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From Invisible Children to Legal Citizens: An Analysis of Low National Birth Registration Rates and Global Efforts to Increase Registration

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From Invisible Children to Legal Citizens: An Analysis of Low National Birth Registration Rates and Global Efforts to Increase Registration

A thesis submitted in partial fulfillment of the requirement for the degree of Bachelor of Arts in International Relations from The College of William and Mary

by

Mary Katherine Adgie

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(Honors, High Honors, Highest Honors)

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Williamsburg, VA
April 18, 2017
Abstract

The global lack of birth registration has denied 230 million children their right to a legal identity, hindered government provision of services, and distorted measurements of development indicators. Low national birth registration rates are caused by centralized civil registration systems, costly and distant birth registration processes, a lack of public awareness, and little political commitment from governments to fix the issue. I used a large-N fixed effects panel regression analysis to determine why some countries have higher birth registration rates than others and why national rates improve. The significant variables of the quantitative analysis were the urban population rate and the rate of births attended by skilled staff. I then used a methodology called process tracing to analyze causal effects of changes in birth registration. I find that government initiatives with international support developed civil registration systems, allowing for improved birth registration, and efforts to increase the rate of births attended by skilled staff likely enhanced the effect of these initiatives. I hypothesize that birth registration initiatives likely result from countries wanting to signal good governance once international funding is available. Using original field research, I provide a case study of Tanzania’s implementation of a mobile birth registration system. I conclude that countries increase birth registration rates after implementing initiatives with international support, an effect strengthened by an effective health system. Governments and international organizations should continue to partner to improve civil registration and health systems.

Acknowledgements:

I have many people to thank for the support I received with this thesis. First, I thank for my advisor, Professor Philip Roessler, for endless support from beginning to end. He continuously pushed me to improve my thesis, reminding me to focus on the big picture while remembering the little details, all while sharpening my research abilities. Most importantly, he gave me the opportunity to live in Tanzania, building the foundation for this thesis. I am grateful for Professor van der Veen and Professor Shiferaw for being on my thesis committee. Professor Shiferaw also provided clear, thoughtful advice regarding the quantitative analysis. The regression analysis would not be nearly as developed or accurate without him.

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Last, I thank my family and friends for having faith in me every step of the way, even when I was short on my own faith. My parents showed me what it takes to be successful, and my brother’s texts asking about my thesis always provided comfort. My friends ensured I worked hard and took care of myself. Thank you for providing advice and coffee and listening to me discuss outlines, questions, work timelines, data collection, interviews, and case studies. Specifically, I would like to thank everyone who edited my drafts, all of who probably know more about birth registration than they ever thought possible. From the bottom of my heart, thank you, Megan Davis, Lidia Kovacevic, Niña Ledonio, Emily Marter, and Ahmed Skaljic.
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I. Introduction

Globally, over 230 million children are “invisible”—their births and existence remain unregistered with their country’s civil registration system.¹ A nation’s civil registration and vital statistics (CRVS) system is “an administrative system to record occurrence and characteristics of major vital events”² (i.e., births, deaths, marriages and divorces), and birth registration is an important albeit often forgotten component. Unregistered children are more vulnerable to human trafficking, illegal identity changes, early marriage, forced labor, military recruitment, and involvement in armed conflict than children with birth certificates.³ Article 7 (1) of the Convention of the Rights of the Child says, “The child shall be registered immediately after birth and shall have the right to a name, the right to acquire a nationality and, as far as possible, the right to know and be cared for by his or her parents.”⁴ The United Nations General Assembly reaffirmed the importance of birth registration and its nations’ commitment to increasing registration in a 2002 resolution.⁵ Yet these documents plainly contrast reality. In “least developed” countries, only 35% of children under the age of five are registered, compared to the global average of 65%.⁶

Birth registration is near universal in countries with average incomes above $6,000, and richer or urban children are more likely to be registered.⁷ However, the variance of birth

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⁵ Ibid.
⁶ Ibid.
registration in low- and middle-income countries indicate that there are certain pathways (and barriers) to achieving registration. To combat this problem, international non-governmental organizations (INGOs), governments, and private companies have partnered together around the world. This thesis uses quantitative and qualitative research tools to determine why birth registration is incomplete in low- and middle-income countries, as well as what efforts can increase birth registration rates.

This paper uses large-N analyses, case studies, and field research to explore the topic of birth registration. Section II further explains birth registration as a component of a CRVS system, the process of birth registration, and the disparities of birth registration rates. Section III discusses the results of a fixed effects panel regression analysis that found urbanization and the rate of births attended by skilled staff as significantly correlating with low birth registration rates and changes in rates. Section IV uses process-tracing methodology to determine why birth registration rates have changed in select countries, particularly related to the results of the quantitative analysis. In Section V I discuss the players and creation of birth registration initiatives, and Section VI uses Tanzania as a case study based on original field research to situate the findings of the previous sections within a specific country. Section VII recommends policy actions and objectives, and Section VIII suggests opportunities for future research. Section IX concludes that barriers to birth registration include cost, a lack of public awareness, and a lack of political commitment from governments. Specifically, slow urbanization and fewer births attended by skilled staff hinder registration of births. Successful efforts to improve birth registration utilize international support, reform the birth registration process, and eliminate registration barriers.
II. Literature Review

2.1 Introduction

Of the 93 WHO member states, only approximately one-third of the CRVS systems are “essentially complete” and produce reliable data. A research team leading the “Who Counts?” series within *The Lancet* which analyzes CRVS said that the lack of development of civil registration systems is “the single most critical failure of development over the past 30 years.”

This section discusses what CRVS is, why it is important, what the determinants and barriers to birth registration are, and the politics of birth registration. Section II provides the foundation for the quantitative and qualitative analyses in Sections III and IV that attempt to answer more specifically why birth registration is uncommon in some countries and how it improves.

2.2 An Overview of CRVS Systems and their Importance

The United Nations (UN) defines civil registration as the “universal, continuous, permanent, and compulsory recording of vital events provided through decree or regulation in accordance with the legal requirements of each country.” Countries should aim to meet UN standards through effective civil registration and vital statistics (CRVS) systems. With its many moving parts, one could describe a CRVS system as a “system of systems.” The data that results from civil registration forms the country’s vital statistics system, which gives accurate

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assessments of population and epidemiological measures. Governments, development organizations, and donors thus encourage the development of CRVS systems for national planning regarding public health, education, labor, housing, family planning, and economic development and monitoring of progress towards development goals. The data from CRVS systems is better for these objectives than censuses and household surveys because census and survey data cannot provide continuous and complete information on the population at local and national levels. An effective CRVS monitors population changes more regularly. Vital statistics from a CRVS system also provide a precise “denominator” for the measurement of population-based indicators of poverty reduction and economic growth, in addition to health outcomes.

The health sector utilizes vital statistics most. Birth registration documents dates and locations of births and death registration notes who has died and how. Proficient birth and death registration informs officials on mortality statistics; birth and death trends; health inequalities; and the impact of diseases (such as malaria or HIV/AIDS), malnutrition, a lack of access to health care, and more. This information supports responses of government and development partners to these challenges, in addition to determining the effectiveness of current efforts in the health sector. “Timely and complete” vital statistics measure baseline levels of and later changes in development indicators. Vital statistics can monitor the progress of achieving

18 Ibid.
Millennium Development Goals (MDG) and other health initiatives to determine if they are achieving the desired results. An effective CRVS system can also assist in the “planning, monitoring, and evaluation in decentralized health systems.”

CRVS systems provide legal benefits outside of birth registration and certification. Official death registration eases the transfer of property to beneficiaries. Marriage and divorce registrations are often prioritized less than birth and death registration. However, they should still be included in an effective CRVS system, especially to achieve gender equality and the protection of women. Registration of marriages and divorces can make it easier or, in some cases, legally possible for women to inherit property, avoid forced and early marriages, and register their children. Though CRVS should be multifaceted, CRVS efforts often focus solely on improving birth registration. While acknowledging that development of CRVS systems should include registration of other vital events, this paper only discusses birth registration for the sake of logistics and research constraints.

Solving the development problem of CRVS requires better understanding the conditions that lead to effective CRVS implementation. The specific barriers to birth registration will be discussed later, but like other policy initiatives one can analyze adoption and implementation as a function of two broad factors: political commitment and capacity. Each government faces the fundamental challenge of allocating scarce resources. Developing countries, combatting malaria, HIV/AIDS, or armed rebellion, may find CRVS development a much lower priority compared to these challenges. However, the cost of a CRVS system is a complication rather than a

20 Ibid.
22 Ibid.
23 Kristen Wenz (CRVS Consultant) in discussion with the author, February 03, 2017.
blockade. Low-income countries such as Cuba and Sri Lanka have sufficient civil registration systems.\textsuperscript{24} In addition, the lack of a civil registration system may be costlier than the development of such system, as social and economic programs implemented without vital statistics as their foundation may be wasteful or inefficient.\textsuperscript{25} Still, many countries, especially in Sub-Saharan Africa, have not given budgetary priority to civil registration.\textsuperscript{26}

2.3 Global Variation in Birth Registration Rates

The birth registration rate of a country is the national rate of children under the age of five (0-59 months old) with a birth certificate or registered with the civil authorities.\textsuperscript{27} (Some measurements of birth registration can be for the entire population or for children under the age of one. Unless otherwise specified, in this paper “birth registration rate” will refer to the under-five birth registration rate.) Two household surveys are the primary sources of these figures, the Multiple Indicator Cluster Surveys (MICS) and the Demographic Household Surveys (DHS).\textsuperscript{28} UNICEF supports MICS while the U.S. Agency for International Development (USAID) supports DHS.\textsuperscript{29} These surveys gather data on demographics and health of populations, among other factors. Vital registration systems and censuses also provide data on registration rates, but household surveys are the largest source of data with MICS and DHS as the leaders.\textsuperscript{30}

\textsuperscript{25} Ibid.
The MICS and DHS have tracked changes in birth registration rates around the world for over a decade. While birth registration rates have generally increased, approximately 230 million children remain unregistered.\(^{31}\) Low birth registration rates are most prevalent in sub-Saharan African and Asian countries. In South Asia, 103 million children are unregistered, correlated to a registration rate of 39%, and sub-Saharan Africa has only registered 44% of its children under the age of five.\(^{32}\) Within these regions, great disparities exist between countries. Pakistan registered 27% of children, while Bhutan successfully registered 100% of children.\(^{33}\) South Africa had a registration rate of 95%, while Somalia had a 3% registration rate.\(^{34}\) Compared to the high registration rates of more developed regions of the world, advocates may see birth registration as a development problem. The Middle East and North Africa, Latin America and the Caribbean, and Central and Eastern Europe and the Commonwealth of Independent States (CEE/CIS) have each registered over 85% of their children regionally.\(^{35}\) Together least developed countries have registered only 38% of their children, falling behind the world’s registration rate of 65% of children.\(^{36}\) Thus improving birth registration rates in least developed countries would dramatically increase the global birth registration rate, would provide legal identities to over 200 million children, and would give validity to the measurement of development indicators and initiatives.


\(^{34}\) Ibid.


\(^{36}\) Ibid.
2.4 Determinants of Birth Registration

To understand how to improve birth registration in least developed countries it is crucial to identify why birth registration is so low. General trends in birth registration explain the barriers to achieving universal registration. Countries have unique government systems, registration methods, and cultures that impact registration rates in different ways. Yet when it comes to low registration rates, similarities exist across borders regarding the correlation between a lack of registration and various demographic and registration-related factors.

Birth registration has four general steps: notification, declaration, registration, and certification.\(^\text{37}\) Notification of the birth begins the process.\(^\text{38}\) The notifier is usually a hospital, midwife, or village chief and reports to an informant or registrar.\(^\text{39}\) An informant declares the birth to the local registrar; the informant should be the mother, father, close relative of the mother, head of the institution where the birth took place, attendant of the birth, or an adult who knows the details of the birth.\(^\text{40}\) Good birth registration practices encourage countries to legally determine preferred and permissible informants.\(^\text{41}\) (The UN recommends health workers act as the primary informant.)\(^\text{42}\) The registrar will record the details of the birth, including the name of the child at birth, sex of the child, date and time of the birth, parents of the child, and parents’ addresses and citizenship.\(^\text{43}\) After the registration of the child, the parents should receive the child’s birth certificate to prove the completion of the registration.\(^\text{44}\)


\(^{38}\) Ibid.

\(^{39}\) Ibid.

\(^{40}\) Ibid.

\(^{41}\) Ibid.


\(^{44}\) Ibid.
Some governments may combine these steps or make other changes to simplify the process, while other countries have complicated and costly processes that contribute to low birth registration rates. Some governments may enact fees or mandate registration occur within a specific time frame after the birth. The criteria for the various steps of registration also differ between countries. For example, Indonesia requires a marriage certificate to register a child, and Bhutanese children cannot be registered if their fathers are unknown. Global certification rates are significantly lower than registration rates.

Based on regional disparities and the gap between least-developed countries and more-developed countries, income may have some effect on birth registration rates. Countries that have a national income per capita above $6,000 are likely to have registration rates of 80% or higher. Increased income per capita can influence birth registration because citizens with more money are more capable of overcoming the implicit and explicit costs to birth registration, as evidenced by the different registration rates between income quintiles within a country. In addition, the richer a country is the greater the supply and demand for birth registration. More developed countries may be able to allocate more of resources to CRVS system development, thus effectively supplying registration and certification. Citizens also require birth certificates as legal identification in richer countries for things such as driver’s licenses, bank loan approvals, and other documents. Birth registration rates of countries with national income per capita less

46 Ibid.
47 Ibid.
48 Ibid.
49 Ibid.
than $6,000 have much more variance than countries with greater incomes per capita. Yet some countries below this measure have succeeded at birth registration, such as Bolivia, Benin, and Madagascar. A UNICEF analysis aggregated national birth registration rates based on income groups. The table below reflects the findings.

<table>
<thead>
<tr>
<th>Income Group</th>
<th>Number of Countries</th>
<th>Population Total (Millions)</th>
<th>Weighted Average Birth Registration Rate</th>
<th>Standard Deviation as Percentage of Birth Registration Rates</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low-income countries GNI pc US$1,000 or less</td>
<td>30</td>
<td>695</td>
<td>32%</td>
<td>78%</td>
</tr>
<tr>
<td>Lower-middle income countries GNI pc US$1,006-US$3,975</td>
<td>45</td>
<td>2,408</td>
<td>49%</td>
<td>45%</td>
</tr>
<tr>
<td>Upper middle-income countries GNI pc US$3,976-US$12,275</td>
<td>27</td>
<td>703</td>
<td>94%</td>
<td>5%</td>
</tr>
<tr>
<td>Total</td>
<td>102</td>
<td>3,806</td>
<td>51%</td>
<td>40%</td>
</tr>
</tbody>
</table>


Birth registration can impose an explicit and implicit cost. The explicit cost is the fee that families pay to register their children. This fee can take the form of a regular registration fee or a

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51 I determine this using World Bank, DHS, and MICS data from the dataset I created.
late fee. Many countries require registration of a child within 30 or 90 days of a birth. Families may have to travel to distant registration centers, possibly multiple times, adding an implicit cost. The implicit cost is what the family must sacrifice to register a child; this could equal specific travel costs or the income or food forgone when a family spends time registering a child instead of working. The combined explicit and implicit costs can cause registration to be expensive for families of lower economic status. Poor households would have to utilize its two most valuable resources—money and time—to register a child. It is then more understandable why many parents of socially disadvantaged children do not register their children. If parents must choose between spending their disposable income on birth registration or clothes, food, or even a cell phone, it would surprise few if they chose not to spend the money on birth registration, even if they understood the full benefits of birth registration. While birth registration is important for providing legal protection of a child, more food on the table or an additional day of work are immediate benefits to reap. This, however, keeps already-vulnerable children legally invisible.

A country’s birth registration system can intentionally increase the cost of birth registration, hindering universal birth registration. Some governments enact late fees after the legal timeframe of birth registration to encourage prompt registration. However, constraints such as lack of awareness, distance to registration centers, traditional naming culture, and even the registration requirements may hinder registration within the specific timeframe after birth. This is seen in many countries. In Uzbekistan, parents must pay a fee to register their children, and in Belize parents can be summoned and fined if their children are not registered 42 days after

54 Ibid.
the birth. Liberian law requires a fine of $50 on parents of children who are not registered two weeks after the child’s birth, although this is rarely enforced. Registration after the deadline may also require additional documents. Registration of an Eritrean child 90 days after the birth requires a “government-issued clearance paper to confirm parenthood and date of birth,” which costs the equivalent of the average weekly rent in the rural areas. Data is unavailable for Eritrea’s registration rate.

Comparing birth registration rates between income quintiles within countries suggests there is a correlation between income and the likelihood of registration. In every region children in the richest quintile are registered more often than children in other income quintiles. The impact of household wealth on the likelihood of registration is most prevalent in countries with lower birth registration rates. As national registration rates increase, the disparities between the richest children and the poorest children shrink, but in some cases, they can persist. The largest gaps among quintiles occur in sub-Saharan Africa and South Asia. The registration rate for the richest quintile of West and Central African children is 71% compared to a 27% registration rate of the poorest quintile. (The regional registration rate is 47%.) Impoverished children are already the most vulnerable to the risks that birth registration can prevent, and yet their families’ economic statuses make their registration less likely. The promotion of birth registration for all children then becomes an effort to combat poverty.

56 Ibid.
57 Ibid.
59 Ibid.
60 Ibid.
61 Ibid.
While income is correlated with registration rates, it is not the sole determinant of achieving universal birth registration nor is it the only obstacle to improving birth registration in a country. Most birth registration procedures involve visiting a registration center or Registration Agent (RA), resulting in the physical distance between the children/families and registration locations posing a significant barrier to birth registration. Visiting a registration center may be logistically impossible for children living in rural or remote areas. The cost to travel to a registration center could create a financial burden that when parents consider the cost-benefit analysis of registration (if they are even aware of the necessity of registration), they may decide registration is too expensive. Related to urban or rural living, access to transportation, existing infrastructure, and surrounding terrain impact families’ ability to register children. These factors are less likely to constrain urban children. Worldwide “children living in urban areas are one and a half times more likely to be registered than their rural counterparts.” Similarly to income, as national registration rates increase, the disparities between registration of urban and rural-based children will minimize. This gap has almost entirely closed in CEE/CIS countries, but it is a strong indicator of a flawed registration system in many least developed countries. Rural children in Chad, for example, have a registration of 9%, while 42% of urban children have been registered. In some countries, birth registration is higher in rural areas or regions farther from capitals or major cities than in urban areas. This is the case for Rwanda, Lesotho,

63 Ibid.
64 Ibid.
65 Ibid.
66 Ibid.
68 Ibid.
and the Democratic Republic of the Congo. Increased rural registration, though, is not a coincidence but rather is a result of deliberate targeting of rural areas. Birth registration initiatives that attempt to increase registration will often begin in the areas with lowest birth registration rates (i.e. rural or peripheral areas). It is important to note then that when rural children have higher registration rates, it is a product of an initiative or program to combat a specific registration barrier and improve the birth registration process.

Registration of a child also correlates with the education level of the child’s mother. Mothers with some education are more likely to know how to register their children than their uneducated counterparts. This relationship likely stems from the positive impact a mother’s education has on the health, wealth, and overall well-being of her family. In many countries, there is truth to this trend, further indicating inequality between children based on social, economic, and familial backgrounds. The relationship between a mother’s education and birth registration rates holds whether it is in countries with very low national registration rates or higher national registration rates. Only 4% of Ethiopian children whose mothers received no education are registered; 47% of Ethiopian children whose mothers completed primary education are registered; and Ethiopian mothers with a secondary education have registered their children at the highest rate (67%). Nationally 7% of children in Ethiopia are registered. If a child’s mother has any sort of education, the likelihood of registration (and thus a legal identity and the

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71 Ibid.
72 Ibid.
73 Ibid.
75 Ibid.
protection that comes with it) increases tenfold. Cameroon’s national birth registration rate is 61%, much higher than Ethiopia’s, and still children of mothers with some education are twice as likely to be registered as children of mothers with no education.

The ethnicity, religious background, or minority status of a child may also influence the likelihood of registration. For example, registration rates vary among Indian children of different religious backgrounds. Over 80% of the minority Jain Indian children are registered, while less than 40% of Muslim and Hindu Indian children are registered. In Vietnam, children of an ethnic minority have a registration rate about 10% lower than children of a larger ethnic group (approximately 85% versus 95%). Meanwhile one tribe of the Central African Republic (the Sara people) has a lower birth registration rate by nearly 30% than another tribe (the Zande/Nzakara people).

