth reported that employers may use identity documents, including birth certificates, to exclude migrants from employment opportunities (Plan International 2016). These issues are of particular importance for refugees, displaced people, and other mobile populations, and explain some people's reluctance to register births (Parkinson and Behrouzan 2015). Parents who are members of

minority and migrant groups may not only avoid seeking their own registration, but also that of their children. Supply-side measures to ensure data security and transparency concerning data use may begin to reduce resistance.

Health sector

The WHO recognizes that strengthening the relationship between the health sector and civil registration is key for identifying births and notifying the CRVS system (World Health Organization 2018). Numerous studies demonstrate a positive association between birth registration and women delivering their babies in institutions. In Algeria, 92 percent of mothers gave birth and registered their baby at a health facility; the national statistical office confirmed that 97 percent of babies are registered within the statutory five days after birth (UNICEF 1998). In Laos, birth registration was lower among children who were born at health centres (68 percent) and at home (65 percent), compared with those born in a hospital (85 percent) or a private facility (90 percent). An ecological study highlighted that countries that allow midwives to register babies at health facilities have high levels of birth registration; this suggests that healthcare providers have a critical role to play in improving registration (Nomura et al. 2018). In Malaysia, as in some other LMICs, the system is decentralized; midwives and other community actors are legally required to notify the district registrar of births occurring in their area (UNICEF 1998). Some countries have comparable levels of institutional delivery and birth registration (for example, Cameroon, Ghana, Nigeria, and Senegal). Other countries, such as Democratic Republic of the Congo and Guinea-Bissau, have higher facility delivery than birth registration, which underscores missed opportunities to ensure registration at health facilities (UNICEF 2017). To increase birth registration at health facilities in Tanzania, a policy was put forth to require nurses to register babies, although policymakers expressed concerns that this strategy could burden overworked staff (Measure Evaluation 2016).

While integration of health and registration services may be an effective strategy to capture births that occur in health facilities, a considerable proportion of women in LMICs do not give birth in a clinical setting. Only 69 percent of rural women in Senegal deliver in a health facility, and only about 54 percent of rural women in Tanzania do so. Many women are assisted by traditional birth attendants in the community. While these attendants have an important role to play in supporting women who may not be able to access facility-based care, many birth attendants have difficulty navigating the complexity of the CRVS system (Assaf and Pullum 2018). Other strategies are needed to reach women who are especially vulnerable, live in remote areas, or cannot be reached at brick-and-mortar health facilities.