Consideration of the influence of ethnicity, religion, or other status is important, as these factors could pose as barriers to birth registration or exacerbate other barriers. Fear exists among some minority groups regarding birth registration. Some people are fearful of their governments collecting personal and sensitive data about them, particularly regarding the possibility of a government using this information against the people later. Governments should have concrete and feasible methods to protect the records of their citizens; otherwise people may feel hesitant to register their children, particularly if their governments are

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77 Ibid.
80 Ibid.
81 Kristen Wenz (CRVS Consultant) in discussion with the author, February 03, 2017.
82 Kristen Wenz (CRVS Consultant) in discussion with the author, February 03, 2017.
discriminatory or unjust. Governments may also avoid registration of minorities to weaken government responsibility to such groups. Yet the accountability of the government emphasizes the importance of universal and complete birth registration. Birth registration and certification solidifies a person’s legal identity and provides protection against human rights violations. It is proof of the contract between a state and its citizens. The impact of ethnic and/or religious background on birth registration is less clear than that of income or education of mothers, but it is important to recognize and understand on a country-case basis, particularly if there is any active or passive discrimination based on ethnicity or religion.

No significant difference exists between the registration of boys and girls for any region in the world. This is just one characteristic that does not appear to be correlated with bias in registration. The economic, social, familial, ethnic, and/or religious backgrounds of children seem to influence the likelihood of registration worldwide. These characteristics create disparities between certain groups within countries, and often national birth registration rates cover these inequalities. Identifying these trends is thus crucial, as the urban, rich children can skew the national birth registration rates and hide the low registration rates of the rural and poor. Allowing some to be registered two, six, or even ten times more often than others defeats the purpose of birth registration. As the Convention on the Rights of Child implies, every child has the right to a name and nationality, not every child has the right to a name and nationality if he can afford it, if his mother went to school, if he lives in the capital, etc. Detailed trends and disparities partially reveal why birth registration is low and how countries have failed their

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83 Kristen Wenz (CRVS Consultant) in discussion with the author, February 03, 2017.
84 Ibid.
people. Most importantly the reasoning for low registration provides a blueprint for efforts to target the unregistered and rectify the country’s birth registration process.

2.5 CRVS Reform Suggestions

The United Nations Children’s Fund (UNICEF), an international organization (IO), advocates for free registration and certification (regular and late). UNICEF acknowledges that while governments may implement late fees hoping to encourage time-appropriate registration, this instead discourages registration and prevents registration of more disadvantaged children. This stand on free registration is included in General Assembly Resolution A/HCR/22/L.14/Rev.1, 2011 and the General Assembly resolution ‘Human Rights in the Administration of Justice,’ 2012. Legal or policy changes can eliminate the direct cost of registration. The indirect or implicit cost of registration requires more specific reform of the birth registration process, but lessening this cost is possible. Various legal reforms, campaigns, and pilot experiments have minimized or weakened the implicit cost of registration through the creation of more registration centers, the use of information and communications technology (ICT), and delegating registration responsibilities to more local authorities.

87 Ibid.
90 Ibid.
decentralization of the birth registration system makes registration less costly and thus more likely that families will take advantage of the benefits and register their children.

The direct and indirect costs of birth registration are irrelevant if people are unaware of the process or the benefits of birth registration. UNICEF’s analysis of global birth registration found that in about half of the sampled countries, most mothers of unregistered children did not know how to register their children. (However, this indicates that in the other half of the included countries most mothers understood how to register their children but still had not.) Mothers who know how to register their children do not necessarily see the value in registration. Raising public awareness and emphasis on the importance of birth registration is often included in campaigns to improve birth registration.

UNICEF has identified the target areas of improvement of birth registration and CRVS systems based on the definition of what civil registration and vital statistics. In the publication, “Every Child’s Birth Right: Inequities and trends in birth registration,” UNICEF writes that to improve the efficacy, quality, and coverage of “records” registration must be “free… continuous, permanent, and available… universal… confidential… [and] timely and accurate.”

Understanding how birth registration and CRVS systems should operate and the inadequate systems that exist instead allow governments and other organizations to implement proper corrective measures. This requires significant political commitment, despite a distinct lack of it. The positive relationship between economic development, specifically gross national income, and birth registration rates is clear, but improvement in CRVS systems does not require great

94 Ibid.
financial commitment. In a publication called “A passport to protection: A guide to birth registration programming,” UNICEF wrote that, “in comparison to typical country government capital and running expenditure, the investment required in civil registration is generally small,” and the financial returns of effective civil registration systems are “substantial.” Yet governments, especially in sub-Saharan Africa, “have not given sufficient budgetary priority to civil registration.”

If governments attempt to improve their civil registrars and birth registration processes, they should give special attention to understanding the problems to make significant and accurate changes. CRVS systems are “a system of systems” and initiatives that focus on just one component of CRVS or birth registration will not achieve their full objectives. Registration costs, lack of awareness, discrimination against the socially disadvantaged, too few registration centers, a centralized process, and a lack of coordination among entities are all legitimate problems that require attention from governments and other involved agencies. UNICEF and other organizations have identified actions that improve CRVS systems and birth registration rates. One recommendation is linking birth registration interventions to other programming areas, such as health and education. Data shows that children that had skilled staff present at their births or are immunized are more often registered. Successful initiatives have tied birth registration to the health sector to increase outreach and ease of access. For example, Brazil and Thailand have electronically connected their civil registries with maternity hospitals. Sierra Leone will

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96 Ibid.
98 Ibid.
register children during immunization visits, and Tanzanian hospitals and clinics have trained Registration Agents.  

The use of information and communication technology (ICT) has improved CRVS as it allows the birth registration process to be decentralized and increase “interoperability” between the components and offices involved. The application of ICT has been one of the most powerful tools to improving civil registration, though it is important to note that it is not a “quick fix” or all-powerful solution to countries’ complex problems. ICT can also allow countries to minimize the “learning curve” and learn from more developed countries while simplifying some complex components of CRVS. The use of mobile phones to register children and send data to a central system and digitizing records is one example of new ICT measures. Innovative, ICT-focused approaches to improving birth registration, though, often take the form of pilot programs. ICT-based pilot programs should aim to scale up on a national level, otherwise countries may have multiple pilot programs and no real solution for a national problem.

ICT, public awareness campaigns, and linkages across sectors will remain insufficient if a country’s laws and policies do not change to support birth registration and CRVS. A supportive legal framework is required for true change. Legal reform can involve mandating, clarifying, and simplifying civil registration; eliminating fees; bringing the laws and duties of CRVS under one

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102 Ibid.
105 Ibid.
106 Ibid.
legal “umbrella;” and ensuring that laws are culturally, socially, ethnically, and religiously sensitive and inclusive. Without the appropriate legal infrastructure in place, innovation cannot sustain CRVS development. Supportive laws must exist, as well as be consistent and enforced, to improve birth registration. UNICEF has become a strong advocate for legal reform regarding birth registration and CRVS development.

2.6 The Politics of Birth Registration

Many birth registration systems in less-developed countries prevent universal birth registration. The faulty systems have created and/or exacerbated registration barriers, intentional or not. Governments must actively decide to reform the CRVS sector to overcome these barriers and improve birth registration rates, requiring political support and commitment. Governments’ prioritization of CRVS development requires active self-evaluation and implementation of policies that address the country’s unique but multifaceted problems. Half-hearted efforts or programs that are not well thought-out result in “the wrong solutions for the wrong problems.”

UNICEF, Plan International, and other organizations are limited in their capabilities to implement change. Without government recognition of the problem and commitment to address it, CRVS will suffer and children will remain invisible. The Convention on the Rights of the Child Article 7 affirms the right of every child to a nationality and name. There are 197

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108 Kristen Wenz (CRVS Consultant) in discussion with the author, February 03, 2017.
110 Ibid.
111 Ibid.
signatories on this document and yet many have still not even achieved 80% national birth registration rates. Improving birth registration and CRVS systems is possible, as evidenced by various countries’ significant improvements in registration rates. This begs the question, though: how did these countries increase birth registration rates? Did their people become richer, move to urban areas, and/or more mothers became more educated? Or did governments make a political commitment to improve their CRVS systems and birth registration rates, thus addressing specific barriers? Was it a combination of both? If sufficient political commitment (and the resulting efforts) spurs change, then why have more countries not made this political commitment? Most importantly, what causes the political commitment to be made to improving CRVS and what kind of countries make these commitments?

A public good is a good that is non-excludable and non-rivalrous. When a good is non-excludable, it is impossible to stop others from using this good, so long as the good exists and the supplier continues to supply it. When a good is non-rivalrous, many use the good, but the availability of the good does not decrease the more people use the good. Not all public goods are perfect public goods, meaning that they are under some conditions excludable and/or rivalrous. These goods would be classified as club goods (which are excludable but non-rival) and common resource goods (which are non-excludable but rivalrous). The non-excludable characteristic does not mean that there are no entrance or access barriers to using a good. Rather it means that “each person who wishes to profit from a public good can do so… Entrance barriers are not combined with selective criteria that define a list of potential beneficiaries and

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116 Ibid.
118 Ibid.
exclude others.” This is like how a highway is a public good, but some citizens may live closer to said highway and have fewer entrance barriers when accessing it.

Based on the above definition, CRVS systems and thus birth registration are imperfect public goods. A CRVS system is non-rivalrous: one person’s registration has no impact on another’s ability to register or his/her likelihood of registration. Civil registration, however, can be excludable. Although registration and certification of a birth is a public service, one can classify birth registration as a public good, given the above reasoning. With the supply of this good people gain legal identities and reap the benefits of registration and certification. The provision of this public good, though, varies between and within countries. Some countries have universal and complete birth registration, while others have national registration rates below 30%. After considering a child’s legal identity that results from birth registration a public good, one can say that governments have failed at effectively providing this good to the public.

Scholars Lake and Baum found that levels of democracy (as measured by Polity IV scores) are associated with significant improvements of development indicators such as literacy rates, school enrollment, mortality rates, immunization rates, and life expectancy. The outcomes of some of these variables stem from the provision of public goods, like education. The researchers concluded that “democracies provide a higher level of public services to their citizens” compared to other regimes. The theory proposed in “The Invisible Hand of Democracy: Political Control and the Provision of Public Services” is that states act like firms,

120 Ibid.
and democracies will act as “regulated [monopolies]” that provide more public goods and earn fewer monopoly rents.\textsuperscript{123} Analysis of the relationship then between the level of democracy—or more precisely, regime type—and provision of public goods is crucial to understand the provision of birth registration services and thus global rates. Scholar Robert T. Deacon studied the provision of public goods from democratic and dictatorial governments. Their quantitative analysis measured the provision of public schooling, roads, safe water, pollution control, and public sanitation.\textsuperscript{124} The results showed that dictatorships are expected to provide public goods at a lower level than democracies.\textsuperscript{125} Most of the literature supports this theory, often with scholars analyzing the relationship between democracy and public good indicators.\textsuperscript{126} The incentives of the governments, like political survival, will influence provision of public goods. Curtis Bell found that inclusive governments are more likely to provide public goods, but this effect is stronger as governments consolidate.\textsuperscript{127} That is, consolidation intensifies the effect of democracy on the supply of public goods.\textsuperscript{128} Other works find that the relationship between public sector efficiency and the level of democracy is positive and significant, supporting the theory that democratic politicians will “produce” public goods in a more efficient way to retain power.\textsuperscript{129} Much research has claimed that democracies fund public goods at a rate higher than non-


\textsuperscript{125} Ibid.


\textsuperscript{128} Ibid.

democracies. The reasoning for this is usually that elected leaders of democracies try to please most of the population through effective provision of public goods, while autocratic rulers will instead provide private rents to a smaller group.

On the other hand, some scholars believe the literature has falsely supported the positive relationship between democracies and public goods provision. Rory Turex used a global sensitivity analysis to conclude that the robust positive relationship between democracies and public goods provision that the literature supports has been overestimated for most indicators. This idea is in the minority, though, with most of the literature supporting the theory that democracies provide a higher level of more public goods. Whether democracies provide public goods more than non-democracies or not, capabilities and incentives of governments impact their provision of public goods. What capabilities must a government have to provide the public good of birth registration? What kind of governments and countries are incentivized to provide this public good? Answers to these questions are crucial to wholly understanding birth registration barriers and how to improve birth registration. The rest of my research attempts to answer these questions.

As previously mentioned, most countries with a GNI per capita of $6,000 or more have national birth registration rates over 80%. Countries with GNI per capita below this threshold, however, are more varied in registration rates. Benin’s registration rate has been over 80% for years and its GNI per capita is approximately $2000. Yet Tanzania has a similar GNI per capita and its registration rate remained below 20% for over a decade. The relationship between GNI

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132 Ibid.
per capita and registration rates is unclear. Increased economic development likely improves birth registration rates because of the related increases in the demand and supply of birth registration. Demand increases with development as more people need legal personal identification for access to services, and supply improves as governments with higher GNI per capita are more financially capable of providing government services. The lack of supply and demand of less developed countries, though, contribute to low registration rates.

This thesis seeks to better understand why birth registration varies for low-income and lower-middle income countries. If national income was the most and/or only influential factor regarding birth registration rates, there would be a more defined relationship between registration and income for lower-income countries. Given what is known about registration rates, discrepancies among groups, registration barriers, and the registration process, there are underlying structural factors that can influence birth registration equally or even more than income.

As previously discussed, the reasons for low registration include the cost, lack of awareness, and a lack of political commitment from governments. When analyzing increasing national birth registration rates, many development or country characteristic indicators also improve. There is a possibility that these indicators are correlated with increased birth registration, such as infant mortality rates or primary education completion rates of females. However, the relationship between these variables and birth registration remains murky when comparing countries. Like income, these variables (such as infant mortality) can be low in countries with low registration and high in countries with high registration, contrary to the assumption that more developed countries naturally have higher birth registration rates.

Comparing countries becomes difficult, as the social, cultural, economic, and political differences between countries abound. These differences and variance among indicators therefore necessitate a quantitative analysis to gain a clearer understanding of the correlation between specific variables and birth registration rates.

Certain structural factors can influence birth registration rates beyond the impact of national income, such as the urban population rate of the country or the Polity IV score. Various factors can allow for a more conducive environment to having successful birth registration rates or improving said rates, and it is important to identify and understand the impact of these factors. A more comprehensive understanding of what restrains or encourages successful birth registration will allow the global community to address the foundational barriers to birth registration and directly improve birth registration. The variables included in the quantitative analysis were selected based on an in-depth understanding of the birth registration process, the barriers and shortfalls of rates, and success stories are described in detail in the next section.

However, analyses of countries that have had significant increases in birth registration rates show that these improvements are often a result of intentional and targeted birth registration improvement initiatives, frequently with international support. These initiatives include policy reform, amending the birth registration system, eliminating fees, public awareness campaigns, and increasing the number of registration points and Registration Agents. UNICEF is one of the largest supporters of CRVS development and universal birth registration. UNICEF has partnered with many countries to implement birth registration initiatives. Another common partner is Plan International, a children’s development non-profit organization that has worked on achieving universal birth registration since 1998 and partnered with 30 countries to do so, including
Bangladesh, Sudan, Indonesia, Thailand, and Ethiopia.\textsuperscript{135} Development groups like the Asian Development Bank have also encouraged birth registration.\textsuperscript{136} These initiatives seem to be so successful because they change faulty birth registration processes to ease registration and increase awareness.

Based on what is known about the absence, provision, and uptake of birth registration, I predict that birth registration rates will be higher for more effective and democratic countries. Countries with greater economic and social development, more urban living, and those which receive more aid will also have improved rates. Yet the most important factor in increasing birth registration rates is policy change to the birth registration system that includes decentralization, elimination of the explicit and implicit costs, and increasing awareness. International support will result in these necessary policy changes. This thesis thus attempts to study the two effects of high birth registration: development levels and country characteristics that are conducive to successful birth registration and the government initiatives to increase birth registration.

2.7 Conclusion

CRVS is important for development efforts and protection of citizens. Yet many countries do not have an operable or effective registration system. In many countries, the process of birth registration is often explicitly and implicitly costly, complicated, centralized, and/or unknown to the public. These barriers contribute to disparities of birth registration between and within countries. While most developed countries have achieved near universal birth registration, the variance of birth registration rates is high among less-developed countries. Within these

\textsuperscript{135} “What if… every child was in the picture?” \textit{Plan International}, last modified July 01, 2014, https://plan-international.org/publications/what-if-every-child-was-picture.

countries, registration rates differ for children of different income groups, urban and rural children, children of mothers with different education levels, and more. Good governance and political commitment can help eliminate some barriers of registration, but other country factors may explain why countries have not overcome this development problem.

III. Quantitative Analysis of Birth Registration

3.1 Introduction

Countries’ income levels may influence national birth registration rates, but factors external to income also determine national birth registration rates, as the variance of under-five birth registration rates between countries of different incomes indicate. This quantitative analysis seeks to determine what other factors are correlated with higher or lower birth registration rates. Though the results of the regression analysis explain correlation and not causation, the regression results in addition to qualitative analyses (which include country process tracing) may allow for estimates of casual relationships between these variables. Each observation is a country and year, creating a panel data set. The selection of observations was contingent on the data available of national birth registration rates from the World Bank, DHS, and MICS. Some countries like Eritrea, China, Romania, and Malaysia did not have data on their national birth registration. It is unclear why, but this could be indicative of the types of countries that have reported data on birth registration and those which do not, potentially causing bias in this analysis. Unique social, cultural, political, and economic factors complicate cross-country comparisons, so I used a fixed effects panel regression analysis. This effect conducts within-country analyses, therefore

resulting in conclusions on why birth registration rates of individual countries change over time, if at all.

3.2 The Data

The dataset for this analysis has 341 country-year observations of which there are 132 countries ranging from 1997-2016, though the numbers of observations included in the regression models are lower due to incomplete data for all of the included variables. The countries are all low- and middle-income countries, as I excluded high-income countries from the quantitative analysis. The exclusion of high-income countries (which almost always have birth registration rates over 80%, many with 100%) allows for a focus on low- and middle-income countries to better understand the relationships of the selected variables in these types of countries. This thesis chooses to focus on low- and middle-income countries due to the variance of these countries’ registration rates and an assumption that high-income countries have achieved a level of development that distinguishes them from less developed countries in a way the data may not capture. The absence of high-income countries omitted 80 observations (39 countries total).

The dependent variable of this quantitative analysis is the national birth registration rate, which is the rate of children aged 0-59 months registered with their countries’ civil authorities. Registration means that the country’s civil authorities have registered the birth of that child. This includes children who received birth certificates, but not all who were registered have birth certificates. A country’s national birth registration rate is not a perfect measure because it hides registration disparities between groups such as income quintiles or urban and rural children. However, this rate is the most common measure of birth registration and will have to suffice for
this analysis. The birth registration rate data has a left skew. The mean is approximately 71%, and the 75th percentile and above have registration rates above 90%. However, the rates of other observations are as low as 2.3%, 4.2%, and 6%. Graph 1 is of the dependent variable.

![Graph 1](image)

Graph 1. Density of national birth registration rates of low- and middle-income countries.

### 3.3 Variables

I included nine independent variables in this analysis based on extensive research of the birth registration process and the barriers to achieving universal birth registration. They are measures of political, economic, social, public health, and geographic factors that could influence birth registration rates. Table 2 lists the variables included in the dataset I built, their sources, the theoretical explanation for their inclusion, and my hypothesized relationship between the independent variables and the dependent variable (DV), national birth registration rates.
<table>
<thead>
<tr>
<th>Variable</th>
<th>Source</th>
<th>Theoretical Explanation and Hypothesized Relationship</th>
</tr>
</thead>
<tbody>
<tr>
<td>Birth registration rate (0 – 59 months)</td>
<td>World Bank Data, DHS, MICS</td>
<td>N/A</td>
</tr>
<tr>
<td>Births attended by skilled staff rate</td>
<td>World Bank Data</td>
<td>Birth attendants play the first role in birth registration as they notify the registration agents of the birth or they register the births. Increased attendance of skilled staff also indicates an effective healthcare system, a sign of development and indicative of the governments’ ability to link CRVS with the health sector. I predict a positive relationship with the DV.</td>
</tr>
<tr>
<td>Education completion rate (primary) for females</td>
<td>World Bank Data</td>
<td>Children of mothers with more education are registered at rates higher than children of mothers with less or no education. Education of mothers improves the well-</td>
</tr>
</tbody>
</table>
being of her family, and education of females indicate a commitment to social development and gender equality from the governments. I predict a positive relationship with the DV.

| Gross domestic product per capita (current US $) | World Bank Data | Gross domestic product (GDP) per capita is a measurement of economic development. Richer nations may have greater demand of services that require birth registration and a greater ability to provide this good. Richer children are also registered more often than their poorer counterparts. I predict a positive relationship with the DV. |
| Government effectiveness score | World Governance Indicators | This measurement “captures perceptions of the quality of |
public services, the quality of the civil service and the degree of its independence from political pressures, the quality of policy formulation and implementation, and the credibility of the government’s commitment to such policies.”

A more effective government will have an improved provision of public goods. I predict a positive relationship with the DV.

<table>
<thead>
<tr>
<th>Infant mortality rate</th>
<th>World Bank Data</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Like the rate of births attended by skilled staff, infant mortality is a measure of the efficacy of a nation’s healthcare system. A higher mortality rate indicates an undeveloped health sector, which may hinder birth</td>
</tr>
</tbody>
</table>

Official donor assistance per capita | World Bank Data | Increased official donor assistance (ODA) per capita means that nations are receiving more foreign aid, which can allow the country to fund CRVS development. On the other hand, poorer countries may receive more foreign aid, meaning little budgetary priority for CRVS development. I predict a (weakly) positive relationship with the DV.

Polity IV score | Polity IV Data | The Polity IV score is a measurement of democracy. Democracies often provide public goods at a higher level than non-democratic regimes. I predict a positive relationship with the DV.
Urban population rate | World Bank Data | Greater urban populations are “associated with shifts from an agriculture-based economy to mass industry, technology, and service.”

Urbanization can also indicate a growing middle class, and it can mean increased demand and eased supply of birth registration. I predict a positive relationship with the DV.

| Table 2. The names and sources of the independent variables and dependent variables included in the regression analysis. |
|---|---|---|

### 3.4 Statistical Models and Results

I conduct a fixed effects panel regression analysis beginning with a simplified model then expanding the model to include additional variables. The problem of birth registration rates may seem like an income story. One could assume that richer countries have higher registration rates and poorer countries have lower registration rates. Model 1 includes the log of GDP per capita as the only independent variable. The model finds the log of GDP per capita significant at the 1% level with a high, positive coefficient. The model provides support to the theory stressing the

importance of income for birth registration. The scatterplot below shows a positive correlation between the two variables, but there is a lot of unexplained variation. For example, Tajikistan is a poor country with a high registration rate, and Zambia is a middle-income country but has a low registration rate. This relationship reiterates the importance of exploring variables beyond GDP per capita to explain birth registration rates.

![GDP per Capita (log) and Birth Registration Rate](image)

Graph 2. A scatter plot of the logs of GDP per capita and national birth registration rates.

Urban children are more likely to be registered than their rural counterparts in most cases. This is likely because urban children are closer to registration centers. Increased urbanization is also a sign of a transition towards a market-based economy and indicative of

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development in other areas. Urbanization may thus increase the supply and demand of birth registration. Model 2 adds the urban population rate, which is significant at the 1% level and has a positive coefficient. The log of GDP per capita retains its significance. The next model adds the primary education completion rate of females as an independent variable. Research has shown a positive relationship between the education levels of mothers and the likelihood of the registration of a child, with children of mothers with no education significantly less likely to be registered than children of mothers with some education. In addition, scholarship on female education documents that more education for mothers enhances the health and well-being of their families. I expected a strong, positive relationship between female primary education rates and birth registration rates and found this to be somewhat true with the primary education rate of females significant at the 10% level with a positive coefficient. The urban population rate keeps its significance, but the GDP per capita loses its significance and remains insignificant in the follow models, implying that income is less correlated with the variance of birth registration rates than other variables.

Health staff play a critical role in the completion of birth registration. The infant mortality rate and the rate of births attended by skilled staff are included as measurements of the health sector and overall development. A more effective health care system would have skilled staff attending more births and a lower infant mortality rate. In addition, the skilled staff who assist births often play the first role in initiating the birth registration process. Without skilled staff attending births, it is more difficult to begin the registration process or for parents to learn about birth registration. The rate of births attended by skilled staff is positively significant at the 5% level in model 4 and all following models. The primary education rate of females loses its

significance in model 4 and does not become significant again. Model 5 includes the infant mortality rate as a proxy for development and a second indicator of the efficacy of a country’s health system. Though the coefficient is negative as expected, the variable is insignificant in the model and remains so in every model.

It is the responsibility of governments to ensure complete and universal birth registration, a public good. The literature on the provision of public goods resulting from various regimes suggests that more democratic countries will provide this public good at a higher level, resulting in a greater national birth registration rate. The Polity IV scores are annual scores for countries based on regime authority that test this idea. The composite of the score is the difference between the democracy score and the autocracy score, which will result in a value from -10 (strongly autocratic) to +10 (strongly democratic). The Polity IV score was recoded for a base of 0, so that the scores range from 0 (strongly autocratic) to 20 (strongly democratic). The authority coding is based on four categories: “Competitiveness of Executive Recruitment,” “Openness of Executive Recruitment,” “Constraint on Chief Executive,” and “Competitiveness of Political Participation.” I theorize a positively significant relationship between Polity IV scores and birth registration rates. Contrary to my hypothesis, though, the variable is never significant and the coefficient is negative.

Though higher democratization is not correlated with higher birth registration rates, one would expect that more functional or active governments would be correlated with higher national birth registration rates. Identifying a more functional or active government is tricky, but the government effectiveness score, a component of the World Governance Indicators, attempts

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143 Ibid.
to measure just that. It, “captures perceptions of the quality of public services, the quality of the
civil service and the degree of its independence from political pressures, the quality of policy
formulation and implementation, and the credibility of the government’s commitment to such
policies.” The WGI researchers do not advise year-to-year analysis of changes in the
government effectiveness scores but rather advocate using the scores over a longer period, so the
strength of this measure is questionable. However, it accurately measures what I am hoping to
test, so it remained in the dataset. I recoded the scores so that the base value is set to 0, so that
the scores range from 0 to 5, with 0 representing very weak governance and 5 representing very
strong governance. This variable reflects populations’ perception of the quality of public services
(which birth registration is). The government effectiveness score is insignificant in all models.

The net official donor assistance (ODA) per capita (current US$) symbolizes a country’s
dependency on aid. It quantifies concessional loans that members of the Development Assistance
Community (DAC), multilateral institutions, and non-DAC countries donated to encourage
economic development. The theoretical relationship between net ODA per capita and birth
registration rates is unclear. One may think that more ODA can allow countries to support
development that also improves factors that improve birth registration rates. This is in addition to
countries that receive aid specifically to increase birth registration and/or develop their CRVS
systems. However, because ODA is meant to encourage economic development, less-developed
countries may receive more aid and as they develop, the quantity of aid will lessen. The log of
ODA per capita is included, and though it has a negative coefficient, it is never significant. The
full results of the quantitative analysis are pictured on the next page.

144 “Worldwide Governance Indicators,” Worldwide Governance Indicators, accessed March 16, 2017,
145 “Net ODA received per capita (current US$), The World Bank, accessed March 18, 2017,
Table 3. The results of the fixed effects panel regression analysis.

<table>
<thead>
<tr>
<th>VARIABLES</th>
<th>(1)</th>
<th>(2)</th>
<th>(3)</th>
<th>(4)</th>
<th>(5)</th>
<th>(6)</th>
<th>(7)</th>
<th>(8)</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Model 1</td>
<td>Model 2</td>
<td>Model 3</td>
<td>Model 4</td>
<td>Model 5</td>
<td>Model 6</td>
<td>Model 7</td>
<td>Model 8</td>
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<tr>
<td></td>
<td>(1.242)</td>
<td>(1.671)</td>
<td>(2.632)</td>
<td>(2.729)</td>
<td>(3.056)</td>
<td>(3.141)</td>
<td>(3.436)</td>
<td>(3.469)</td>
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<tr>
<td>Urban Population Rate</td>
<td>0.783***</td>
<td>1.207***</td>
<td>1.046***</td>
<td>0.885**</td>
<td>0.831**</td>
<td>0.844**</td>
<td>0.840*</td>
<td>0.840*</td>
</tr>
<tr>
<td></td>
<td>(0.283)</td>
<td>(0.357)</td>
<td>(0.356)</td>
<td>(0.381)</td>
<td>(0.388)</td>
<td>(0.414)</td>
<td>(0.420)</td>
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<tr>
<td>Female Primary Education Rate</td>
<td>0.137*</td>
<td>0.0708</td>
<td>0.0332</td>
<td>0.0633</td>
<td>0.0159</td>
<td>0.0154</td>
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<td></td>
<td>(0.0814)</td>
<td>(0.0804)</td>
<td>(0.0865)</td>
<td>(0.136)</td>
<td>(0.144)</td>
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<tr>
<td>Births Attended by Skilled Staff</td>
<td>0.334**</td>
<td>0.315**</td>
<td>0.281**</td>
<td>0.312**</td>
<td>0.312**</td>
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<tr>
<td></td>
<td>(0.130)</td>
<td>(0.131)</td>
<td>(0.139)</td>
<td>(0.148)</td>
<td>(0.149)</td>
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<tr>
<td>Infant Mortality Rate (per 1,000 births)</td>
<td>-0.196</td>
<td>-0.201</td>
<td>-0.320</td>
<td>-0.325</td>
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<tr>
<td></td>
<td>(0.170)</td>
<td>(0.195)</td>
<td>(0.257)</td>
<td>(0.266)</td>
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<tr>
<td>Polity IV</td>
<td>-1.019</td>
<td>-1.375</td>
<td>-1.359</td>
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<tr>
<td></td>
<td>(0.805)</td>
<td>(0.969)</td>
<td>(0.996)</td>
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<tr>
<td>Government Effectiveness</td>
<td>4.158</td>
<td>4.241</td>
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<td></td>
<td>(5.910)</td>
<td>(6.044)</td>
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<tr>
<td>ODA per Capita (log)</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td>-0.167</td>
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<td>(1.966)</td>
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<tr>
<td>Constant</td>
<td>17.23*</td>
<td>1.950</td>
<td>-6.116</td>
<td>3.900</td>
<td>35.90</td>
<td>47.79</td>
<td>60.19</td>
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<tr>
<td></td>
<td>(9.186)</td>
<td>(10.92)</td>
<td>(14.49)</td>
<td>(14.54)</td>
<td>(31.31)</td>
<td>(35.43)</td>
<td>(40.97)</td>
<td>(42.07)</td>
</tr>
<tr>
<td>Observations</td>
<td>334</td>
<td>321</td>
<td>182</td>
<td>154</td>
<td>154</td>
<td>141</td>
<td>137</td>
<td>135</td>
</tr>
<tr>
<td>R-squared</td>
<td>0.148</td>
<td>0.176</td>
<td>0.291</td>
<td>0.369</td>
<td>0.382</td>
<td>0.377</td>
<td>0.391</td>
<td>0.391</td>
</tr>
<tr>
<td>Number of countries</td>
<td>129</td>
<td>126</td>
<td>92</td>
<td>87</td>
<td>87</td>
<td>78</td>
<td>76</td>
<td>74</td>
</tr>
</tbody>
</table>
In conclusion, the only variables significant in every model are the urban population rate and the rate of births attended by skilled staff. The coefficients of these variables are positive, as expected. Graph 3 and 4 scatter these two variables against the birth registration rates of the observations to visually represent the positive relationships with the dependent variable. The following graph is a matrix of the scatter plots of all the variables included in the model.

Graph 3. A scatter plot of the urban population rates and birth registration rates with the fitted values.
Graph 4. A scatter plot of the rate of births attended by skilled staff and birth registration rates with the fitted values.
3.5 Discussion and Conclusion

The results of the fixed effects panel regression analysis are interesting. The most simplified model supports the strong relationship between economic development and birth registration rates, but as the model expands to include social, geographic, governance, and health-related variables, the log of the GDP per capita loses its significance. The indicators which measure good governance are never significant, challenging the theory that more democratic or effective governments will be correlated with higher birth registration rates. The significance of the urban population rate and the rate of births attended by skilled staff are
revealing. Current data analyses reveal that urban children are registered more than rural children, reflecting the significance of the urban population rate. The importance of an effective health system in increasing registration rates is reflected in other results from a UNICEF analysis that found that children who are immunized more often are more likely to be registered.\footnote{\textit{\textquotedblleft}The ‘rights’ Start to Life: A Statistical Analysis of Birth Registration,\textquotedblright; \textit{UNICEF} (2005): 14, accessed February 25, 2017. \url{https://www.unicef.org/protection/rights_to_life.pdf.}} The relationships between the independent variables with birth registration rates show that the most accurate predictors of improvement of birth registration rates are greater urban populations (and by extension, more connected communities) and improved health systems that are conducive to registration. The results of my analysis support my theory that registration is lower in countries with greater rural populations likely due to the obstacle of distant, costly, and centralized registration processes and registration is higher when more births are attended by skilled staff.

The analysis has a risk of bias with omitted variable bias. Variables excluded from this analysis could be heavily correlated with birth registration rates. I do not believe this is a strong concern here, though, because the included variables seem to encompass a wide range of sectors which could influence birth registration rates, given my in-depth research of the subject. A larger concern is that of the omitted observations. The number of observations decreases from 321 observations to 182 observations for model 3 which adds the primary education rate of females. There is a risk that there is an unknown correlation between the observations that did not have data for the female education rate which could be correlated with birth registration rates as well. Overall, however, the results of the regression are consistent with my theoretical understanding of the provision of birth registration and they provide some explanation for how birth registration rates can change. The next sections uses case analyses to determine if urbanization, health staff attending more births, or something else happened in countries that experienced increases in
birth registration. The next section will compare the results of the quantitative analysis with the qualitative analysis.

IV. Qualitative Analysis of Birth Registration

4.1 Introduction

The previous section identified the primary correlates of birth registration rates in low- and middle-income countries. The two factors found to significantly increase birth registration are births attended by skilled staff and urbanization. Whereas higher rates of births attended by skilled staff represent a direct pathway to improvements in birth registration, urbanization reflects a constellation of various direct and indirect mechanisms--namely, rising demand for registration from a growing middle class and improvement in service delivery. In this section I explore countries’ changes in birth registration rates within recent years. I use a method called process tracing to work alongside the quantitative analysis and determine what factors can increase birth registration. Process tracing is a social science tool that uses detailed analyses of case studies to identify “sequences or mechanisms” that will support or counter competing explanatory hypotheses.\textsuperscript{147} Process tracing allows the scholar to move beyond statistical measures of correlation and to make causal inferences.\textsuperscript{148} One scholar compared it to a detective piecing together clues and suspects to solve a crime.\textsuperscript{149} This type of qualitative analysis is important because it can identify variables missing from the regression analysis, and it can help create a complete picture of the barriers and drivers of birth registration. In this section, I will


\textsuperscript{148} Ibid.

discuss in varying levels of detail the birth registration and CRVS development experiences of Cambodia, Bangladesh, Mali, Niger, Lesotho, and Guinea-Bissau. These countries experienced some of the most dramatic changes of birth registration rates in a short amount of time.

4.2 Cambodia

In 2000, Cambodia’s under-five birth registration rate was 22%.150 Other development indicators further revealed the country’s struggle to progress: the infant mortality rate was 80%, GDP per capita was only $299.56, and the (readjusted) Polity IV score was 12.153 Cambodians felt the effects of the mass exodus of cities and genocide of Cambodians under the 1975-1979 Khmer Rouge regime decades after the crisis, and this difficult point in history contributed to Cambodia’s slow development, particularly for civil registration.154 The Khmer Rouge destroyed public records, and their abolishment of the government eliminated any sense of a civil registration system that existed.155 As Cambodia rebuilt itself following the Khmer Rouge rule, a weak and ineffective CRVS system existed.156 In December 2000, the Cambodian government began to change this.157

155 Ibid.
156 Ibid.
157 Ibid.
The Sub-Decree on Civil Registration of 2000 was a legal document that declared that birth registration must occur within 30 days of birth, free of charge. The Cambodian government also introduced a standardized registration system, as previously municipalities had independently made and kept records, leading to inefficiencies. This system launched in 2002 with the government hoping to register the entire population in five years. The system failed spectacularly. After three years, only about 5% of the population had received their birth registration documents, due to lack of clarity of the responsibilities of local officials, limited support from the central government, and poor implementation. The decree and elimination of the fee was not enough to eliminate birth registration barriers and encourage registration, so Cambodia partnered with Plan International and the Asian Development Bank.

A larger development program encapsulated the initiative to improve birth registration. This project was called the Commune Council Development Project (CCDP) and sought to develop communes in a variety of areas, focusing on construction of commune facilities, building communication and transportation between communes, decentralization of communes, and civil registration. The Commune/Sangkat Councils are locally elected bodies whose purpose is to govern and promote development of their respective communes. The CCDP sought to better prepare Commune Councils to complete birth registration and have effective

160 Ibid.
161 Ibid.
CRVS systems. The Cambodian government, in partnership with Plan International and the Asian Development Bank, then launched the Mobile National Civil Registration Project (MNCRP) to directly target birth registration barriers.

The CRVS system falls under the authority of the Office of Civil Registry in the Ministry of the Interior (MoI). Plan International extended technical assistance to improve birth registration, and the Asian Development Bank provided funding. 27 UN volunteers engaged in the pilot phase of the MNCRP, which discerned the efficacy of the initiative before a national implementation. The volunteers travelled to three different provinces to register people. Registration rates skyrocketed in these provinces, increasing from 15-45% in some areas. The pilot was successful because it targeted the barriers that prevented registration. The mobile units brought the registration supplies and registration agents to the people and discussed the benefits of birth registration. Once the Royal Government of Cambodia (with their partners) supplied birth registration, the demand for registration increased.

The positive feedback from the pilot encouraged the MoI to implement changes that would support a national rollout of this mobile campaign. They gave the initiative legal support by changing Cambodian law to support the changes, eliminated the registration fee, and engaged with local governments to decentralize the process. With over 13,000 people deployed to help

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165 Ibid.
167 Ibid.
169 Ibid.
170 Ibid.
register vital events, 1,621 teams traveled across the country. The lack of public information was a hindrance on registration, but Plan printed thousands of posters to disperse throughout villages as a solution.\textsuperscript{171} Cambodia has also held events promoting birth registration to children and their families so that the importance and process of registration was better understood.\textsuperscript{172}

The decentralization of the birth registration process and the ownership and responsibility given to local governments encouraged the improvement of birth registration in Cambodia. After the changes, Commune Councils encouraged their communities to complete registration locally.\textsuperscript{173} (The chain of command from lowest to highest is, communes, districts, provinces, ministries.) Village leaders play a strong role in encouraging parents to register their children. They will visit the homes of unregistered children and speak with the parents to explain why and how the parents should register their children.\textsuperscript{174}

UNICEF has partnered with the Commune Councils in a social services mapping (SSM) scheme, a result of funding from UNICEF, USAID, and the Japan Committee for UNICEF.\textsuperscript{175} Using a ‘social mapping’ technique, the commune councils identify the most vulnerable families to support from a UNICEF-provided budget.\textsuperscript{176} This includes donating rice, school supplies, bicycles, clothes, and supplies to build a house.\textsuperscript{177} Commune councils also host seminars to educate women and children about health services, schools, and birth registration.\textsuperscript{178} In addition,

\begin{flushleft}
\textsuperscript{172} Ibid.
\textsuperscript{174} Ibid.
\textsuperscript{176} Ibid.
\textsuperscript{177} Ibid.
\end{flushleft}
a women and children “focal point” position exists on the commune council. The “social services envelope” has become the foundation for combatting poverty, improving local governance, and increasing transparency. Judith Leveilee, head of local governance for child rights at UNICEF Cambodia, said, “UNICEF and other development partners are supporting decentralization… At UNICEF, we want to encourage local decision makers to pay more attention to women and children’s issues.” This method also strengthens local governments to operate independent of outside support or funding. As Commune Councils become more responsible for service delivery (including birth registration) and decide how to use their funds to help their communities they are learning “how to identify priorities, plan, budget, [organize] interventions, and monitor the situation.”

Within three years of the implementation of Cambodia’s initiative in partnership with Plan and the ADB, the under-five registration rate rose 66.4%. The initiative was a large success. Though barriers like provision of registration supplies and public information exist, birth registration coverage has continued to improve. Cambodia has even started digitizing their civil records. The most recent birth registration rate estimate is 73.3% in 2014—an increase of near 50% in 14 years. Cambodia has developed in other areas, too, as seen below.