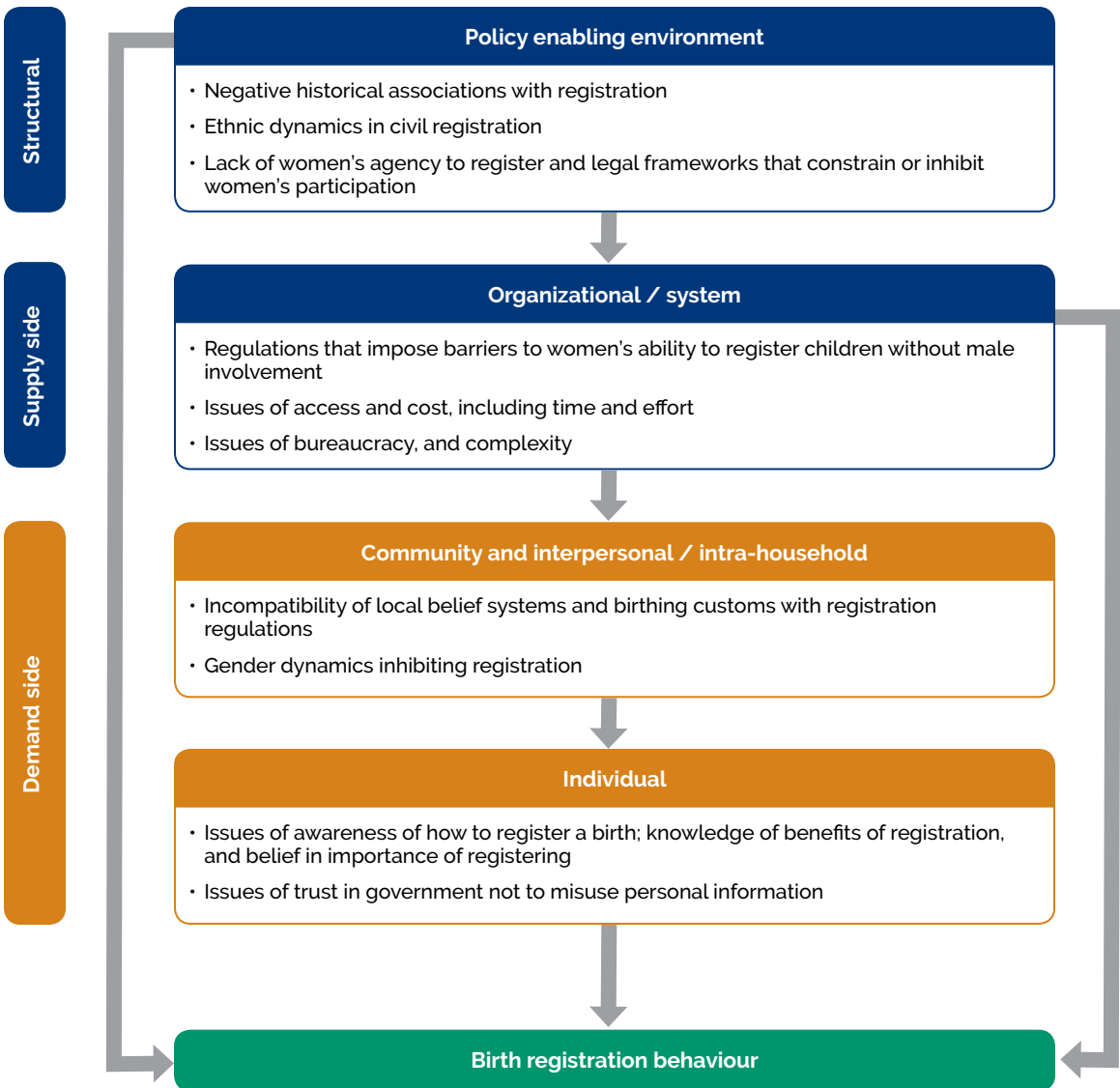
Silva et al. (2016) assessed a community health worker program to improve the registration of vital events in Ethiopia, Ghana, Malawi, and Mali. The program recruited community health workers with basic levels of education and trained, equipped, and supported them to report pregnancies, births, and deaths within defined geographic areas over a period of at least 15 months. The results varied: community health workers documented around 30 to 90 percent of expected births and 22 to 91 percent of expected under-5 deaths. Although the intervention, particularly in Mali, demonstrated that community health workers could be integrated into CRVS systems to improve completeness in small geographic areas, it is unclear if this strategy would work for larger areas. Nonetheless, the Data for Health Initiative found that active notification

processes relying on front-line health workers have been successful in several countries (Bangladesh, Ghana, Myanmar, Rwanda, the Solomon Islands, and Tanzania). While questions remain about whether completeness and data quality could be maintained, the integration of lay workers is a promising strategy to expand access to registration among rural populations (AbouZahr et al. 2018).

Conceptual framework

Figure 4 provides a unified approach to understand the determinants of birth registration and allows us to consider relevant factors at multiple levels. In terms of socio-political factors, the literature suggests that the tainted legacy of "registration," gender dynamics that are rooted in a patriarchal worldview, ethnic conflict or tension in the country/region, and social policies (for example, health, education, migration) broadly impact the determinants of birth registration.

Figure 4: Theory of change – birth registration.