<table>
<thead>
<tr>
<th></th>
<th>Cambodia 2000</th>
<th>Cambodia 2005</th>
</tr>
</thead>
<tbody>
<tr>
<td>Birth Registration Rate</td>
<td>22%</td>
<td>66.4%</td>
</tr>
<tr>
<td>GDP per Capita</td>
<td>$299.56</td>
<td>$472.45</td>
</tr>
</tbody>
</table>

180 Ibid.
Table 4. Data on Cambodia collected from the dataset I created that I used in III.

Cambodia achieved a remarkable increase in its birth registration rate in a very short period of time. One question is how the success of the birth registration program may have been driven by the factors identified in the quantitative analysis—or at least interacted with them. As seen in Table 4, during this period Cambodia experienced a general increase across most development indicators, though not in urbanization, suggesting that the success of the birth registration program was not contingent on that. While GDP per capita jumped by nearly 60%, this occurred in tandem with a significant reduction in infant mortality and an increase in births attended by skilled staff. A key component of the CCDP was improving decentralization, which likely enhanced the effects of the birth registration initiative by allowing local officials to hold responsibility.184 In the few publications available on CRVS efforts in Cambodia during this time, there are no mentions of Plan, ADB, or another organization seeking to improve maternal or child health. Plan has no publications describing maternal or child health efforts during this period. UNICEF Cambodia, however, emphasizes its focus on reducing the death rate of mothers

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and newborns due to a lack of skilled staff, a priority UNICEF shares with the Cambodian government. \textsuperscript{185} UNICEF efforts include training birth attendants and encouraging home visits by health staff. \textsuperscript{186} Cambodia implemented a Safe Motherhood program around this time, which aimed to decrease maternal mortality. \textsuperscript{187} The government also created primary midwife training courses to address the lack of human resources to attend births. \textsuperscript{188} Increased maternal and newborn health may have improved birth registration, particularly as Cambodia used local government systems to register births. As officials educated women on the importance of seeking assistance for deliveries, there is a greater opportunity for health staff to interact with local officials to register births. This could have amplified the changes made to the CRVS system and resulted in more birth registrations.

Cambodia increased its birth registration rate because it made a political commitment to do so and enacted changes that addressed the barriers to registration. It was the implementation of an initiative that changed birth registration. The targeted improvement of maternal and newborn health, and thus the consequential increase in births attended by skilled staff, likely enhanced the effects of the CRVS initiative, as the birth attendants likely led to lower mortality rates and increased assistance with birth registration, which could have eased the notification step of registration. It is worth noting that this wide-spread effective change occurred after Cambodia received external international support to develop its CRVS system.


\textsuperscript{186} Ibid.


4.3 Bangladesh

Another country that achieved a drastic increase in birth registration was Bangladesh. In 2006, the under-five birth registration rate was 9.8%; it increased to 37% by 2013. Like Cambodia, Bangladesh received international support to change its birth registration system. A 2002 UNICEF documents identifies the barriers that prevented 100% registration as corruption, fraudulent certificates, and lack of awareness of local government officials regarding registration duties. The government of Bangladesh began the “Birth and Death Registration Project” in 2001 with UNICEF support, as stated on the website of the Office of the Registrar General, Birth and Death Registration. This project repealed acts related to birth and death registration that the colonizers of Bangladesh--the British--had implemented in favor of Bangladesh’s new Birth and Death Registration Act, which went into effect in 2006. This gave registration authority to “all union council, municipality, cantonment board, city corporations and Bangladesh mission.” The act also validated the use of a birth certificate to access services such as passport applications, admission to school, and marriage registration.

Bangladesh continued to promote awareness of birth registration, including establishing July 3rd as National Birth Registration Day in 2007. This day promoted that birth registration

193 Ibid.

In 2013, the birth registration rate was still only 37%. While this number is low and Bangladesh did not meet its target of achieving universal registration by 2008, considering its 2006 rate, one can say the country has made progress. Bangladesh has developed in other areas, as seen in Table 5. UNICEF has promoted educating communities about the importance of having skilled staff attending births and knowing the “danger signs” of when to seek help about a pregnancy.\footnote{“Maternal and neonatal health,” \textit{UNICEF Bangladesh}, accessed April 12, 2017, https://www.unicef.org/bangladesh/activities_4948.html.} UNICEF has also partnered with WHO and the UN Population Fund to empower women and encourage local health officials to connect with larger hospitals.\footnote{“Maternal and neonatal health,” \textit{UNICEF Bangladesh}, accessed April 12, 2017, https://www.unicef.org/bangladesh/activities_4948.html.} In 2009, UNICEF supported a project that trained community members in providing health assistance. This effort
“trained community health workers visit households to provide antenatal information, nutrition supplements, delivery kits and counseling, conduct postnatal care visits (within 24 and 72 hours of birth) to ensure essential neonatal care, assist with birth registration, counsel on child care and caring practices and refer for immunization.”

They also created support groups that met monthly to receive health education. In 2011 Plan Canada also established the Women and Their Children’s Health (WATCH) project, which used $25,780,160 (CAD) to improve maternal, neonatal, and child health (MNCH) in five countries, one of which was Bangladesh. Their work included reopening and updating health facilities for birth assistance, promoting MNCH education, and improving transportation to health facilities so skilled attendants can assist births. Like other successful registration changes, Bangladesh increased its birth registration rates by changing its legal infrastructure, decentralizing the process, giving responsibilities to local officials, and taking advantage of international support. However, an increase in MNCH also likely intensified the effects of the birth registration initiative.

4.4 Mali and Niger

Mali had a similar experience. Mali’s registration rate increased from 53.3% in 2006 to 84.3% in 2013 and significant international support aided a movement to increase civil services. In 2006, a government act provided the legal framework for birth registration, and

204 Ibid.
206 Ibid.
hospitals and clinics could then register births.\textsuperscript{208} UNICEF provided technical and financial support and assisted the government of Mali in providing supplies, increasing awareness of registration to the public, and perhaps most importantly, creating more registration centers.\textsuperscript{209} Plan International helped give thousands of children birth certificates using funding from the German Federal Ministry for Economic Cooperation and Development.\textsuperscript{210} Plan targeted refugees and internally displaced people (IDPs) to increase services and educated 600 government officials on the importance of birth registration.\textsuperscript{211} Mali has the 8\textsuperscript{th} highest under-five mortality rate in the world and several struggling development indicators, including child labor and education rates, but the country improved in other areas, as seen in Table 5.\textsuperscript{212}

The government of Niger received international support from UNICEF, Plan, and the European Union,\textsuperscript{213} and the registration rate increased from 31.8\% to 63.9\% in six years.\textsuperscript{214} The number of registration centers tripled,\textsuperscript{215} communes had their own registration officers,\textsuperscript{216} the government created a national registration policy,\textsuperscript{217} and a campaign increased public awareness about birth registration.\textsuperscript{218} The development improvements are also pictured in Table 5.

\begin{itemize}
  \item \textsuperscript{208}“Mali: Requirements and procedures to obtain a national identity card, a birth certificate and a certificate of national; characteristics of each of these identity documents, including physical features (2012-February 2015),” \textit{Canada: Immigration and Refugee Board of Canada}, published March 03, 2015, http://www.refworld.org/docid/550c37d04.html.
  \item \textsuperscript{211}Ibid.
  \item \textsuperscript{216}Ibid.
  \item \textsuperscript{218}Ibid.
\end{itemize}
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<tbody>
<tr>
<td><strong>Birth Registration Rate</strong></td>
<td>9.8%</td>
<td>30.5%</td>
<td>53.3%</td>
<td>80.8%</td>
<td>31.8%</td>
<td>63.9%</td>
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<td><strong>GDP per Capita</strong></td>
<td>$495.85</td>
<td>$838.55</td>
<td>$518.39</td>
<td>$704.06</td>
<td>$260.56</td>
<td>$393.64</td>
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<tr>
<td><strong>Urban Population Rate</strong></td>
<td>27.5%</td>
<td>31.2%</td>
<td>32.8%</td>
<td>36%</td>
<td>16.9%</td>
<td>18%</td>
</tr>
<tr>
<td><strong>Female Primary Education Rate</strong></td>
<td>78.57%</td>
<td>38.44%</td>
<td>50.56%</td>
<td>25.92%</td>
<td>42.18%</td>
<td></td>
</tr>
<tr>
<td><strong>Births Attended by Skilled Staff</strong></td>
<td>20.1</td>
<td>27.8</td>
<td>26.8%</td>
<td>56.1%</td>
<td>17.6%</td>
<td>29.3%</td>
</tr>
<tr>
<td><strong>Infant Mortality (per 1,000 births)</strong></td>
<td>48.4</td>
<td>37.2</td>
<td>93.2</td>
<td>82.9</td>
<td>78.7</td>
<td>61.6</td>
</tr>
<tr>
<td><strong>Polity IV</strong></td>
<td>16</td>
<td>15</td>
<td>17</td>
<td>17</td>
<td>16</td>
<td>16</td>
</tr>
<tr>
<td><strong>Government Effectiveness</strong></td>
<td>-0.77</td>
<td>-0.76</td>
<td>-0.69</td>
<td>-0.84</td>
<td>-0.79</td>
<td>-0.69</td>
</tr>
<tr>
<td><strong>ODA per Capita</strong></td>
<td>8.43</td>
<td>9.73</td>
<td>$65.05</td>
<td>$71.79</td>
<td>$38.9</td>
<td>$50.44</td>
</tr>
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Table 5. Data on Bangladesh, Mali, and Niger collected from the dataset I created that I used in III.

The trends of these countries which experienced increases in birth registration are like each other. The governments received international support and took specific steps to improve the birth registration system, which often included raising public awareness, creating more birth registration centers, and reforming the law. Other development indicators also improved, particularly the health measurements. To better determine if the improvements of birth registration are a result of these changes, an analysis of countries that have not improved their birth registration rates (or even countries that had decreasing birth registration rates) is needed for comparison.
4.5 Lesotho and Guinea-Bissau

Lesotho’s registration rate was 50.6% in 2000, 26.3% in 2004, and then 45.1% in 2009.\(^\text{219}\) It is unclear why the registration rate fell, as UNICEF supported some endeavors during this time. A 2005 country report on birth registration describes actions the government took to improve birth registration. This included a 2002 study tour of Mauritius and a 2004 study tour of Uganda on vital registration (with UNICEF support), sensitization workshops for chiefs and civil servants on registration, “establishment of new local government structures” to assist chiefs in registration, and a 2003 consultancy from the Bureau of Statistics on strengthening and digitizing the registration system.\(^\text{220}\) Plan International encouraged community leaders and members to raise awareness about birth registration.\(^\text{221}\) Birth registration decreased during this time despite these efforts, yet other development indicators improved in the same period.

Like Lesotho, the registration rate of Guinea-Bissau has decreased--the rate dropped from 42.1% in 2000 to 24.1% in 2010--and the efforts to improve registration are sparse.\(^\text{222}\) The government created a national program from 2000-2003 to increase birth registration coverage and focused on modernization and decentralization.\(^\text{223}\) The program registered 56,000 children in the first year, but this initiative is not reflective in the national registration rates over the years.\(^\text{224}\)

\(^{224}\) Ibid.
In 2009 Guinea-Bissau’s Ministry of Justice attended a “National Birth Registration Conference,” which UNICEF, Plan, and the United Nations’ Population Fund planned.\textsuperscript{225} Three years later UNICEF assisted registration offices and campaigns.\textsuperscript{226} Table 7 shows the changes in relevant development indicators for Lesotho and Guinea-Bissau.

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<tbody>
<tr>
<td><strong>Birth Registration Rate</strong></td>
<td>50.6%</td>
<td>26.3%</td>
<td>45.1%</td>
<td>42.1%</td>
<td>24.1%</td>
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<tr>
<td><strong>GDP per Capita</strong></td>
<td>$478.01</td>
<td>$790.38</td>
<td>$939.51</td>
<td>$281.40</td>
<td>$517.89</td>
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<tr>
<td><strong>Urban Population Rate</strong></td>
<td>19.5%</td>
<td>21.4%</td>
<td>24.3%</td>
<td>36.7%</td>
<td>45.2%</td>
</tr>
<tr>
<td><strong>Female Primary Education Rate</strong></td>
<td>74.73%</td>
<td>81.1%</td>
<td>82.41%</td>
<td>19.3%</td>
<td>55.09%</td>
</tr>
<tr>
<td><strong>Births Attended by Skilled Staff</strong></td>
<td>59.8%</td>
<td>55.4%</td>
<td>61.5%</td>
<td>43.7%</td>
<td>43%</td>
</tr>
<tr>
<td><strong>Infant Mortality (per 1,000 births)</strong></td>
<td>84.1</td>
<td>87.9</td>
<td>78.8</td>
<td>106.9</td>
<td>73.4</td>
</tr>
<tr>
<td><strong>Polity IV</strong></td>
<td>14</td>
<td>18</td>
<td>18</td>
<td>15</td>
<td>16</td>
</tr>
<tr>
<td><strong>Government Effectiveness</strong></td>
<td>-0.17</td>
<td>-0.39</td>
<td>-0.29</td>
<td>-1.06</td>
<td>-1.04</td>
</tr>
<tr>
<td><strong>ODA per Capita</strong></td>
<td>$19.76</td>
<td>$51.28</td>
<td>$61.49</td>
<td>$61.63</td>
<td>$76.73</td>
</tr>
</tbody>
</table>

Table 7. Data on Cambodia collected from the dataset I created that I used in III.

4.6 Discussion and Conclusion


I conducted the quantitative analysis to assess the correlation of increased birth registration with improving development indicators. The fixed effects panel regression revealed that only two variables—the urban population rate and the rate of births attended by skilled health staff—were significant. The selected case studies experienced increases in these two variables, whether birth registration increased or decreased over the same period. In some of these cases the governments utilized health systems to improve registration, and various development efforts occurred in the health sector separate from civil registration. The strengthening of the health sector could have played a role in improving birth registration, as many successful interventions utilized the health sector. A technical meeting between the World Health Organization, USAID, UNICEF, and the government of Canada discussed good practices of improving birth registration through the health sector and explored how the organizations and other governments can use the health sector to continue to improve.227 Therefore, as development projects strengthen health systems, CRVS may also improve either directly or indirectly.

The process tracing of countries that experienced increases in birth registration was more detailed and revealed more initiatives that international players supported compared to the process tracing of countries that experienced decreases in registration. There is a possibility that there are more reports and analyses of successful interventions than publications of unsuccessful interventions. However, an alternative and more viable option, in my opinion, is that there is more information about international support for countries that increased birth registration because these countries received more international support—thus implementing targeted and

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effective initiatives. Greater international support, I believe, resulted in more successful initiatives and thus more registered children than countries which did not receive as much support.

While more urbanization and births attended by skilled staff can eliminate barriers to birth registration, birth registration initiatives that actively attempt to reduce these barriers can be just as effective, if not more. These birth initiatives seem to occur with international support from organizations like UNICEF or Plan International. I thus hypothesize that a crucial factor in improving birth registration is a commitment to do so through initiatives that include increasing awareness, country campaigns, and reforms of the CRVS process and law. International organizations and governments that assist play a key role in beginning these initiatives.

V. Initiatives and International Support

Birth registration initiatives in a plethora of forms are often a driving force of increasing registration rates. A birth registration initiative is any program or project that aims to reform or improve the birth registration process and overall system. Targeted initiatives are successful in improving birth registration rates because they attempt to fix the pre-existing ineffective birth registration systems. Most birth registration initiatives do so by (1) changing birth registration laws, (2) determining who has registration authority and providing training for these offices, (3) reducing or eliminating costs to registration, and (4) increasing public awareness. Updating a birth registration system to reflect a nation’s efforts to increase registration requires a financial and political commitment. This often occurs with international support, as seen by the qualitative analysis of countries that experienced increases in birth registration rates. Given the effectiveness
of these interventions, it is important to understand the dynamics of how they come about and ultimately what factors affect the adoption and implementation of a successful campaign.

Three types of players are involved with the creation and implementation of birth registration initiatives: the national government, the international non-governmental organizations (INGOs), and the donors. The national governments commit to improve their birth registration rates and develop their CRVS systems; the governments work with INGOs, which provide technical assistance, expertise, and support; the INGOs, in conjunction with the national governments, utilize the funding the donors provide for the birth registration or CRVS programs. The most active INGOs working on birth registration and CRVS development are UNICEF and Plan International. UNICEF was created in 1946 to work with the United Nations, other UN agencies, governments, and other partners to “improve the lives of children and their families around the world.” Birth registration falls under the child protection program. Plan International is an independent humanitarian organization that aims to protect children’s rights and gender equality, working in areas that include child protection, education, economic security, emergencies, and sexual and productive health. UNICEF and Plan International receive donations from governments, foundations, corporations, and individual voluntary contributions, so the donors of birth registration support vary.

The three players should wish to encourage birth registration and proper CRVS systems independent of each other, simply because birth registration is important to protect human rights, properly measure development indicators, and provide for the people. Their shared goals should

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lead them to enter partnerships to achieve their goals more effectively. However, other factors may influence the interests of the players’ in improving (or not improving) birth registration rates. Specifically, governments may implement birth registration initiatives because of international influence, a desire to legitimize their nations, or to express a commitment to democracy to the global community (particularly donors). Sarah Sunn Bush explored this theory in her paper, “International Politics and the Spread of Quotas for Women in Legislature” published in *International Organization*.

Confused by the increase in gender quotas for women in legislature in countries that regarded women as having low-statuses, Bush researched the adoption of these quotas to understand why they occurred where they did. She found that international incentives (such as UN peace operations, the distribution of foreign aid, and the invitation of international officials to monitor elections) were positively and statistically significant with a country’s likelihood of adopting gender quotas. Based on a cross-country event history analysis and process-tracing of Afghanistan’s gender quotas, Bush concluded that implementation of gender quotas stemmed from direct and indirect international influence. The direct influence results from international encouragement of democracy and gender equality when writing constitutions of post-conflict countries. The indirect influence of the international community causes leaders to pursue gender quotas (or other democratic norms) for strategic purposes. “Leaders adopt gender

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234 Ibid.
quotas as a signal--sincere or insincere--to the international community or to domestic actors,” wrote Bush, “of their commitment to liberal democracy.” According to this theory, countries interested in “foreign aid, foreign investment, international reputation, and legitimacy” would implement gender quotas to craft an image of a commitment to democracy, regardless of the objective truth of such an impression. This theoretical framework may be applicable for birth registration initiatives, as governments may implement such programs to prove good governance or belief in democracy and its norms.

An explanation for how the three-way relationship begins is important. Which player initiated the commitment to birth registration can reveal the objectives of the leader and why the other players supported the initiator. After all, in countries like Cambodia or Tanzania, birth registration rates persisted at low levels for years prior to any intervention, internal or external. What caused the change? Who decided first that Country A needed to improve its national birth registration rate and develop its CRVS system? The government of Country A could have sought external assistance to improve birth registration or a development partner could have decided that Country A needed assistance and asked for funding and told the government it should improve this. Alternatively, the donor could have decided—for whatever reason—that Country A should improve its birth registration rate and offered the government money to do so.

Clarifying which player begins or leads this process is challenging. Program assessments, UNICEF media reports, government websites, and more do not specify when describing the birth registration initiative who initiated the development project. Rather these sources explain the

initiatives without ever clarifying how the partnership came into existence, only that the government wished to improve birth registration, a development partner was providing support, and a donor in some form also gave assistance. I found no sources that indicated which partner (UNICEF or Plan International, the government, or a donor) was the motivator. As a result, most inferences about sequencing are drawn from interviews with employees in this field.

Brian Haupt is a Resilience (Governance and Emergencies Specialist) Program Manager of Plan International USA. The main job at the U.S. office of Plan International is to raise money for Plan’s initiatives by requesting support from the Department of State and the U.S. Agency for International Development. Plan International runs via a federation model, which means it has a headquarters office and then various country level offices.\(^{237}\) The headquarters office provides leadership and policy direction.\(^{238}\) The country offices have long-term presences, have developed relationships with the local governments, and employ local citizens.\(^{239}\) The national offices are in countries like the U.S., United Kingdom, Canada, Sweden, etc., and their job is to raise money from their own countries.\(^{240}\)

Ten years ago, Plan International created a program called “Count Every Child.” The goal is “to make every girl and boy visible in the eyes of the law while providing them with a first form of legal identity.”\(^{241}\) Through this program, Plan has helped register over 40 million children and changed birth registration and certification laws in 10 countries.\(^{242}\) Plan has emphasized the innovative use of technology to achieve digital birth registration and works with national governments, UN agencies, and the private sector to achieve their goal of counting

\(^{237}\) Brian Haupt (Program Manager, Plan International) in discussion with the author, February 20, 2017.
\(^{238}\) Ibid.
\(^{239}\) Brian Haupt (Program Manager, Plan International) in discussion with the author, February 20, 2017.
\(^{240}\) Ibid.
every child. They have worked in countries like Bangladesh, Ethiopia, Kenya, Nepal, Pakistan, and Rwanda. These countries have different governments, histories, cultures, birth registration rates, and development levels of CRVS systems; therefore, the work Plan does in these countries varies, as well. In the Plan publication, “What if… Every child was in the picture?” Plan describes its past and future endeavors in various countries related to the Count Every Child initiative and explains the organization’s need for investment. While the Plan office in Sierra Leone was implementing pilot projects, Pakistan’s Plan office strove to train 7,000 Registration Agents, support the government in reforming the law regarding birth registration, and advocate for allocation of funds towards birth registration improvements.