Structural factors include CRVS policies requiring parents to be in a legal union to register a birth, laws related to vulnerable groups (for example, registration may collect information indicating a vulnerable population category), and regulations that govern CRVS-related policies and procedures. At the systems level, contributing factors include coordination of services and information sharing between government institutions (for example, civil registrar and health sector), the window of time for birth registration, the cost of birth registration and late fees, the documentation required to register a birth, and the geographic distance to registration services. Socio-political and structural factors give rise to social conditions that inform how communities conceptualize personhood, postpartum practices that include seclusion periods for mothers, baby-naming conventions that delay registration, gender norms that shape women's agency to register a birth, stigma associated with being a single mother, women's level of education, and overall confidence in government institutions.

Collective practices are rooted in structures and social conditions and feed into household and individual factors (Frohlich et al. 2001). At the household level, the mother's level of education, gender dynamics and preferences, and socio-economic status influence individual-level factors, which include recognition of paternity, awareness of how to access civil registration services, knowledge of the benefits of registration, and, critically, the belief that registration is important.

Death registration

The literature on demand-side factors affecting death registration is scanty, leaving many unanswered questions.

Knowledge and awareness

Knowledge of the registration process and awareness of why death registration is important are critical. A study from 2013 that examined death registration in Kenya found that 59 percent of respondents were aware of how to complete the registration process. Yet the decision to do so may often be tied to the need for proof of death to navigate administrative procedures (Bradshaw et al. 2010). For example, in the Kenya study, among respondents who had had a death in their household in the past 10 years, 26 percent reported that they did not obtain a death certificate because the deceased did not own property and thus did not leave an inheritance. In Senegal, as in many other countries, death registration is required for a burial permit and to claim an inheritance and pension (Manga 2014).

Gender

Underregistration of female deaths has been reported from at least four countries (Silva 2016; Rand Stoneburner 2017; UNFPA and UNESCAP 2017). For example, in Morocco, an estimated 65 percent of deaths among men are reported, compared with only 35 percent of deaths among women (Silva 2016). On the supply side, lower levels of death registration among women may be explained in part by physician bias and socio-cultural views that place a lower value on women's lives (Cobos Muñoz et al. 2020). Disparities in death registration may also be related to underreporting of gender-based violence. In a study conducted by Stökl et al. across 66 countries, researchers found that while 38 percent of homicides among women are linked to intimate partner violence, compared with 6 percent among men, men are four times more likely to have an injury-related death than women (Stökl 2013). Intimate partner violence is generally underreported. Even for cases that are reported, in a study conducted by the

WHO in collaboration with the United Nations across 133 countries, only 60 percent integrate homicide information into their CRVS system (WHO 2014). It is widely accepted that intimate partner violence is underreported, but the lack of information on interpersonal violence in most CRVS systems makes it even more difficult to assess the magnitude of intimate partner violence reported. At this time, CRVS systems are not able to even estimate the scope of the problem (Centre of Excellence for CRVS Systems 2019).

On the demand side, there is little in the literature that delves deeper into gender differences in death registration. There are clearer incentives to register men's deaths where inheritance rights are linked to registration, particularly for widowed women; this would seem likely to be the case in patriarchal and patrilineal societies (Butt and Asad 2016). Understanding the cultural practices surrounding inheritance may allow for better alignment of contemporary registration requirements with local norms and may incentivize registration (Hockings 1982), but this would not address the more fundamental causes of gender disparities.

Cultural context

While theoretically there may be incompatibilities between legal definitions of a timely registration and culturally sanctioned periods of mourning or seclusion, these are not documented. Evidence is emerging, however, that stigmatized conditions may deter families from registering deaths. The challenges faced in controlling the 2014 Ebola epidemic in Sierra Leone were partially attributed to ongoing Ebola transmission linked to funeral practices. The stigmatization of Ebola promoted secret burials, movement across porous borders, and underregistration of deaths (Nuriddin et al. 2018).

CRVS system

As previously discussed, lack of coordination between institutions within the CRVS system adds to the complexity of navigating a disjointed system (United Nations Statistics Division 2014). For example, to register a death in Mali, a relative of the deceased has to go to a higher-level health centre — of which there are only 58 in the country, serving a population of nearly 20 million — to obtain a document confirming the death. The document is then submitted to the local town hall, where the death certificate is issued and signed by the mayor. This assumes that the deceased died at or near a health facility and that the relative has knowledge of the registration process (Sangho et al. 2015). In a nearby country, individual-level factors were compounded by local and national administrative challenges, including a shortage of stamps and registers, poor storage conditions at the registrar's office, and lack of coordination between different government entities (United Nations Statistics Division 2018). As a result, even with knowledge of how to register a death, families may be unable to benefit from death registration.

Socio-political factors

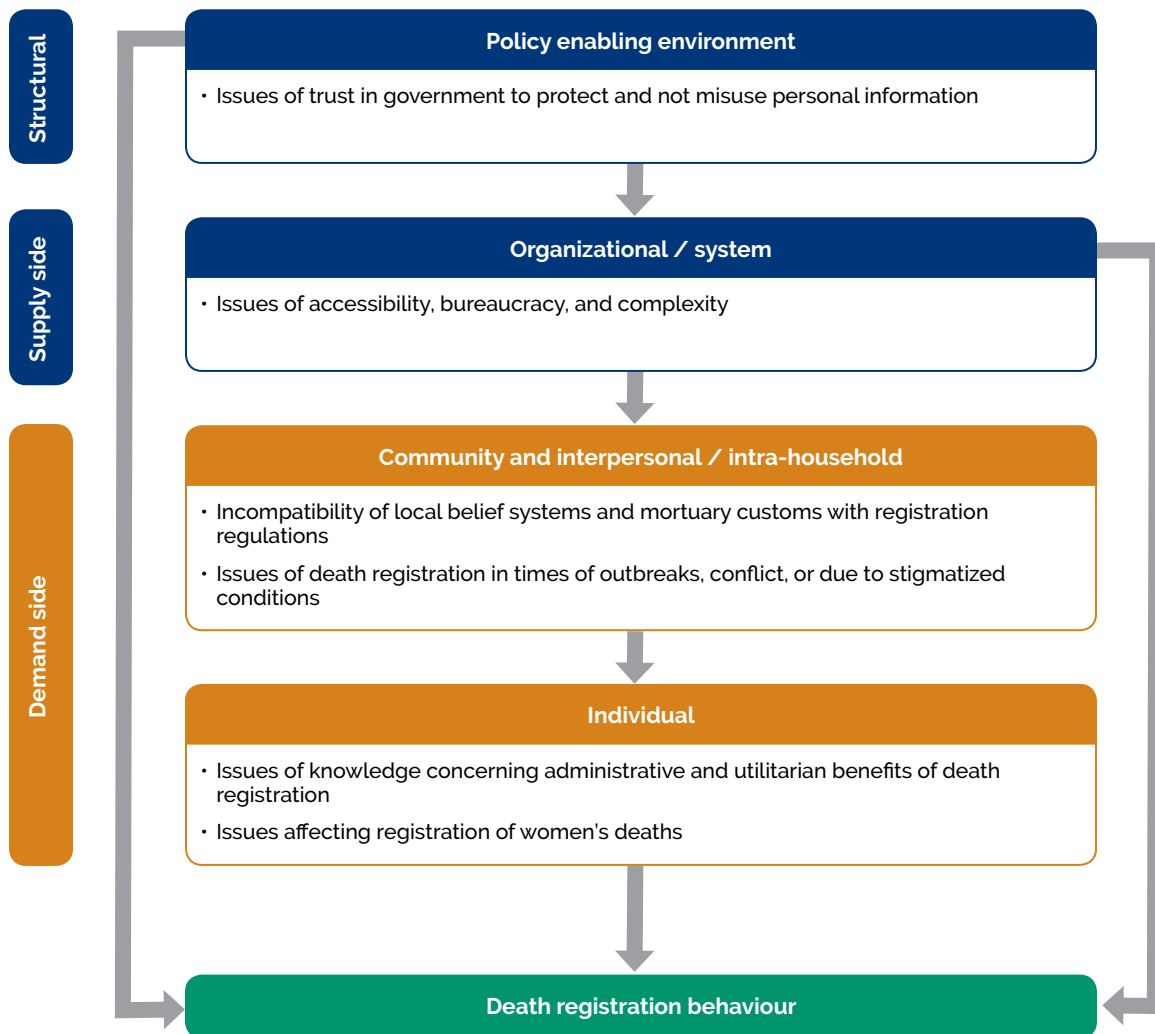
As with birth registration, sub-groups such as refugees and displaced populations may be reluctant to register deaths because they fear persecution by the authorities or because they do not have adequate documentation to formally register a death. For example, Syrian refugees in Lebanon purchase forged papers to provide the supporting documentation required to register vital events (Norwegian Refugee Council 2015). Also, large numbers of refugees can overwhelm local public authorities and their administrative systems. This means that deaths during times of conflict or during periods of displacement may not be registered. In Syria, Guha-Sapir et al. (2015)