Without donors, Plan International is limited in its capabilities. How does this relationship with the donors begin? Did donors give money to Plan to help the governments? Or did the governments ask Plan, which then asked the donors, for assistance? Or has Plan motivated both the donors and the governments? According to Haupt, “It starts with the money… It all starts with the pocket book.” This refers to a combination of governments indicating how they would like their money to be utilized and organizations like Plan seeking funding to achieve their goals. He believes that if funding is available for a program or development objective, a country office will prioritize that. He explained that even if a country had low birth registration, at times there may not be an identified budget opportunity to target birth registration. The reality is that Plan offices, like donors and governments, are limited in

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244 Ibid.  
245 Ibid.  
246 Ibid.  
247 Brian Haupt (Program Manager, Plan International) in discussion with the author, February 20, 2017.  
248 Ibid.  
249 Ibid.
resources. These actors must decide how to commit their resources, resulting in trade-offs of such actions. Less-developed countries may face multiple development issues and must choose which to address with limited funds. Haupt says that most of the money is earmarked, though funding from individual sponsorships is unrestricted. “Like most development organizations and agencies around the world, funding is already spoken for when you get it,” he said.250 “You have to write a proposal, [and] you are then given money to do a specific thing,” he continued. “A lot of the work is juggling different funding streams and making those into coherent projects.”

Kristen Wenz, a CRVS Consultant who works with UNICEF, spoke similarly about the importance of donors regarding birth registration. During an interview with Wenz, she said that UNICEF has been working on improving birth registration for decades.251 The issue was that people [governments, INGOs, and other donors] did not have an interest in birth registration and CRVS development until Canada pledged millions of dollars to combat this problem.252 She noted that once the money was there for this development obstacle, people took notice of the problem.253 Wenz said that this is an underfunded issue and that donors, development partners, and governments often overlook it in favor of combatting malaria or HIV/AIDS, for example.254 UNICEF’s relationship with donors is like Plan’s relationship with donors. Donors may ask UNICEF what assistance is needed for or UNICEF may write proposals to the donors if they have an idea or specific need.

Donors decide to which countries they will give their money and how the governments and development partners will use it. Many actors in the international community seek to

250 Brian Haupt (Program Manager, Plan International) in discussion with the author, February 20, 2017.
251 Ibid.
252 Kristen Wenz (CRVS Consultant) in discussion with the author, February 03, 2017.
253 Kristen Wenz (CRVS Consultant) in discussion with the author, February 03, 2017.
254 Ibid.
promote democracy and “domestic liberalization.” Regime leaders seeking to improve their legitimacy or receive more foreign aid/investment may believe that they will reap these benefits if they indicate compliance with democratic norms. This theory of Sarah Sunn Bush situates itself well within the framework of birth registration and CRVS development. Birth registration is a product of good governance. As Haupt and Wenz said, governments and other players became more cognizant of the importance of birth registration once donors revealed their willingness to provide funding to address the problem and wholly commit to good governance. Countries may then capitalize on this opportunity to receive support to receive foreign aid, exhibit good governance, or present themselves as a legitimate and capable nation. This rationale could contribute to some governments’ commitment to birth registration and others lack thereof and explain why birth registration rates often increase following birth registration initiatives that include international support.

International support is not an instant solution to struggling birth registration rates and CRVS systems. For many countries, the reasons for this problem—poverty, lack of education and awareness, difficult-to-reach communities—persist after aid donations. However, international support often results in birth registration initiatives that intentionally reform the birth registration process and thus overcome the obstacles of poverty and such. It is worth noting, though, that in some cases international support will do little to nothing, as a lack of registration or discrimination in registration is intentional. The level of government support and overall development people receive can depend on how much the government cares for the people and recognizes them as one of their own.

Canada is one of the biggest donors regarding increasing birth registration rates and developing CRVS systems. Canada operates through the Global Financing Facility, which the UN helped launch in 2015.\(^{256}\) The Global Financing Facility (GFF) supports the Every Woman Every Child movement, which is a global movement to unite organizations and leaders around the world to address global maternal and child health challenges.\(^{257}\) GFF is a “country-driven financing partnership that brings [reproductive, maternal, newborn, child and adolescent health (RMNCAH)] stakeholders together, under national government leadership and ownership.”\(^{258}\) The goal is to end preventable RMNCAH deaths by 2030.\(^{259}\) Donors include the United Nations; the World Bank Groups; the Governments of Canada, Norway, the U.S., and Japan; and the Bill & Melinda Gates Foundation.\(^{260}\) The GFF created a business plan to guide its efforts and it prioritizes smart financing (“evidence-based, high-impact solutions”), scaled financing (fully financing the agenda using public and private resources), and sustainable longer-term financing (using “strategies that anticipate the economic transition of countries from low- to middle-income status”).\(^{261}\) The Government of Canada pledged $16 million to establish a global Centre of Excellence, which will help strengthen CRVS to achieve the GFF’s goal of achieving

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\(^{259}\) Ibid.


universal registration by 2030. The selected “front-runner” countries of the GFF are the Democratic Republic of the Congo, Ethiopia, Kenya, and Tanzania. Brian Haupt and Kristen Wenz specifically cited Global Affairs Canada (GAC) as a lead donor to improve CRVS, and GAC was the lead donor of Tanzania’s mobile birth registration initiative (which is discussed in more detail in the next section).

International support is not an instant solution to struggling birth registration rates and CRVS systems. Foreign aid cannot instantly rectify or eliminate the factors that may prevent birth registration, such as ineffective health systems, poverty, and difficult-to-reach communities. However, international support often results in birth registration initiatives which intentionally reform the birth registration process and thus overcome the obstacles of poverty and such. A deeper comprehension of the beginning of the initiatives can help identify why birth registration is low and how it changes.

If one of the main reasons that countries improve their birth registration rates and develop their CRVS systems is that they would receive international support and they could display democratic principles or good governance, then increasing birth registration may become a product of donors encouraging it as a measurement of good governance and governments hoping to display this good governance to the global community. The importance of donors and the larger international community within the context of building CRVS systems creates a new

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263 Ibid.

264 I emailed GAC requesting to speak with someone about the department’s contributions to CRVS development. GAC declined to provide any information or assistance. The department’s response was, “We have reviewed your request, and unfortunately, the Canadian High Commission is not in a position to consider your proposal at this time. Canada’s international development efforts in Tanzania contribute to poverty education by focusing on improving the lives of children and youth particularly, increasing sustainable economic growth and strengthening governance systems, particularly in health and education.”
frame of reference when analyzing the problem of birth registration. As developing countries strive to prove legitimacy, democracy, or good governance, they may turn to increasing birth registration rates. Donors and development partners should continue to emphasize an effective CRVS system as a prerequisite to achieving the image of upholding these principles. Thus, as donors stress the importance of effective CRVS and provide support to achieve this, governments will be more incentivized to improve their CRVS systems. The resulting partnership will likely result in initiatives that address the barriers of birth registration and improve birth registration rates around the world.

VI. A Case Study of Birth Registration Reform: Evidence from in-depth Qualitative Interviews in Tanzania

6.1 Introduction

Tanzania has one of the poorest economies in the world based on per capita income.²⁶⁵ It has the greatest population and lowest population density in Eastern Africa,²⁶⁶ and the country has become what some have called a “donor darling.”²⁶⁷ Tanzania receives the second greatest amount of aid in sub-Saharan Africa behind Ethiopia.²⁶⁸ It has received approximately $26.85 billion in aid between 1990 and 2010.²⁶⁹ The nation has made progress reducing mortality rates, though malaria and HIV remain leading killers of children and adults.²⁷⁰ The country has experienced high growth rates because of its natural resources and tourism, averaging 6-7% per

²⁶⁶ Ibid.
²⁶⁸ Ibid.
²⁶⁹ Ibid.
year from 2009-2015.\textsuperscript{271} The current presidential republic transitioned to a multi-party system in the 1990s and has allowed for freedom of the press and civil society.\textsuperscript{272} Many have regarded Tanzania as a “relative success story” regarding African political reform, and its economic future is optimistic.\textsuperscript{273} However, one persistent development problem in Tanzania that has gone relatively unnoticed is the lack of birth registration and the “invisible children” that result from it. The United Republic of Tanzania has had one of the lowest under-five birth registration rates on the African continent for years, but recent efforts have changed this trajectory.

In 2004, Tanzania’s under-five birth registration rate was a measly 7.1%. Eight years later, the registration rate had only doubled to 14% and earned Tanzania the title of the country with the 8\textsuperscript{th} lowest registration rate in the world.\textsuperscript{274} The number of children with birth certificates was even lower. Increasing birth registration had not been a priority of the national government, and the costly and timely birth registration process prevented most Tanzanians from registering their children. Tanzania’s low birth registration rates thus stemmed from the lack of supply (from the government) and demand (from the people) of birth registration and certificates. In the past 4 years, though, a new initiative resulted in the registration of millions of children (and the distribution of corresponding birth certificates). Tanzania’s mobile birth registration initiative—while not perfect—has eliminated many barriers by promoting decentralization, public sensitization, and the application of mobile technology throughout the registration process.

This section draws on original field research in Tanzania to better understand how the country has been able to increase birth registration. Consistent with the paper’s central argument,

\textsuperscript{271} Ibid.
\textsuperscript{273} Ibid.
it shows that the success is due to the government’s adoption of a special birth registration initiative in coordination with UNICEF and Canadian as a donor. This section undertakes a systematic analysis of the program and its mechanics. The main finding is that the Tanzanian government’s use of the healthcare system and ICT overcame many registration barriers, though it initially struggled with the supply-side of the initiative. The country’s partnership with the international community implemented effective and direct policies that will allow Tanzania to one day achieve universal registration.

The rest of the section is organized as follows: I explain UNICEF’s “situation analysis” as my methodology for analyzing Tanzania’s birth registration system. Through this situation analysis I explain descriptive statistics of birth registration in Tanzania, the history of birth registration, reform of the civil registry, and the demand and supply sides of birth registration. I then describe the qualitative research I conducted in Tanzania by researching government officials, health staff, and citizens about the mobile birth registration system. These interviews serve as the foundation for my analysis of the efficacy of the reformed system. I conclude with a final assessment of the initiative and give recommendations for Tanzania to address its weaknesses.

6.2 UNICEF’s “Passport to Protection” Program

UNICEF’s publication, “Passport to Protection” provides a detailed approach to conducting a “situation analysis” of a country’s civil registry program.275 UNICEF built the eight-step approach to guide UNICEF country offices with creating action plans.276 The

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276 Ibid.
publication also provides a “checklist” for each step to ensure a thorough analysis. “Caseland” is a fictitious country that UNICEF analyzes using this method in “Passport to Protection.” I follow and simplify this guideline to assess the civil registration system of Tanzania, though my access to information as a non-UNICEF employee and non-Tanzanian government official is limited, resulting in an inability to discuss in detail every point of the “checklist.” Some steps on the checklist will be omitted in this paper for logistical and simplification purposes. The eight-step situation analysis is copied exactly below.

<table>
<thead>
<tr>
<th>Step</th>
<th>Description</th>
<th>Analysis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Step 1</td>
<td>Country birth and civil registration situation</td>
<td>Analysis of the status of birth and civil registration in the country</td>
</tr>
<tr>
<td>Step 2</td>
<td>Organizational review</td>
<td>Examination of supply-side factors: how the civil registration service is organized and the legal framework on which it is based</td>
</tr>
<tr>
<td>Step 3</td>
<td>Legal review</td>
<td>[Same as Step 2]</td>
</tr>
<tr>
<td>Step 4</td>
<td>Demand for civil registration services</td>
<td>Analysis of factors related to demand</td>
</tr>
<tr>
<td>Step 5</td>
<td>Government policy, plans, and international support</td>
<td>Analysis of the policies and plans that the government has in place and the international support for civil registration that it receives</td>
</tr>
<tr>
<td>Step 6</td>
<td>Analysis for Communication for Development</td>
<td>Analysis of factors that influence birth registration rates, that are relevant to the development of communication strategies</td>
</tr>
<tr>
<td>Step 7</td>
<td>Analysis and identification of gaps and priority interventions</td>
<td>Consolidation of the review that can be used by government to frame future action</td>
</tr>
<tr>
<td>Step 8</td>
<td>Analysis and possible directions for UNICEF support</td>
<td>Review of previous interventions by UNICEF and the type of support that it may provide in the future</td>
</tr>
</tbody>
</table>

277 Ibid.
6.3 A Situation Analysis of Birth Registration in Tanzania

The situation analysis is a tool to determine what type of interventions UNICEF should support to improve a country’s civil registration system. The Tanzanian government began its partnership with UNICEF regarding its civil registration system in 2011 and introduced a mobile phone birth registration campaign that they have successfully implemented in four regions of the country in four years. This analysis is thus rather retrospective, given that UNICEF and the Tanzanian government have already created a program specific for Tanzania. The eight-step approach will still guide a complete analysis of Tanzania’s civil registration system before the initiative, the initiative itself, and Tanzania’s civil registration system after the introduction of the initiative. This simplified situation analysis can assess the applicability and efficacy of the new birth registration initiative given the specificities of Tanzania and provide suggestions for future action.

6.3.1 Descriptive Statistics of Birth Registration in Tanzania

<table>
<thead>
<tr>
<th>Step 1: Country birth and civil registration situation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Checklist</td>
</tr>
<tr>
<td>• Detailed analysis of birth registration rates over time and by age, sex, residence, educational level of the mother, and by wealth quintile</td>
</tr>
<tr>
<td>• National income as an indicator of expected birth registration coverage</td>
</tr>
<tr>
<td>• Population density and volume of vital events</td>
</tr>
<tr>
<td>• Vital event registration volume and workload per registration office</td>
</tr>
<tr>
<td>• Special circumstances and the response to them</td>
</tr>
</tbody>
</table>

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Tanzania’s low registration rate is somewhat peculiar. Domestic instability can explain low levels of birth registration, such as if governments have suffered institutional damage, a loss of records, destruction of CVRS systems, etc. The Khmer Rouge regime in Cambodia, for example, destroyed any semblance of a CVRS system and resulted in municipalities independently trying to keep records.280 Liberia’s shaky past has made birth registration a low priority.281 Yet Tanzania has had relative domestic stability for the past three decades. The last war Tanzania engaged in was the Tanzanian-Ugandan war in 1979.282 There has never been a successful coup d’état, and riots are uncommon, though political protests in 2005 and 2011 resulted in 31 and two casualties, respectively.283 Over one-quarter of Tanzanians live under the national poverty line and health and development indicators are lagging.284

In 2013, an estimated 7 million Tanzanian children were unregistered.285 A mere 6% had birth certificates.286 While these numbers indicate a national problem for Tanzania, a closer look at the data reveals the inconsistencies of registration and a problem deeper than simply registering more children. Urban Tanzanian children were four times more likely to be registered than rural children.287 Regarding family incomes, the registration rate of children from the richest

quintile was 56%, while the registration rate of children in the poorest quintile was 4%.288

Another interesting birth registration trend is the impact of mothers’ education levels. The registration rate of children of mothers with no education in Tanzania is 10%, while the registration rate of children of mothers with secondary education or higher is almost 60%.289

These discrepancies are problematic because of the benefits birth registration/certificates provide. A birth certificate gives the owner a legal identity and easier access to services. A closer analysis of the data thus reveals that those who may need the benefits of a birth certificate most are the least likely to have one. Pictured below is the results of the 2010 DHS survey in Tanzania regarding birth registration.

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288 Ibid.
289 Ibid.
The results from Tanzania’s 2010 DHS.\textsuperscript{290}

In 1999, Tanzania’s national income per capita was $1120.\textsuperscript{291} Its steady increase led to an income per capita of $2,260 in 2012.\textsuperscript{292} Tanzania’s income per capita has not achieved the threshold of $6,000 that is associated with a birth registration rate of over 80%. Tanzania’s low birth registration also contrasts with some of its neighbors’ rates. Average registration rates have

\begin{table}
\centering
\begin{tabular}{|l|l|l|l|l|}
\hline
\multicolumn{5}{|c|}{Percentage of children whose births are registered with the civil authorities, according to background characteristics, Tanzania 2010} \\
\hline
\multicolumn{1}{|c|}{Background} & \multicolumn{1}{|c|}{Had a birth} & \multicolumn{1}{|c|}{Did not} & \multicolumn{1}{|c|}{Total} & \multicolumn{1}{|c|}{Number of} \\
characteristic & certificate & have a birth & certificate & children  \\
\hline
\cellcolor{gray!10} & \cellcolor{gray!10} & \cellcolor{gray!10} & \cellcolor{gray!10} & \cellcolor{gray!10} \\
\hline
\rowcolor{gray!10} Age & \cellcolor{gray!10} & \cellcolor{gray!10} & \cellcolor{gray!10} & \cellcolor{gray!10} \\
4+ & 6.0 & 10.4 & 16.3 & 3,263 \\
2-4 & 8.9 & 7.3 & 16.2 & 4,818 \\
\hline
\rowcolor{gray!10} Sex & \cellcolor{gray!10} & \cellcolor{gray!10} & \cellcolor{gray!10} & \cellcolor{gray!10} \\
Male & 7.7 & 8.9 & 16.6 & 4,016 \\
Female & 7.7 & 8.2 & 13.9 & 4,065 \\
\hline
\rowcolor{gray!10} Residence & \cellcolor{gray!10} & \cellcolor{gray!10} & \cellcolor{gray!10} & \cellcolor{gray!10} \\
Urban & 24.7 & 19.5 & 44.2 & 1,542 \\
Rural & 3.7 & 6.0 & 9.7 & 6,539 \\
\hline
\rowcolor{gray!10} Mainland/Zanzibar & \cellcolor{gray!10} & \cellcolor{gray!10} & \cellcolor{gray!10} & \cellcolor{gray!10} \\
Mainland & 6.2 & 8.4 & 14.6 & 7,874 \\
Urban & 22.1 & 19.8 & 41.9 & 1,471 \\
Rural & 2.4 & 3.7 & 6.4 & 6,420 \\
Zanzibar & 63.0 & 13.7 & 76.7 & 207 \\
Unguja & 71.1 & 17.2 & 88.4 & 122 \\
Pemba & 51.3 & 13.5 & 64.7 & 85 \\
\hline
\rowcolor{gray!10} Zone & \cellcolor{gray!10} & \cellcolor{gray!10} & \cellcolor{gray!10} & \cellcolor{gray!10} \\
Western & 2.3 & 4.3 & 4.8 & 1,690 \\
Northern & 9.0 & 13.6 & 22.6 & 1,037 \\
Central & 2.0 & 4.5 & 6.5 & 794 \\
Southern & 7.8 & 8.9 & 16.7 & 1,104 \\
Lake & 4.4 & 3.3 & 3.7 & 6,420 \\
Eastern & 17.3 & 26.4 & 43.7 & 910 \\
Southern & 3.5 & 3.8 & 7.3 & 643 \\
\hline
\rowcolor{gray!10} Region & \cellcolor{gray!10} & \cellcolor{gray!10} & \cellcolor{gray!10} & \cellcolor{gray!10} \\
Tabora & 16.6 & 11.3 & 5.9 & 430 \\
Arusha & 10.3 & 9.6 & 32.3 & 296 \\
Kilimanjaro & 10.3 & 9.6 & 40.2 & 206 \\
Tanga & 6.2 & 11.4 & 17.6 & 331 \\
Morogoro & 8.1 & 21.8 & 9.9 & 330 \\
Peja & 9.6 & 38.8 & 25.7 & 370 \\
Dar es Salaam & 29.6 & 29.2 & 58.8 & 317 \\
Lindi & 3.0 & 1.6 & 4.6 & 138 \\
Mwanza & 5.2 & 1.7 & 6.9 & 240 \\
Ruvuma & 2.2 & 0.6 & 1.9 & 293 \\
Iringa & 10.7 & 12.0 & 22.7 & 311 \\
Mwanza & 8.7 & 9.4 & 10.3 & 527 \\
Singida & 4.3 & 3.2 & 7.5 & 304 \\
Tabora & 3.6 & 6.1 & 4.7 & 455 \\
Ruaha & 2.9 & 4.3 & 7.4 & 276 \\
Kagera & 2.1 & 3.6 & 3.7 & 409 \\
Shinyanga & 2.1 & 1.2 & 3.5 & 823 \\
Kagera & 3.8 & 2.8 & 6.7 & 490 \\
Mwanza & 5.6 & 6.0 & 11.5 & 805 \\
Mara & 2.7 & 1.7 & 4.4 & 400 \\
Tanzania & 3.3 & 2.2 & 4.1 & 204 \\
Unguja North & 55.4 & 20.6 & 76.0 & 33 \\
Unguja South & 66.1 & 21.7 & 87.9 & 30 \\
Tanganyika & 79.9 & 14.4 & 94.3 & 70 \\
Pemba North & 52.1 & 10.4 & 62.6 & 44 \\
Pemba South & 50.4 & 16.7 & 67.0 & 41 \\
\hline
\rowcolor{gray!10} Wealth quintile & \cellcolor{gray!10} & \cellcolor{gray!10} & \cellcolor{gray!10} & \cellcolor{gray!10} \\
Lowest & 1.0 & 3.4 & 4.4 & 1,720 \\
Second & 1.6 & 4.5 & 5.0 & 605 \\
Middle & 3.0 & 6.7 & 9.7 & 1,843 \\
Fourth & 10.3 & 12.5 & 22.8 & 1,536 \\
Highest & 34.0 & 21.5 & 55.8 & 1,067 \\
\hline
\multicolumn{5}{|l|}{Total} \\
\hline
\cellcolor{gray!10} & \cellcolor{gray!10} & \cellcolor{gray!10} & \cellcolor{gray!10} & \cellcolor{gray!10} \\
7.7 & 8.5 & 16.3 & 8,081 \\
\hline
\end{tabular}
\end{table}


\textsuperscript{292} Ibid.
been higher in Zimbabwe, Rwanda, Mozambique, and Kenya, all of which have similar or lower incomes per capita.\textsuperscript{293} The Human Development Index assesses the development of countries based on the following categories: “long and healthy life,” “knowledge,” “decent standard of living,” “participation in political and community life,” “environmental sustainability,” “human security and rights,” and “promoting equality and social justice.”\textsuperscript{294} Tanzania’s Human Development Index is a score of 0.521 and ranked 151\textsuperscript{st} in the world.\textsuperscript{295} Tanzania’s neighbors have similar scores. The scores of Kenya, Mozambique, Rwanda, Uganda, Zambia, and Zimbabwe are 0.548, 0.416, 0.483, 0.483, 0.586, and 0.509, respectively.\textsuperscript{296} Tanzania, while a lesser developed country globally, has relatively equal development levels to its neighbors. However, low birth registration is a persistent problem in Tanzania that seems worse compared to its surrounding countries.

6.3.2 A History of Birth Registration in Tanzania

<table>
<thead>
<tr>
<th>Step 2: Civil registration organizational review</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Checklist</strong></td>
</tr>
<tr>
<td>• History of the civil registration service: home-grown or introduced by a colonial power</td>
</tr>
<tr>
<td>• Legal status of the civil registration organization: government or private</td>
</tr>
<tr>
<td>• Organizational structure and functioning</td>
</tr>
<tr>
<td>• C4D aspect of the organizational review</td>
</tr>
</tbody>
</table>


\textsuperscript{296} Ibid.
The first semblance of a CRVS system in what is now the United Republic of Tanzania began in 1917 after the Germans colonized the region. Proclamation No. 15 of 1917 mandated the registration of births and deaths under the German colonial power. When the British replaced the Germans, they enacted the Births and Deaths Registration Ordinance, 1920 (Cap. 108). This law continued the registration that the Germans established, but the registration of births and deaths of Africans was not mandatory. Following independence, the responsibility of registering fell to the central government of Tanzania, but the flawed colonial system prevented the new government’s complete registration of the population.

In 2006, the Registration, Insolvency, and Trusteeship Authority (RITA) replaced the Administrator Generals Department in the Attorney Generals Chambers, Ministry of Justice and Constitutional Affairs. RITA’s website says that RITA “aims at effective and efficient management of information on key life events, incorporation of trustees, safeguarding properties under trust, of deceased persons, insolvents, and minors to enable the law to take its course.” RITA is a semi-governmental body, as it reports to the Ministry of Constitution and Legal Affairs, but rather than belonging to that department it behaves more like its own agency. It is responsible for civil registration services and has autonomy in this area. RITA is a revenue-generating authority due to its involvement with insolvency and trusteeship issues, and before the

\[\text{297 “Aim and Historical Background,” RITA, accessed March 09, 2017,}\]
\[\text{298 Ibid.}\]
\[\text{299 Ibid.}\]
\[\text{300 Ibid.}\]
\[\text{301 Ibid.}\]
\[\text{302 Ibid.}\]
\[\text{303 Birgithe Lund-Henriksen (Chief of Child Protection, UNICEF Tanzania) in discussion with the author, February 27, 2017.}\]

RITA is a rather centralized organization. Regional RITA officers oversee the registration of births within their region of Tanzania. The registration process changed in the regions that experienced the rollout of the mobile birth registration campaign to the standard prescribed under this initiative. The registration process in these regions utilized the same tools and methods, and registration agents received similar training. It is unclear how standardized the registration process was before the initiative in these regions and in regions that have not changed according to this initiative.

below. Birth registration was paper-based prior to the initiative. Information technology has eased sharing of information between registration points, registration offices, and RITA headquarters.

![Registration Insolvency and Trusteeship Agency (RITA) Under Five Birth Registration Dashboard](image)

Picture 2. Screenshot of the Under-Five Birth Registration Dashboard.\textsuperscript{309}

### 6.3.3 Reform of Tanzania’s Civil Registry System

RITA is transitioning to a more decentralized system regarding delegation of registration authority. The initiative promotes “partnership between health facilities, Ward Executive Offices, and the regional and district registration officers.”\textsuperscript{310} Prior to the initiative, parents had to visit registration agents at the Registrar Office in each district, which could have required a


\textsuperscript{310} Ibid.
distant travel for some Tanzanians.\textsuperscript{311} With the initiative, health workers and other civil service workers at the ward level in government administrative offices and local health facilities became Registration Agents.\textsuperscript{312} This decentralization lessens the distances between children and registration points and increases the feasibility of registration. In 2012, there were 133 registration offices on the mainland of Tanzania, a country of over 900,000 square kilometers.\textsuperscript{313} Because each district only had one registration office, the office served on average over 6,000 square kilometers.\textsuperscript{314} The increase of registration points with the initiative will result in approximately 80 registration points per district.\textsuperscript{315} This will decrease the maximum distance to a registration point from 45 kilometers to five kilometers.\textsuperscript{316}

Tanzania is improving interoperability between agencies regarding registration. RITA remains the leading agency for civil registration, but it seeks support from other agencies. The initiative has formed the Inter-Sectoral Technical Committee, to which UNICEF acts as Secretariat per RITA’s request.\textsuperscript{317} The Prime Minister’s Office for Regional Administration and Local Government, the Ministry of Health and Social Welfare, the National Bureau of Statistics, the National Identification Agency, RITA, and UNICEF work together on this Inter-Sectoral Technical Committee.\textsuperscript{318} The purpose of this committee is to provide support from the many sectors involved in CRVS activities as Tanzania reforms its system.\textsuperscript{319} The technical support

\begin{flushleft}
\textsuperscript{312} Ibid.
\textsuperscript{313} Ibid.
\textsuperscript{314} Ibid.
\textsuperscript{315} Ibid.
\textsuperscript{316} Ibid.
\textsuperscript{317} Ibid.
\textsuperscript{319} Ibid.
\end{flushleft}
available from this committee does not always translate into actions. According to a UNICEF Tanzania employee who has worked with the Tanzanian government to increase birth registration, Birgithe Lund-Henriksen, the Ministry of Health is not directly involved with birth registration services.\textsuperscript{320} No linkage yet exists between the birth registration system and the national identification system. Bhaskar Mishara, a Child Protection Specialist working with UNICEF Tanzania, believes that a cooperation between these two systems would be effective and should be an aim of the government as linkage between additional systems such as the driver’s license, criminal records, and immigration would be ideal.\textsuperscript{321} The African Health Observatory’s profile on Tanzania reports that “the national identification database and the vital statistics database are expected to be linked together and with other national systems, such as the National Electoral Commission of Tanzania, Tanzania Revenue Authority, President’s Office, Public Service Management, Ministry of Labour and Employment, National Bureau of Statistics, Ministry of Home Affairs, health, education, and police databases, and international law enforcement such as Interpol.”\textsuperscript{322}

UNICEF’s acronym “C4D” stands for “communication for development.”\textsuperscript{323} Within the country’s situation analysis, C4D should analyze the population’s perception of the civil registration system. The population’s perception of Tanzania’s civil registration system is unclear. In 1999, 75% of Tanzanian mothers who had not registered their children did not know

\textsuperscript{320} Birgithe Lund-Henriksen (Chief of Child Protection, UNICEF Tanzania) in discussion with the author, February 27, 2017.
\textsuperscript{321} Bhaskar Mishra (Child Protection Specialist, UNICEF Tanzania) in discussion with the author, June 23, 2017.
that their children should be registered or they did not know how to register their children.\textsuperscript{324} Given the low registration rates, it is easy to assume that the population’s perception of Tanzania’s civil registration service is either not good or non-existent. If Tanzanians believed that the civil registration system was effective, important, or easily accessible, this would be reflected in the registration rates. Following the rollout of the mobile birth registration initiative, my visit to these affected regions revealed that civil registration workers and Tanzanians utilizing the registration system felt positive about birth registration. When asked what they thought about the changes to birth registration, all supported the initiative and believed that it made the process easier and more accessible.

6.3.4 Legal Aspects of Tanzania’s Civil Registry System

In 1948, the Universal Declaration of Human Rights established the right of a
nationality.\textsuperscript{325} International organizations and states expanded upon this right, and the right of a
child to a name and a nationality provided the foundation to the Convention on the Rights of the
Child (CRC) in 1989.\textsuperscript{326} The United Republic of Tanzania became a signatory of this on June 1, 1990.\textsuperscript{327} By signing this, Tanzania pledged support to guaranteeing universal birth registration.

\textsuperscript{326} Ibid.
The African Union, of which Tanzania is a member, has also committed to complete birth registration.\textsuperscript{328} Due to logistical constraints, an in-depth report of Tanzania’s translation of and alignment with international laws will not be included in this analysis. It should be noted that, though Tanzania has expressed support for universal and complete birth registration through various international treaties and organizations, it had done little to improve its dismal birth registration rates until 2011.

The Births and Deaths Registration Ordinance, Cap.108 of Tanzania outlines and legalizes the birth and death registration process. The Act is dated 1920 but the government has had orders and acts added since.\textsuperscript{329} The creation of RITA in 2006 was a legal change that encouraged civil registration development.\textsuperscript{330} The Law of the Child Act in 2009 acknowledges a child’s right to “identity and statehood from the onset of a child’s birth.”\textsuperscript{331} Tanzania has also made recent legal and policy changes to improve its national identification system, provision of national identification cards, death registration, and documentation of causes of death.\textsuperscript{332} Tanzania is currently taking steps to change its CRVS strategy and the Births and Deaths Registration Act, both of which are approaching finalization.\textsuperscript{333} The UNICEF proposal to Canada’s Department for Foreign Affairs, Trade, and Development (DFATD) states that UNICEF will work with the Tanzanian government to enact a law that will support the new

\textsuperscript{333} Birgithe Lund-Henriksen (Chief of Child Protection, UNICEF Tanzania) in discussion with the author, February 27, 2017.
system and “strengthen governance of, and create an enabling environment for, the new birth registration system.”

The requirements of birth registration and certification in other sectors is very unclear. UNICEF does not recommend denying social services to children because of a lack of registration or certification, as this will exacerbate a larger problem and deny benefits to children who are likely already vulnerable. However, during my visits to Mbeya and Mwanza, two regions which have changed their birth registration process according to the new system, many Tanzanians emphasized the importance of registering births as a requirement for enrolling in secondary school. The problem of this requirement is later explained in detail, but for now I note that a denial of education because of a lack of birth registration or certification can still be problematic, though it may seem to encourage registration. This is an issue during the transition to the new system, as the new birth registration system still requires payment of a fee for children over the age of five, who cannot be registered at the same locations that register children under the age of five. At present children over the age of five in “new system” regions who do not have certificates may not attend secondary school, according to some Tanzanians, and some may be unable to pay the registration fee. In the regions that adhere to Tanzania’s current/“old” registration process, a fee is still required. This prevention of secondary education seems discriminatory and a problem of its own. When asked about this issue and whether that is the actual policy of the government, Child Protection Specialist Bhaskar Mishara said, “Of course, there is a government policy to this effect, but its implementation is patchy. And the reasons are an abysmally low level of registration and the problems of distance and cost. Rather school

certificates are used as proof for registering the births of older children.” Birth certificates are required for coverage of health insurance, but they are not required for health care and hospital treatment. Birth certificates do not seem to be required for voting (a national identification card is required instead) or in other social sectors. A birth certificate is required to apply for civil service jobs.

6.3.5 Bottom-Up Demand for Birth Registration

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Like most countries, Tanzania’s birth registration process has three steps: notification, registration, and certification. However, these three steps occur separately and at different times in Tanzania, causing registration to be more costly and timely, contributing to birth registration’s lack of demand. Prior to the new initiative, parents or caregivers were to notify health officials about a child’s birth within 90 days of the birth, and the officials then documented the birth in an

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336 Bhaskar Mishra (Child Protection Specialist), e-mail message to author, February 27, 2017.
337 Fred Clemente Kiwale (Regional RITA Coordinator for Mbeya Region) in discussion with the author, June 27, 2016.
official logbook. After the District Registrar receives the logbooks, parents can officially register their children with the District Registrar under the District Administrative Office for a fee of 3,500 TSH (approximately $1.75). Parents must return later to receive the birth certificate. If a parent attempts to register a child late, the process is lengthier and sometimes costlier. After the 90-day window, parents must submit a late registration application to the District Administrative Secretary. This application has a higher processing fee and longer verification process that may require confirmation of the birth from a local government leader.

The average national income in Tanzania is only $2260 and the District Registrar’s offices are most often found in city or town centers—not in rural areas. There is also a possibility of an additional late fee. The first step for birth registration—notification—is immediate for mothers that give births in health facilities. Mothers that give birth at home or without a health official present, on the other hand, must seek out health officials for the “notification.” Approximately 50% of Tanzanian births occur at home. As previously mentioned, the number of registration centers prior to the registration initiative is insufficient for universal registration. When each district only has one registration center, registration centers can be up to 45 kilometers away from families. The registration and certification process can thus be timely and costly for many families. The large gap of registration between urban and rural and rich and

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339 Ibid.
340 Ibid.
341 Ibid.
342 Ibid.
343 Ibid.
344 Ibid.
345 Ibid.
poor children likely occurs because rural and poor families must give up more of their two most valuable resources—time and money—to register their children.

One publication has categorized the various explanations for a lack of registration: “economic (cost of registration, including indirect cost); administrative (quality of civil registration service); cultural (social barriers); geographic (distance of civil registration offices); and political (exclusionary policies).”346 The above description of the birth registration process explains the economic and geographic reasoning for a lack of registration. The administrative barrier is difficult to describe, as it is difficult to quantify the quality of civil registration as an explanation for the low demand of registration. However, one can interpret the few Registration Agents and registration centers and the complex and lengthy birth registration process as indicative of a poor civil registration service. The Tanzanian government has also acknowledged that the functionality of its civil service has been poor.347

There are some cultural barriers that prevent registration, such as the naming culture in Tanzania. One health official named Gody in the Ngumbulu District of the Mbeya region explained this culture in his district. A child’s name is as follows: [The Child’s Name] [Father’s Name] [Father’s Father’s Name].348 Yet in the Ngumublu District some believe that a woman should not mention her father-in-law’s name.349 This mindset then requires the fathers of the children to be present for the registration, as the father-in-law’s name is needed on the certificate. Many fathers in the Ngumbulu District, however, work in Zambia or Malawi and mothers end up waiting three to four months for the fathers of their children to return before they can officially

347 Gody (nurse at Ngumbulu District health dispensary) in discussion with the author, June 27, 2016.
348 Ibid.
349 Ibid.
name their children and then register them.\textsuperscript{350} This culture is diminishing, but it still hinders immediate registration of some births.\textsuperscript{351} Another barrier is that parents will not select names for their children prior to the birth and will at times deliberate on a name after the birth of the child.\textsuperscript{352} Tanzania’s birth registration process and laws are not intentionally exclusionary, and there does not seem to be discrimination of registration based on ethnicity, religion, or gender. Rather the exclusion of birth registration is a result of the implicit and explicit costs of registration and is discriminatory based on income and area of living. There thus does not seem to be a true political barrier to registration.

Another barrier to birth registration has been the distinct lack of public awareness of birth registration’s process and benefits. A 1999 survey found that, when asked why they had not registered their children, 75\% of Tanzanian mothers responded that they “didn’t know the baby must be registered” or “didn’t know where to register.”\textsuperscript{353} The national government mandated birth registration by the Births and Deaths Registration Act of 2002, yet neither birth registration nor birth certificates are necessary for access to health and social services. UNICEF acknowledged the importance of generating demand through the increase of public awareness in its proposal to Canada for funding by emphasizing widespread public information campaigns when rolling out the new birth registration system.

As previously mentioned, the discrepancies of birth registration rates in Tanzania among various groups contribute to an explanation of demand and supply. However, these characteristics are often interrelated and do not explain causality. When explaining the

importance of understanding the demand of birth registration, “Passport to Protection” writes, “It is important to note, however, that inequality within urban areas is greater than in rural areas, and that the poorest and most disenfranchised in a country are usually found in urban slums.”\textsuperscript{354} This serves as a reminder that disaggregated registration rates and analysis of the barriers may still not be sufficient to capture the full demand (or lack thereof) of birth registration. This low demand indicates that Tanzania must make radical changes to increase the demand of birth registration among its population to achieve universal registration, which the new mobile birth registration initiative attempts to achieve.

6.3.6 Supply-Side of the Equation: Enter the Mobile Birth Registration System

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Tanzania began its policy reform of the civil registration system in 2011 with the purpose of increasing under-five birth registration to eventually achieve universal and complete registration. RITA partnered with UNICEF and Tigo, a global private mobile network company, to create a five-year plan to increase birth registration called the Under-Five Birth Registration

This initiative decentralizes birth registration and gives more responsibility to local officials, making birth registration more accessible for all. In a post about the initiative on the RITA website, RITA writes, “…this will involve strengthening the use of both mother and child health (MCH) clinics and local government systems for registration and certification as a one step and unified process.” Funding from the Canadian government made this innovation feasible.

The initiative—which combines the notification, registration, and certification of a child’s birth into one step—has trained Registration Agents at hospitals and clinics. This way parents can register their children following birth at health facilities or when the children receive their vaccinations. Registration may also occur at District Registrar offices and ward level offices. Registration Agents complete a hand-written birth certificate and input the information on the birth certificate into the mobile phone which Tigo provided. (Although Registration Agents can send the information on any mobile phone.) The system does not require internet connectivity and is functional on any handset or operating system. Through a SMS message, the child’s information is automatically uploaded to Tanzania’s CRVS system and contributes to

360 Ibid.
361 Ibid.
the online dashboard that tracks registration numbers in Tanzania. Registration Agents give the parents an official copy of the child’s birth certificate free of charge within minutes. This new system eliminates the explicit cost of registration and minimizes the implicit cost, as families are likely to be closer to a health facility than a District Registrar’s office and the entire process occurs in one visit.

The initiative planned to register 90% of newborns and distribute certificates to 70% of children under the age of five by the end of 2019. The initial proposal for this initiative lists the “assumptions and targets underlying this expected outcome” as:

- “Scale up will reach two regions per year”
- “Local government authorities, including health facilities, will fully assume responsibility for implementing the birth registration system, in accordance with the forthcoming Birth and Death Registration Act; and”
- “Significant percentage of the backlog of non-registered under-5s will be met during the launch period in each region and through linkages with health and social protection services which reach the majority of children in every region.”

This initiative is receiving international support from UNICEF and Canada’s Department for Foreign Affairs, Trade, and Development (DFATD), a part of Global Affairs Canada.