noted that weapons-related deaths were underreported, as were deaths indirectly related to conflict. The study underscored that information about violent deaths may be difficult to obtain from death registration systems, as local government services become unreliable in conflict.

Conceptual framework

Compared with our conceptual model for birth registration, our model (Figure 5) for death registration is based largely on inference and hypothesis rather than on a synthesis of rigorous studies concerning the topic of interest. The model begins with socio-political factors that shape the policy environment, including the coordination of systems-level factors of services that are directly related to civil registration. The historical antecedents, policies, and systems shape social conditions in the community that include gender preferences related to inheritance and property rights, beliefs about spiritual existence and the end of life, the culturally prescribed mourning period, and stigma related to health conditions and violence. Similarly, at the household level, these higher-level factors impact gender dynamics and preferences and socio-economic status, which in turn influence awareness of civil registration services, knowledge of benefits, and the belief that registration is important at the individual level.

Figure 5: Multi-level factors related to death registration.



Marriage registration

Cultural context

The ethnographic literature on marriage is vast, but it does not touch on cultural factors that influence behaviour related to marriage registration. While the research on marriage statistics is substantial, we did not find any papers that addressed individual- or household-level barriers to marriage registration. Historically, in many parts of Africa, marriage has been and remains a process governed and delineated by transactions that take place over time, rather than at a single event like a wedding ceremony (Antoine and Marcoux 2014; Hunter 2016; Solway 2017). For example, among the Fulani ethnic group who live semi-nomadically across West Africa, a girl is usually engaged (often to a much older man) soon after birth. Subsequent transactions of material goods, including animals and gold, mark different steps in her betrothal until she formally moves in with her husband, usually between the ages of 12 and 16 (Castle 1992).

Even if there are marriage registration requirements, there is some evidence that couples may see obtaining a marriage certificate as more or less beside the point. The symbolic and material importance of the transactions in the context of religious or customary solemnization of unions may push aside the notion of registering the marriage with the civil registration system: obtaining a marriage certificate may be incidental to or a distraction from dowry or bride price transactions (Meeker 1993). Furthermore, registration places the union under the formal jurisdiction of the state — a disincentive where divorces can be costly, confusing, or hard to obtain, as observed in Thailand (Kemp 1992).

In terms of potential incentives, marriage registration may be associated with regulations concerning dowry payments. The literature suggests that dowry payments may be a source of disputes and increase risks to women's safety (Bates et al. 2004; Field et al. 2009). As documented in Rwanda, formal marriage registration may give women more legal rights and protections in cases of intimate partner violence (Stern and Mirembe 2017).