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363 Ibid.
365 Ibid.
367 Ibid.
has donated $10,000,000 to Tanzania for this initiative, and UNICEF has provided support from the beginning of this initiative on multiple levels.\textsuperscript{368}

Tanzania has expressed its intention to register its children beyond the implementation of the mobile birth registration initiative. A regional workshop in February 2012 took place in Dar es Salaam, Tanzania with neighboring countries in attendance.\textsuperscript{369} The countries, Tanzania included, committed to improve CRVS systems, particularly for birth registration.\textsuperscript{370} In October 2013, the Minister for Constitutional and Legal Affairs attended a meeting on the Africa Programme on Accelerated Improvement of Civil Registration and Vital Statistics.\textsuperscript{371} While there, he reiterated Tanzania’s commitment to improving birth registration.\textsuperscript{372} This commitment was also reflected in budgeting discussions. Birth registration was included as an indicator for the General Budget Support discussion with “budget support donors.”\textsuperscript{373}

Tanzania’s struggling birth registration rates indicate a bigger problem, which is that Tanzania has an inefficient CRVS system. Though the efforts of UNICEF and RITA to increase birth registration have been successful, it is important that birth registration increases as part of a developing of effective CRVS system. The lack of death reporting hinders health interventions due to an incomplete understanding of causes of death. To achieve proper development and meet the goals of the National Strategy for Growth and Reduction of Poverty II (NSGRP II), civil registration is necessary.\textsuperscript{374} Tanzania has taken steps to establish a new, effective CRVS system.

\textsuperscript{369} Ibid.
\textsuperscript{370} Ibid.
\textsuperscript{371} Ibid.
\textsuperscript{372} Ibid.
\textsuperscript{373} Ibid.
In September 2014, a “Comprehensive Assessment” evaluated Tanzania’s CRVS system on the mainland to determine what was needed to have an efficient CRVS system.\textsuperscript{375} The resulting strategy estimated that the new CRVS system required six years (plus one “prepatory year”) and 544 million USD.\textsuperscript{376} The vision of the strategy is “Every Citizen Recognized” and the mission is “To register vital events, to safeguard rights of all and inform evidence-based decisions.”\textsuperscript{377}

On September 22, 2015, a Stakeholders Consultative Meeting on the CRVS strategy occurred in Dar es Salaam with Tanzania’s Ministry of Constitution and Legal Affairs, National Bureau of Statistics (NBL), and RITA in attendance.\textsuperscript{378} The aim of the new CRVS strategy is to be a “permanent, continuous, compulsory, and universal vital events registration and vital statistics system.”\textsuperscript{379} The Director General of NBS, Dr. Albina Chuwa, said, “The overall goal of the CRVS system is to make the process simple, user-friendly, less costly and to achieve a one-stop shop at all service points which include designated health facilities, District Executive District Offices, and Ward Executive Officer offices.”\textsuperscript{380} The stakeholders hope to achieve four outcomes because of an improved CRVS system by 2020/2021: “legal rights and privileges to all; good governance and accountability; efficient CR institutional capacity; and trusted statistics.”\textsuperscript{381}

Tanzania’s mobile birth registration initiative has seen increased success with every region, and the government has begun improving its CRVS system. The nation has needed these reforms for some time, as it has had persistently low registration since 1999. Even though it had

\textsuperscript{376} Ibid.
\textsuperscript{377} Ibid.
\textsuperscript{378} Ibid.
\textsuperscript{379} Ibid.
\textsuperscript{380} Ibid.
\textsuperscript{381} Ibid.
signed supportive legislation and was a member of organizations that promoted universal birth registration, this did not translate into action to rectify Tanzania’s pervasive registration birth problem. Support from UNICEF and Canada’s GAC encouraged substantial policy reforms. These policy reforms restructured the birth registration process in a way that led to significant increases in registration rates.

6.4 Analyzing the Efficacy of the Mobile Birth Registration System in Tanzania Through Original Field Research

Step 6: Analysis for Communication for Development (C4D)

- Organizational review: attitudinal aspects of service delivery
- Role of the private sector
- Legal review: focus on marginalized groups
- Demand for birth registration among different segments of the population
- National government policies, plans and international support
- Innovative C4D approaches at country and regional level
- Communication for Development strategy


Step 6 is important because it allows the analyst “to expand the scope of information and data collection and analysis by using the social-ecological approach, to include contextual issues and the complex interaction of policy, legislative, systemic, social, economic, and personal factors in determining the provision of services, their physical and social accessibility and consequently, the extent to which they are utilized and demanded.”

To review the changes made to the birth registration system and their efficacy and validity, I spoke to Tanzanians in

Mbeya on June 27, 2016 and Mwanza on July 26, 2016, the first two regions to transition to the new birth registration system. The following description of the birth registration initiative and its effects is based upon interviews I conducted with Tanzanians and UNICEF employees and various UNICEF and RITA publications. The interviews expand upon the information provided in previous steps and build the foundation for steps seven and eight, which identify gaps in the system and potential opportunities for further action. The interviews were conducted in English with those who could speak English, and when I interviewed those who could not speak English well or at all, a UNICEF employee translated when we were in Mbeya and a research assistant of REPOA, Tanzania’s premier research organization, translated interviews in Mwanza.

6.4.1 The Beginning of the Campaign

Tanzania first launched this initiative as a pilot in Temeke District of Dar es Salaam, Tanzania’ most populous city, in 2012 and registered 23,000 children. In July 2013, the initiative was rolled out in the Mbeya region. Mbeya had a very poor registration rate; prior to the initiative, the rate was 8.9%. The region lies on the border of Zambia, so Mbeya was also chosen to undergo the initiative to address a security issue. Tanzania’s Home Affairs and RITA believed it was important to know who was born in Tanzania and who was not. The change in Mbeya’s birth registration rate following the rollout was dramatic. By February 2014, Mbeya officials had registered 127,866 children, increasing the under-five registration rate to 30.34%.

383 Bhaskar Mishra (Child Protection Specialist), e-mail message to author, February 27, 2017.
385 Fred Clemente Kiwale (Regional RITA Coordinator for Mbeya Region) in discussion with the author, June 27, 2016.
To better understand the details, success, and challenges of the initiative, I visited the Mbeya region in June 2016 to interview the actors involved in birth registration—a RITA official, Registration Agents at health facilities and a Ward Executive Office, and a mother.

Before the official rollout of the mobile birth registration initiative, a public information campaign occurred throughout Mbeya. This included posters and banners in Ward Executive Offices, District Offices, and health facilities; television and radio advertisements; and even a car driving through towns with the campaign blasting through a speaker. The purpose was to let the public know the campaign was coming, the benefits of birth registration, and the simplified procedure. Before, receiving a birth certificate could be a month-long process; Registration Agents at district offices typed out certificates on one typewriter. Now, the campaign told people, they could receive birth certificates for their babies in one day. Loosely translated from Swahili, the posters in Mwanza said, “Campaign for registering and issuing birth certificates free!” and lists the values of birth certificates as being, “the identity of the child…will allow the child to get an education and a better life…[and] is entitled to the child.”

Pictures of the posters from Mbeya and Mwanza are below.

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387 Fred Clemente Kiwale (Regional RITA Coordinator for Mbeya Region) in discussion with the author, June 27, 2016.
388 Ibid.
389 Ibid.
390 I translated this from Swahili to English using Google Translate and ensured it matched what my translators said it meant.
According to Fred Clemente Kiwale, the Regional RITA Coordinator for Mbeya Region located at the District Office of Mbeya City, birth registration and certificates are important for many reasons. The, “first main importance is that it is a document that will certify that you have been born in Tanzania,” he said.\(^{391}\) This does not mean that you are a Tanzanian citizen, though—birth certificates are not proof of citizenship and being born in Tanzania does not make you a citizen.\(^{392}\) As previously mentioned, to receive a health insurance card, the adult and the others the insurance is covering must have their births registered.\(^{393}\) A birth certificate is also required when applying for a loan or a national service job.\(^{394}\) When a government position becomes available, the number of Tanzanians applying for birth certificates spikes. For example,

\(^{391}\) Fred Clemente Kiwale (Regional RITA Coordinator for Mbeya Region) in discussion with the author, June 27, 2016.
\(^{392}\) Ibid.
\(^{393}\) Ibid.
\(^{394}\) Ibid.
when the Tanzanian Army announced several available positions, those hoping to apply
overwhelmed the District Office attempting to receive birth certificates.\textsuperscript{395} Another cyclical spike
in birth certificates occurs in December and January, as birth certificates are needed to enroll
children in secondary school and school starts in January.\textsuperscript{396}

6.4.2 Challenges to Implementation

Kiwale praised the initiative, saying, “Compared to the former system, this is much
better, far better.”\textsuperscript{397} Yet as the regional RITA official, he is well-versed in the challenges that
accompany this new initiative, most of which are logistical and come from the “supply” side of
birth registration. Network issues are the biggest constraint. Without a network connection, the
Registration Agent cannot send the registration information via SMS to the dashboard and the
CVRS system. Kiwale said, “You cannot go a day without a network problem… Sometimes it
lasts a day… Sometimes [it lasts] 30 minutes, 3 hours, [or] the whole day.”\textsuperscript{398} Network issues
plague the health facilities (HFs) and ward offices (WOs), as well as the District Office.\textsuperscript{399} When
the network is down, officials will call Tigo or RITA headquarters.\textsuperscript{400} Sometimes they can rectify
the issue; other times the problem persists. The unreliable network connectivity caused
inefficiencies in the facilities and discrepancies between the physical and electronic registrations.

One registration book has 100 sheets and thus can administer 100 birth registrations.\textsuperscript{401}
Registration Agents complete the information on the sheet, including the names of the child,

\textsuperscript{395} Fred Clemente Kiwale (Regional RITA Coordinator for Mbeya Region) in discussion with the author, June 27, 2016.
\textsuperscript{396} Ibid.
\textsuperscript{397} Ibid.
\textsuperscript{398} Ibid.
\textsuperscript{399} Ibid.
\textsuperscript{400} Ibid.
\textsuperscript{401} Ibid.
mother, and father and date and place of birth.\textsuperscript{402} The Registration Agent (RA) tears off the certificate at the bottom of the sheet and gives it to the parent(s).\textsuperscript{403} The rest of the sheet—with most of the information—stays in the book which is later returned to RITA.\textsuperscript{404} The RA sends this information to the Dashboard via the mobile phone—or at least he/she should.\textsuperscript{405} RITA officials noticed that not every birth registration is on the Dashboard.\textsuperscript{406} Upon this realization, RITA decided it was important to then check each physical registration against the electronic registrations—a time consuming task.\textsuperscript{407} Following visits to various centers, RITA learned that the discrepancies result because of network issues or even because RAs did not feel like entering the information. Some would think it was unnecessary or they would prefer to go home than do the work.\textsuperscript{408} Kiwale noted that it became an issue of changing their behavior to fix this issue.\textsuperscript{409} Complacency regarding electronic registration was higher following the rollout of the initiative, but it has decreased since.\textsuperscript{410}

Another complication involved the “lines” of the mobile phones (essentially, the batteries). The lines required a recharge after a month, sometimes two or three times a month.\textsuperscript{411} Recharging the lines was costly or even impossible for the registration centers. When the lines were inoperable, RAs could not upload registration information using the phones.\textsuperscript{412} RITA and Tigo later provided new lines that fixed this issue. Distribution and collection of the registration

\textsuperscript{402} Fred Clemente Kiwale (Regional RITA Coordinator for Mbeya Region) in discussion with the author, June 27, 2016.
\textsuperscript{403} Ibid.
\textsuperscript{404} Ibid.
\textsuperscript{405} Ibid.
\textsuperscript{406} Ibid.
\textsuperscript{407} Ibid.
\textsuperscript{408} Ibid.
\textsuperscript{409} Ibid.
\textsuperscript{410} Ibid.
\textsuperscript{411} Ibid.
\textsuperscript{412} Ibid.
books can be a challenge as well. The initial plan was that the HFs and WOs would bring the completed books to the regional office at the end of the month, but this did not happen due to the distance between registration points and the regional office. The registration centers suggested a car could pick up the registration books, and twice the main office sent money to pay for the delivery of the books. With RITA Headquarters’ support, the regional office encourages registration centers to deliver every three months.

6.4.3 An Analysis of Program Rollout in Mbeya

The birth certificates have posed a challenge in Mbeya. The certificates that parents receive following the rollout of the initiative are handwritten and free, and the government recognizes them as valid documents and as valid as any previous form of birth certificate. If a parent requests the “second” certificate, they can receive a printed birth certificate another day from the district office for 3,500 TSH. Some Tanzanians are skeptical of the “first” certificate because it is free and handwritten and believe that the second is better. There are six different types of birth certificates that the government considers valid. Officials noted, though, that incorrect beliefs have spread that the second certificate is the valid one and thus birth registration does have a fee.

At the start of the rollout, the uptake of birth registration was very high. The public information campaigns were successful and there was a heavy demand for birth certificates.

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413 Fred Clemente Kiwale (Regional RITA Coordinator for Mbeya Region) in discussion with the author, June 27, 2016.
414 Ibid.
415 Ibid.
416 Ibid.
417 Ibid.
418 Ibid.
419 Ibid.
WOs registered more children than HFs, and many HFs were unable to meet the demand of birth registration in addition to their previous duties. By 2016, though, the demand had dipped and HFs registered more children than WOs. Trusting birth registration and certification to staff in hospitals, clinics, and health dispensaries increases access to registration agents to more families the access to birth registration. Yet according to one official at the Rugwe District Office, some Tanzanians living in the mountains have difficulties reaching health facilities. “You go up the mountain,” she said, “and the village is behind the mountain.”

One such village in the mountains is the Ngumbulu District that has one health dispensary—a small stone building off a main road. The dispensary has one medical attendant and two nurses, one who is a man named Gody. Gody is one of the two health officials in the village who can register children under the age of five, but there is another registration point in the forest in which Ngumbulu rests. Deliveries and immunizations occur at the health dispensary, and this is when Gody reminds mothers about registering their children. Most registrations, he said, occur after children receive their immunizations. In one year Gody estimates he registered 34 newborns.

Gody thought that birth registration was important, but he faced some challenges. He also struggled with the mobile phones and he was unable to submit the registration information to the Dashboard due to an inoperable phone. He travelled to the district office to tell officials, but they told him to keep registering and they would fix it. His phone was inoperable for a few

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420 Fred Clemente Kiwale (Regional RITA Coordinator for Mbeya Region) in discussion with the author, June 27, 2016.
421 Ibid.
422 Gody (nurse at Ngumbulu District health dispensary) in discussion with the author, June 27, 2016.
423 Ibid.
424 Ibid.
months. Gody then explained the barriers that result from the naming culture in the district that were previously mentioned.

One mother in the Ngumbulu District is Ombenivero and she has a two-year-old son, Ezekiel. She is 20. Ezekiel’s father had left the district to find work, so Ombenivero and her son were staying at her mother’s house, which was approximately a three-minute walk from the health dispensary. When she was pregnant, Ombenivero said, she was not aware of the birth registration initiative. She had gone to another health dispensary for prenatal care, but they were low on supplies, which could be fatal if she had complications during her pregnancy. Instead she went to Igowe Mission Hospital for her care. Yet she said at Ezekiel’s six-week checkup that it was Gody who explained the importance of birth registration and registered Ezekiel. He had said it would help facilitate the school registration process for Ezekiel.

Ombenivero said the registration process was very simple, and Ezekiel’s birth certificate was even laminated. Once a month Gody will take birth certificates down to Kuyu, a town with a lamination machine, and laminate the certificates for the mothers for 200 TSH. Ombenivero did not have Ezekiel’s birth certificate with her—she said it was safe at her grandmother’s house. She did, however, show me the birth certificate of her two-year-old sister. Ombenivero is one of five children and is unsure if any of her other siblings have birth

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425 Gody (nurse at Ngumbulu District health dispensary) in discussion with the author, June 27, 2016.  
426 Ibid.  
427 Ombenivero (maize farmer and mother in Ngumbulu District) in discussion with the author, June 27, 2016.  
428 Ibid.  
429 Ibid.  
430 Ibid.  
431 Ibid.  
432 Ibid.  
433 Ibid.  
434 Ibid.
certificates. When pressed about her own birth certificate, she said her mother said she had one, but it was lost.\textsuperscript{435} It is unclear if this is true.

Ezekiel’s father was supportive of registering Ezekiel and he chose Ezekiel’s name, but Ombenivero was the one who gave the information to Gody.\textsuperscript{436} She claimed the town understood how important birth registration was, courtesy of Gody’s public information campaign.\textsuperscript{437} Gody said there are posters across the district, including at health facilities, on notice boards, and in the bars; he reminds people of birth registration at monthly community meetings; and he discusses birth registration with new mothers.\textsuperscript{438} Ombenivero said that she would tell her pregnant friends to register their children, because she does value her son’s birth certificate.\textsuperscript{439}

Before the mobile birth registration initiative, Ombenivero would have had to register Ezekiel at a district office, which would have necessitated a trip down the mountain. Most people travel to the district office on a \textit{piki piki} (a private motorcycle).\textsuperscript{440} Gody said it would cost approximately 24,000 TSH to travel there and back plus the 3,500 TSH registration fee.\textsuperscript{441} As a maize farmer, Ombenivero said she makes less than 10,000 TSH (approximately $5) a month.\textsuperscript{442} Her husband sometimes gives her money, but she does not know how much he earns. In Tanzania, what the wife earns is her money and what the husband earns is his money. Gody said that maybe 10\% of fathers contribute their income to the households—many prefer to spend it on alcohol.\textsuperscript{443} If this were the case, before the registration initiative came to Mbeya, if somehow Ombenivero could travel to the district office for free, it could still cost over one-third of her

\textsuperscript{435} Ombenivero (maize farmer and mother in Ngumbulu District) in discussion with the author, June 27, 2016.
\textsuperscript{436} Ibid.
\textsuperscript{437} Ibid.
\textsuperscript{438} Ibid.
\textsuperscript{439} Ibid.
\textsuperscript{440} Gody (nurse at Ngumbulu District health dispensary) in discussion with the author, June 27, 2016.
\textsuperscript{441} Ibid.
\textsuperscript{442} Ombenivero (maize farmer and mother in Ngumbulu District) in discussion with the author, June 27, 2016.
\textsuperscript{443} Gody (nurse at Ngumbulu District health dispensary) in discussion with the author, June 27, 2016.
monthly income to register Ezekiel. She would not even be able to get his birth certificate; she would have to return another day. If she had to pay 24,000 TSH (approximately $12) to travel and the registration fee, the simple act of registering Ezekiel would cost almost three months’ income. If she could not register Ezekiel at the health dispensary, though, she said she would save and find some way to register him at the district office. Ombenivero—who only attended primary school—knew that even if Ezekiel did well in school, without a birth certificate he could not advance in his studies, and she wanted him to receive a good education. When asked what she wants her son to do in the future, Ombenivero said she does not want to choose a career for him; she only wants him to be happy.444 While most mothers want their children to be doctors or lawyers, after some encouraging Ombenivero admitted that she wants Ezekiel to be a teacher.445

At Mbeya City Hospital, there are two Registration Agents whose only tasks are to register children and distribute birth certificates. The doctors and nurses at Mbeya City Hospital remind parents of the importance of birth registration after the birth of a child. One Registration Agent, Adela Mwakila, said most parents are already aware.446 Even mothers that give births at home will visit Mbeya City Hospital to register their children.447 Mwakila had overall positive thoughts about the new registration system. She said she liked that it was quick to accomplish and that even if RITA or parents lost the physical birth certificates, thanks to the mobile phones the child is still electronically registered and exists in the system.448 Yet even the largest hospital in the main city of the region struggled with receiving appropriate support from RITA. Mwakila said that one of the most common problems is a lack of stationary—she has struggled with a

444 Ombenivero (maize farmer and mother in Ngumbulu District) in discussion with the author, June 27, 2016.
445 Ibid.
446 Adela Mwakila (Registration Agent at Mbeya City Hospital) in discussion with the author, June 28, 2016.
447 Ibid.
448 Ibid.
shortage of pens. Distribution of supplies (books and stationary) and collection of books are a challenge to coordinate with the regional office and other facilities. Network connectivity was also an issue before Registration Agents received the new lines. Mwakila mentioned that she knew other Registration Agents—not her—would mark that they electronically completed the registration, but they had not because the network was down, creating holes in the system.

It is important to note that this birth registration initiative focuses on under-five birth registration. It is free for children under the age of five and under-five registration can occur at the health facilities. Prior to the initiative, Mbeya’s birth registration rate was so low (8.9%) that it is likely that very few children over the age of five and adults had birth certificates. Yet according to officials, Registration Agents, and the public information campaign, birth certificates were beneficial and necessary. How then did the process work for Tanzanians above the age of five? Did the mobile birth registration initiative improve the registration process for them? Simply put: not really. Registration for those over the age of five could not occur at health facilities; instead, those seeking birth certificates must go to their district or regional office. They then must pay 10,000 TSH ($5). The children who were over the age of five then in 2013 (prior to the rollout) were unable to register for free. Some inevitably approached secondary school age or will soon, and the same barriers still stand in place for them.

Gody, the nurse who worked at the Ngumbulu District health dispensary, said that in the district the interest of receiving birth certificates for those over the age of five existed, but they had to travel to the district office to do so. In the Ngumbulu District, the monthly income—at Gody’s estimate—was 15,000 TSH ($7.50). Yet anyone over the age of five had to pay 10,000 TSH ($5).