Traditional versus legal unions

In Mali, Soares (2009) observed that there were parallel systems for recognizing marriage unions. Malians, who are overwhelmingly Muslim, engage in customary and religious marriages and used to place little value on civil registration procedures. However, shortly before the 2018 presidential election, religious marriage was incorporated into the civil marriage process. This procedural change was widely thought to be a political move to appease religious leaders who held great influence over voters (Malijet 2018). The example from Mali highlights the potential political dimensions of civil registration systems and practices.

Registration of polygamous relationships

In many Sahelian contexts, the registration procedures for marriage require the man to register his intent to be in a monogamous or a polygamous relationship. Whitehouse's qualitative research in urban Mali on this issue revealed that although monogamy is increasingly appealing to men and women, the prospect of a legally binding pledge of monogamy arouses suspicion (Whitehouse 2017). These tensions are related to gendered power dynamics and women's low expectations of both men's fidelity and the state's ability to enforce the country's civil marriage code. As a result, polygyny continues to shape marital choices and practices in Bamako.

Anecdotal evidence collected during fieldwork by one of the authors (SC) suggests that during the civil ceremony, a man may agree to a polygamous marriage, even though he intends to remain monogamous, only as a way of exerting control over his wife.

In other contexts, marriage registration can conflict with the legal status of polygamous unions or in cases of leviratic marriage (a system of widow inheritance in which the brother of a deceased man is obliged to marry his brother's widow). For example, in Rwanda, Polavarapu (2011) noted that land ownership laws have limitations, as they protect only women who are in registered monogamous marriages. This is the only kind of marriage recognized by the constitution, even though about 10 percent of women live in polygynous households. In other countries, leviratic marriage is considered abhorrent by the state and is banned.

Migration and population mobility

High levels of migration and mobility also impact the dynamics of marriage and non-marital unions. In many parts of Africa, seasonal and long-term migration separates families. As spouses may live apart for long periods of time, partners who migrate and those who stay in the community are more likely to have other sexual partners, and even to form other unions. For example, many workers migrate to the artisanal gold mines of Guinea and Mali to find seasonal work. Within the mining communities, although they are technically married to absent partners, miners establish informal relationships, known in Bambara as *konon fitini* (little marriages), which are unlikely to be registered (Dessertine 2016). These unions provide women with a degree of protection and economic security, and men with household help and access to sex. Similar practices have been documented in Tanzania, where neither traditional extended family support nor state welfare is available to miners (Bryceson et al. 2013). Such informal unions can significantly increase the social vulnerability of women and children.

Child marriage

Marriage registration can play an important role in combatting child marriage, but it requires effective communication campaigns and strategies that respond to the socio-cultural and economic context of the practice (Davis et al. 2013). In Nepal, researchers found a lack of awareness about the negative effects of child marriage, and few people knew of the legal provisions that protect against child marriage (Acharya and Welsh 2017). The causes of child marriage, they found, were related to factors including parents' perception of girls as burdens, cheaper dowries for child brides, and family pressure with parents and grandparents, underscoring the need for wider community engagement with family and other influential stakeholders to change community norms and cultural practices. In times of conflict or natural disaster, parents may marry daughters at a younger age to relieve themselves of the economic burden (Girls not Brides 2016). These child marriages intentionally may not be registered because they are not lawful. Among Syrian refugees in Lebanon, Mourtada et al. (2017) found that earlier marriage was linked to conflict, displacement-related safety issues, and worsening economic conditions.

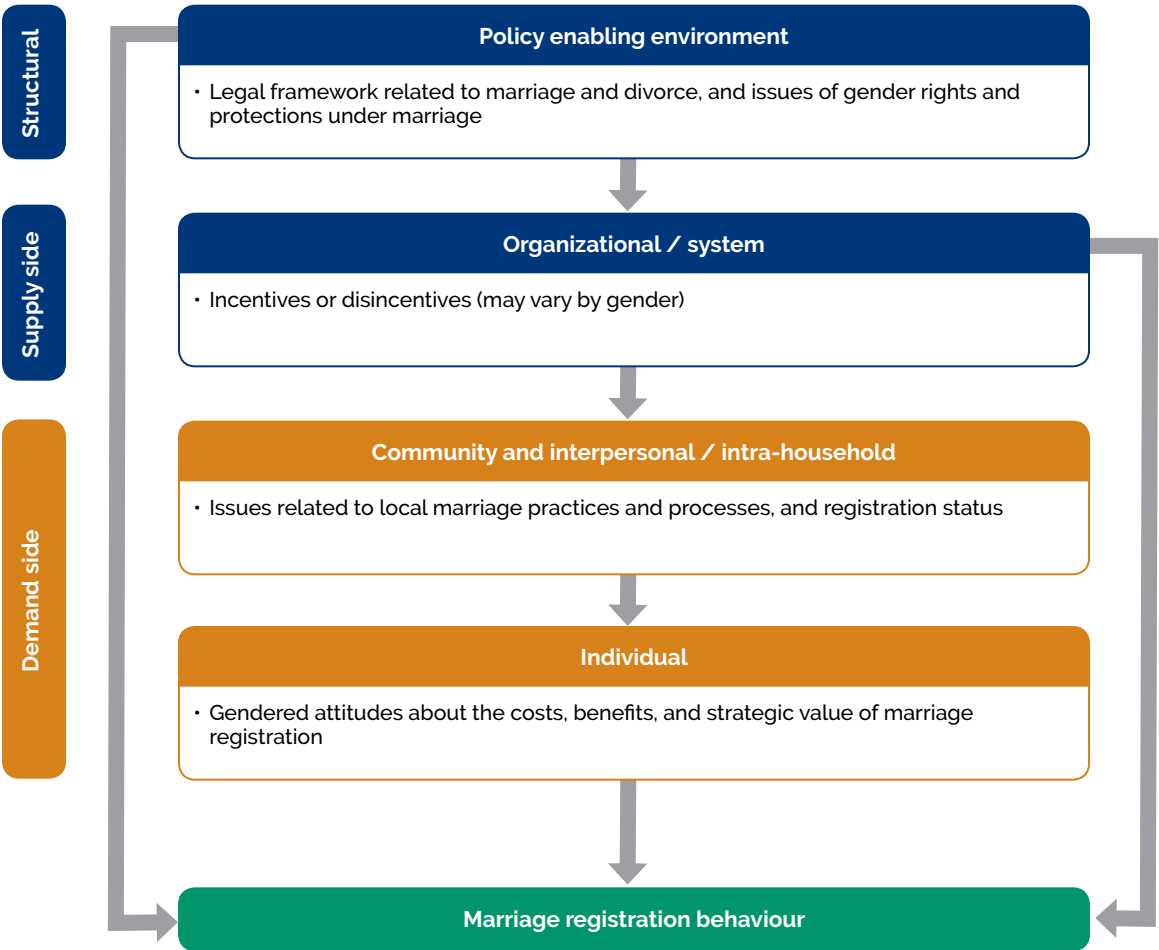
In Bangladesh, it was noted that in times of flooding, girls were married earlier, increasing their social vulnerability and risks of early child-bearing (Human Rights Watch 2015). Even in non-crisis situations, in spite of the law against child marriage, early marriage of girls is widely practiced in Bangladesh, especially in rural areas. Enforcement of the law is constrained mainly by the fact that the birth registration system is not universally implemented and thus, the actual age

of girls cannot be ascertained (Ferdousi 2014). Streatfield et al. (2015) found that two-thirds of Bangladeshi women aged 15 to 29 misreported their age at marriage. Also, laws in Bangladesh forbid intermarriage of religious and ethnic groups, which limits even the possibility of registration in such cases (Kamruzzaman 2016).

Conceptual framework

Figure 6 presents multi-level factors associated with marriage registration — again, based on a significant amount of inference. The socio-political and policy context frames the systems-level barriers. The policy-level factors include the legal framework related to marriage and divorce. In terms of the social dimensions of marriage, the processual nature of marriage and marriage customs (religious, traditional, and transactional) are key factors at the community level, and gender norms and child marriage at the household level. At the individual level, these factors may shape awareness of how to register a marriage, the benefits of formalizing a union, and the belief that it is important to have a marriage recognized.

Figure 6: Multi-level factors related to marriage registration.



Conclusion

As CRVS moves into the foreground of development priorities, a holistic understanding of both system constraints and factors that impact registration in the cultural, social, and political context is crucial. Many LMICs have low levels of birth, death, and marriage registration, and they face significant inequalities in registration among women, migrants, populations in rural areas, racial and ethnic minorities, and the poor. While recent investments in supply-side interventions can bring about change in the performance and efficiency of CRVS systems, achieving the goal of universality will depend on the active participation of the entire population.

Except for birth registration, most of what we know about how demand-side factors relate to registration is highly inferential. Even in the case of birth registration, it would be important to ask a host of questions specifically designed to probe the topic. These might include questions about the following factors:

Knowledge of birth registration

- ▶ The birth registration process: what it involves, where one gets services, what the registrant needs to do and provide, what the registrant gets at the end of the process, and what it signifies;
- ▶ The purpose of birth registration and how it benefits the child, the child's parents, and the wider community in both the short and long term;
- ▶ Any negative aspects to or associations with birth registration; and
- ▶ Perceptions about who is more or less likely to register a birth, and why.

Barriers to access

- ▶ Geographical distance or physical location;
- ▶ Opening hours and physical environment;
- ▶ Financial barriers and costs of time and transportation; and
- ▶ Views on how access might be improved.

Household and gender dynamics

- ▶ Sources of social support for women who wish to register their children;
- ▶ Disadvantages, if any, now and later in life for girls who do not have birth certificates, and effects on schooling, marriage inheritance, and other life circumstances; and
- ▶ Barriers to registering a birth that occurs outside of marriage.

Socio-political factors

- ▶ Beliefs about how registration data are used — positively and negatively.

Similar issues relate to death registration, as well as questions concerning the following:

- ▶ Beliefs and practices concerning registering the death of a man versus a woman;
- ▶ Beliefs and practices related to registration and perinatal mortality (just before or just after birth) or neonatal mortality (within the first month of birth);
- ▶ Effect of not having a death certificate for a deceased husband upon remarriage, inheritance, land tenure, and other life circumstances;
- ▶ Beliefs about the suitable time to register a death;
- ▶ Beliefs about how one's social status in life or after death might relate to death registration;
- ▶ Views about cause of death appearing on death certificates and whether surviving family members might be unhappy or feel ashamed about certain causes of death; and
- ▶ Social pressures from opinion leaders to register or not register deaths.

Similarly, population-level data on marriage registration are limited. While it is difficult to define the magnitude of underregistration, a clearer picture is emerging of cultural and contextual issues that impact marriage registration. As may be expected, challenges in accessing marriage registration (and often, by extension, birth registration) reveal how gender discrimination, patriarchy, and polygamy drive disparities. Structural impediments also prohibit the registration of unions between different ethnic and religious groups, thereby denying the spouses benefits and legal protections. Some of the more important marriage registration issues to delve into include many of the issues mentioned above for birth registration, with the addition of topics such as these:

- ▶ The way conflicts over whether to register a marriage are resolved;
- ▶ Gendered cultural and social incentives and disincentives to register marriage; and
- ▶ Gendered strategies for obtaining or avoiding marriage registration.

In sum, our current knowledge base in CRVS is focused on supply and is largely quantitative: this limits our conceptual understanding of demand. More qualitative studies are needed that examine the experiences and views of registrants and non-registrants.

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