449 Adela Mwakila (Registration Agent at Mbeya City Hospital) in discussion with the author, June 28, 2016.
450 Ibid.
451 Gody (nurse at Ngumbulu District health dispensary) in discussion with the author, June 27, 2016.
TSH to receive a birth certificate. This excludes the cost of travel. The cost and distance discouraged people. If birth certificates were necessary to start secondary school, how was it possible that secondary school attendance was feasible for those in Ngumbulu District before the initiative? Gody said that most do go to secondary school, though. This would mean that families would have had to pay the near two months’ income to send their children to secondary school or that birth certificates are not in reality strictly required to attend secondary school. There is little information available to fact check this, but if the former is true, these rural and poor children remain at a disadvantage.

Realistically this problem will become more unlikely as children are enrolled before the age of five at health facilities and ward offices free of charge. Yet the registration rate is still less than 100%, due to lack of knowledge, indifference, provision of supplies from the government, or other reasons. Until the birth registration rate is 100%, some Tanzanians will be faced with the choice of paying for a certificate or remaining unregistered. They may choose to forgo the registration. When this happens, the government still does not have a complete picture of their population. Holes exist, complicating development planning and monitoring. Why then is registration not free and accessible everywhere for everyone? Mwajuma Kitsoi Msangi, a UNICEF Tanzania employee at the time who accompanied me on this visit, answered, “RITA is still a revenue-generating authority.”

The changes to birth registration in Tanzania’s Mbeya region directly addressed the barriers that had existed: cost and lack of awareness. By decentralizing the process and allowing registration to occur at health facilities and ward offices, the number of registration sites increased and the distance to a registration site for most families decreased. This has

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452 Gody (nurse at Ngumbulu District health dispensary) in discussion with the author, June 27, 2016.
minimized—if not eliminated—the implicit cost of registering, and there is no longer an explicit cost for under-five birth registration. Registration Agents at health facilities provide increased outreach and the public information campaign raised awareness. The use of mobile phone technology allows the central government to access this data and use it appropriately. These efforts rectified the lack of demand of birth registration, but the supply side struggled to manage the logistics of this decentralization and the mobile phone technology. Overall, though, RITA and its partners applauded the mobile birth registration initiative as a success and made plans to roll it out in another region, Mwanza.

6.4.3 An Analysis of Program Rollout in Mwanza, Iringa, and Njombe

Mwanza, a northern region in Tanzania that borders Lake Victoria, was the second region to undergo the change in birth registration. Turning birth registration and certification into a one-step process, eliminating the under-five registration fee, and training health facilities’ staff to register children and send information via SMS continued in Mwanza. Mwanza, however, did not have Registration Agents located at ward offices. Instead registration took place only at health facilities.

Prior to the rollout of the campaign, health officials received two to three days of training regarding registration. The training taught them what information to ask parents, how to fill out the books, and how to use the mobile phones. Marko Mihayo, the Regional RITA Coordinator for Mwanza, said that most health facilities have two to three employees tasked with registering births.\(^{453}\) The public information campaign, like Mbeya, involved posters, radio announcements, and cars driving through the streets with announcements blaring through speakers.\(^{454}\)

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\(^{453}\) Marko Mihayo (Regional RITA Coordinator for Mwanza Region) in discussion with the author, July 26, 2016.  
\(^{454}\) Ibid.
The two-week rollout campaign began in July 2015. In 2010, the registration rate for Mwanza was only 11.5%. When the campaign began, the demand for birth certificates overwhelmed many health facilities. Registration agents at Nyakahoja Dispensary and Mwanza Hospital in Mwanza City said that during the campaign their health facilities were unable to meet the demand for birth certificates. The courtyard of the Nyakahoya Dispensary was full of parents hoping to register their children, and the Registration Agents were not able to complete all requests. The inability of health facilities to meet the birth registration demand is the biggest problem Mwanza has faced. Many registration agents at the health facilities have duties besides registering children. Mihayo said that RITA has learned that if a RA is too busy with his or her normal duties, he/she will complete the physical birth registration form and certificate but will not upload the information to the Dashboard using the mobile phone.

Sesilia John, a nurse and registration agent at Nyakahoja Dispensary in Mwanza City, is used to being too busy to register children, but she said that does not deter her from completing her registration duties. Instead she will make appointments for parents to return later to complete the registration and certification. These appointments are within normal hours and John said the registration duties do not require her to work extra hours. Even when she is very busy, she tries to register children every day. Joha Juma, a records officer at Mwanza City Hospital, said she also must make appointments to register children when she is too busy.

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456 Sesilia John (nurse at Nyakahoja Dispensary in Mwanza City) in discussion with the author, July 26, 2016. Joha Juma (records officer at Mwanza City Hospital) in discussion with the author, July 26, 2016.
457 Ibid.
458 Marko Mihayo (Regional RITA Coordinator for Mwanza Region) in discussion with the author, July 26, 2016.
459 Sesilia John (nurse at Nyakahoja Dispensary in Mwanza City) in discussion with the author, July 26, 2016.
460 Ibid.
461 Sesilia John (nurse at Nyakahoja Dispensary in Mwanza City) in discussion with the author, July 26, 2016.
462 Joha Juma (records officer at Mwanza City Hospital) in discussion with the author, July 26, 2016.
Overall the workload was not too much, she agreed, as she is the records officer, but during the campaign it was impossible for her to register everyone waiting.\textsuperscript{463}

John did not feel that the workload at the dispensary was too much for her and the other nurse trained to register. She said she understands the benefit of having registration occur at the health facilities instead of the district offices.\textsuperscript{464} As a nurse, she noted that complete birth registration was important because it allowed the government to know how many births occur in a year and thus plan to provide vaccinations and other support to HFs.\textsuperscript{465} Juma at Mwanza Hospital had similar feelings. She said life is easier when children have birth certificates and that this new system is good because parents can register their children and receive certificates in one day.\textsuperscript{466}

The lessons learned from the network complications in Mbeya seemed to have influenced the rollout in Mwanza because John and Juma said that the mobile phones worked well and the network connection was good. Miyaho said that there are network issues on Ukerewe Island, but most phones work well everywhere else.\textsuperscript{467} The skepticism about the handwritten certificates has persisted, though. Mihayo said that some private institutions (like banks) claim to not accept the handwritten certificates.\textsuperscript{468} The regional office usually gets about 30 requests for the second certificate a month, which has a fee.\textsuperscript{469}

Implementation of the initiatives in Mbeya and Mwanza increased birth registration rates, but not to 100%. The 2016 DHS survey revealed that Mbeya’s registration rate was 41.8\% and

\begin{flushleft}
\textsuperscript{463} Joha Juma (records officer at Mwanza City Hospital) in discussion with the author, July 26, 2016.
\textsuperscript{464} Sesilia John (nurse at Nyakahoja Dispensary in Mwanza City) in discussion with the author, July 26, 2016.
\textsuperscript{465} Ibid.
\textsuperscript{466} Joha Juma (records officer at Mwanza City Hospital) in discussion with the author, July 26, 2016.
\textsuperscript{467} Marko Mihayo (Regional RITA Coordinator for Mwanza Region) in discussion with the author, July 26, 2016.
\textsuperscript{468} Ibid.
\textsuperscript{469} Ibid.
\end{flushleft}
Mwanza’s registration rate was 39%.\textsuperscript{470} (According to a UNICEF official, though, Mbeya’s 2016 U-5 registration rate is 79.7%.)\textsuperscript{471} RITA and its partners seemingly considered the experiences and challenges of birth registration and the initiative and adjusted. Yet when the initiative continued into Iringa and Njombe, two regions in Tanzania, they maintained the priorities of the initiative—decentralization, simplification, public awareness, and cost-free. The partners rolled out the initiative in Iringa and Njombe on September 22, 2016. Like Mbeya, under-five birth registration now could take place in HFs and WOs.\textsuperscript{472} This established 700 different registration points in the region; before there were only 11.\textsuperscript{473} The initiative aimed to register 230,000 children under the age of five in the two regions.\textsuperscript{474} Within four weeks of the rollout, however, registration agents registered more than 220,000 under-five children.\textsuperscript{475} The birth registration rate increased from 10.3% to over 95% in one month.\textsuperscript{476}

The initiative in Iringa and Njombe featured updated mobile technology. The RAs in Mbeya and Mwanza used the SIM Application toolkit to turn the birth registration into SMS messages which the central server eventually read and uploaded to the Dashboard.\textsuperscript{477} As the initiative spread across the country, though, the partners realized that it would be “difficult to scale across multiple mobile providers due to the significant amount of ‘technical involvement’

\textsuperscript{471} Bhaskar Mishra (Child Protection Specialist), e-mail message to author, February 27, 2017.
\textsuperscript{473} Ibid.
\textsuperscript{474} Ibid.
\textsuperscript{475} Ibid.
\textsuperscript{476} Ibid.
required.” Thus, UNICEF created a new version of the application compatible with Android smartphones that can work across different mobile providers. The new application aims to provide simplicity and efficiency to the registration agents. The Android devices have a “bigger screen, full keyboard, and dropdown menus” aiding data collection. The smartphone application is more secure, as users can manage or wipe data if the phone is lost or stolen.

The delegation of authority in Iringa and Njombe likely contributed to greater success than the mobile technology. According to Birgithe Lund-Henriksen, Chief of Child Protection at UNICEF Tanzania, the rollout of the initiative made local government authorities directly responsible for registration in their respective districts, as the health workers reported to the District Executive Director. UNICEF and RITA transferred the funds for the initiatives to these local government authorities, and “it became almost like a competition among them to see who could do the best, and all of them performed extremely well… They’re also setting ambitious targets for themselves-- 100% under-five registration in a three-month period.”

Tanzania has made progress. In 2010, the national under-five birth registration rate was less than 16.3%. Over 6 million children were unregistered, and since 1999 the registration rate had only risen 8%. Now in 2016 the birth registration rate is 26.4% (estimated before the changes reached Iringa and Njombe). While this is still an extremely low birth registration

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479 Ibid.
480 Ibid.
481 Ibid.
482 Ibid.
483 Birgithe Lund-Henriksen (Chief of Child Protection, UNICEF Tanzania) in discussion with the author, February 27, 2017.
484 Ibid.
rate, if Tanzania continues these reforms, it is possible for the nation to achieve complete under-five birth registration. The changes the Tanzanian government made to the birth registration system directly addressed the barriers that prevented universal registration. It is crucial to note that the reforms that increased birth registration did so by rectifying the flawed system. Birth registration discrepancies existed based on income, mothers’ education, and urban or rural living. Yet the changes in birth registration were not a response to increased incomes, more women receiving education, or urban migration. Rather UNICEF and the Tanzanian government understood that these gaps indicated a flawed existing system, and in response they targeted the core of the problem, which was the structure and implementation of the birth registration process.

6.5 Tanzania’s Mobile Birth Registration System: An Assessment

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<td>o Gantt chart and PERT (Programme Evaluation and Review Technique) methodology</td>
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This step will assess the new birth registration system. UNICEF has created multiple tools “to facilitate the analysis of specific issues,” including the bottleneck methodology, which was derived from an approach created by UNICEF, WHO, and the World Bank.487 “Passport to

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Protection” briefly uses the bottleneck methodology to assess “Caseland” and gives an overview of the use of this methodology, so I will follow this approach. The included bottleneck template outlines the utilization of this methodology based on four different domains: enabling environment, supply, demand, and quality.488

One can analyze the enabling environment through judgement of “social norms,” “legislation/policy addressing barriers and disincentives”, “budget/expenditure,” and “management/coordination.”489 Based on these categories, the environment for birth registration has improved following the mobile birth registration initiative. Though the new system did not eliminate some social norms like the naming culture, it made birth registration capable of overcoming these barriers. Because registration occurs at health facilities, Registration Agents can remind parents about birth registration and certification when the children receive their immunizations. This will likely happen after children have received their name. Registration does not require a father’s presence either. Regarding legislation, birth registration is now free, parents receive birth certificates in the first visit and measures are in place to allow for late registration. Birth registration is also now being electronically documented. The birth registration system is not yet linked to other ID systems, however.490 The budget domain is whether the government budget can sustain the civil registration service. Tanzania is budgeting for continued improvements of the CRVS system, but it is unclear if it will require outside support.491 The

490 Birgithe Lund-Henriksen (Chief of Child Protection, UNICEF Tanzania) in discussion with the author, February 27, 2017.
coordination of the civil service is improving as the Tanzanian government attempts to move forward with multi-sectoral contributions and efforts.

The supply side of birth registration has improved, but there is room for development. “Staff” numbers have increased as health workers become trained in registration, and registration centers proliferated across districts. Staff are well-trained, but at times they are unmotivated or dismiss their duties, particularly regarding the mobile uploading of the registration. The Mbeya region had difficulties with the mobile phones at the beginning of the rollout of the campaign, but these issues seemed to be resolved before the rollout in other regions. Registration Agents noted the difficulties of coordinating between RITA and registration points for the distribution and collection of supplies, especially the physical certificate books. RITA should aim to have a solidified system in place for the provision of these supplies.

The mobile birth registration initiative had a significant impact on improving the demand for birth registration and certification. The rollouts of the initiative featured heavy public awareness campaigns that explained the value and process of birth registration. Many people soon saw the importance of birth registration, a process they had heard little to nothing about prior. The net benefit of registration became clearer as the costs of registration decreased. A registration that is geographically closer, monetarily free, and a simplified, one-step process decreased or even eliminated the implicit and explicit costs of birth registration. This has increased demand. The quality of the registration of births has also changed for the better. The act of registration is quicker and the records are consolidated and protected as they are documented physically and electronically. Parents also receive their certificates within minutes of registration, and even if the parents lost their copy of the certificate, the government would still have record of the birth.
Tanzania’s birth registration system has room for improvement, and its CRVS system is still underdeveloped. The bottleneck analysis reveals that the government can continue to improve the enabling environment and the supply of birth registration. However, overall the mobile birth registration initiative is a significant development of the birth registration process, and though it has its flaws, it is a sufficient starting point to increasing birth registration and minimizing the registration gaps that have existed.

6.6 Next Steps

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<tr>
<td>• Future UNICEF support in line with its strengths and comparative advantage</td>
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<tr>
<td>• Supporting government to convene different stakeholders</td>
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UNICEF has provided the Tanzanian government with significant support and guidance in its efforts to increase birth registration and improve its CRVS system and this assistance will continue. The mobile birth registration initiative is only implemented in four of 30 regions in Tanzania, and the goal is to have registration in the entire country change according to this procedure. The UNICEF proposal also declared 2019 the deadline of achieving universal newborn registration. UNICEF has an established presence in Tanzania, and its commitment to free and universal civil registration is unwavering. As Tanzania continues to develop its

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CRVS system and rollout the mobile birth registration campaign, UNICEF will continue to act as an implementing partner and advisor. Bhaskar Mishara of UNICEF said, “Besides our project, we are supporting RITA in amending the Births and Deaths Registration Act which still carries the hangover of the colonial past and doesn’t address the core issues of distance, cost, and low utility/demand for certificates. Things are moving in the right direction, and we hope to have a progressive law with decentralization at the core. We are also supporting them in finalizing the CRVS enterprise architecture and the national CRVS strategy. Our aim is to assist the country in setting up…an efficient and a well-functioning CRVS system.”

Mishra explains exactly what Tanzania’s future efforts regarding birth registration and CRVS should be. The Tanzanian government should ensure that the law supports the registration process it has implemented and that the national has a clear CRVS strategy and reform process. Other suggestions for UNICEF and Tanzanian partnership in this area are clear from the above analysis. RITA should continue to improve and simplify its provision of supplies and ensure functionality, particularly the mobile phones, the physical birth certificates, and stationary. Public awareness campaigns should continue after the rollout of the initiative. Registration should take place at health facilities, district offices, and ward offices. RITA and Registration Agents should prepare for a massive uptake following the initial change to the system, but they should also continue to encourage registration to avoid a plateau of registration. Registration and certification should be free for children over the age of five while these changes take effect, but this is unlikely to happen as the focus is on under-five registration and RITA will likely wish to still generate some revenue. Officials in other sectors should not deny services like education or health care to those without birth certificates, but encouraging the use of birth certificates to

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493 Bhaskar Mishra (Child Protection Specialist), e-mail message to author, February 27, 2017.
access these services will cause people to see greater value in birth registration. The foundation of Tanzania’s birth registration efforts to achieve universal, complete, and reliable registration should be direct responses to the barriers that prevent birth registration by decentralizing and simplifying the process and increasing awareness of the values of birth registration.

Though the quantitative analysis revealed that many of the variables were insignificant in their correlations with changes in national birth registration rates, it is still worthwhile to look at how these variables changed over time like Tanzania’s birth registration rate. The table below shows the values for the independent and dependent variables from 1999 to 2012 (no data is published for 2016 except the national birth registration rate).

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<tbody>
<tr>
<td><strong>Birth Registration</strong></td>
<td>6.4</td>
<td>8</td>
<td>21.8</td>
<td>16.3</td>
<td>14.7</td>
<td>26.4</td>
</tr>
<tr>
<td><strong>GDP per Capita</strong></td>
<td>301.20</td>
<td>446.16</td>
<td>657.73</td>
<td>708.52</td>
<td>827.53</td>
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<tr>
<td><strong>Urban Population</strong></td>
<td>21.9</td>
<td>24.8</td>
<td>26.8</td>
<td>28.1</td>
<td>29.5</td>
<td></td>
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<tr>
<td><strong>Primary Education of Females</strong></td>
<td>58.81</td>
<td>52.49</td>
<td>90.15</td>
<td>82.61</td>
<td></td>
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<tr>
<td><strong>Polity IV</strong></td>
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<td>9</td>
<td>9</td>
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<td></td>
</tr>
<tr>
<td><strong>Births Attended by Skilled Staff</strong></td>
<td>43.8</td>
<td>45.1</td>
<td>50.2</td>
<td>61.4</td>
<td></td>
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<tr>
<td><strong>Infant Mortality</strong></td>
<td>84.5</td>
<td>58.7</td>
<td>48.3</td>
<td>42.4</td>
<td>38.8</td>
<td></td>
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<tr>
<td><strong>ODA per Capita</strong></td>
<td>29.94</td>
<td>38.37</td>
<td>54.42</td>
<td>64.77</td>
<td>58.04</td>
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</tbody>
</table>

Table 8. Data on Tanzania from dataset I created.

The table reveals that since 1999 Tanzania has been on a trajectory towards greater development. Multiple indicators, including GDP per capita, primary education rate of females,
and births attended by skilled staff, improved in the nation since 1999. Tanzania has also made improvements regarding MNCH. Tanzania’s under-five mortality rate dropped from 112/1,000 live births in 2005 to 81/1,000 live births in 2010.\textsuperscript{494} UNICEF, however, credits interventions related to vaccinations and other care for babies and infants, not increased staff attendance at births. Maternal deaths continue to be a problem, with 454 mothers dying from pregnancy complications for every 100,000 live births.\textsuperscript{495} UNICEF is working with the Ministry of Health and Social Welfare to improve MNCH, particularly by decentralizing maternal health to community levels.\textsuperscript{496} UNICEF has provided equipment for birth attendants and health facilities for MNCH and has helped train health workers to education the population about health behaviors, including seeking professional help for a delivery.\textsuperscript{497} Plan International has assisted Tanzanians in accessibility to skilled staff during births. Plan Tanzania’s health program has engaged with Village Savings and Loan Associations (VSLAs) to educate Tanzanians to change behavior regarding MNCH.\textsuperscript{498} One example of this is providing Tanzanian women with the opportunity to save money on transportation when travelling to a health facility to have skilled staffed present during a birth.\textsuperscript{499} Despite these efforts, Tanzania will not achieve the Millennium Development Goal of reducing Maternal Mortality (MDG5).\textsuperscript{500} The importance of improving the rate of births attended by skilled staff, however, is strongly emphasized by Tanzania’s registration system in particular. Tanzania uses health facilities to register most of its children,

\textsuperscript{496} Ibid.
\textsuperscript{497} Ibid.
\textsuperscript{499} Ibid.
and many registrations happen after birth. If 50% of births are unattended, however, registration rates will remain low. To maximize Tanzania’s new registration system, health attendants/registration agents must assist births to perform the registrations afterwards. Thus, efforts improving the rate of births attended by skilled staff are crucial. Without development in this area, Tanzania’s new registration system will not reach its full potential. Progress in both sectors must improve together to secure a better future for Tanzanian children.

The qualitative analysis of this thesis emphasized the influence of international support on improving birth registration rates. UNICEF’s involvement in areas other than birth registration indicate that international support likely improved these other development indicators as well. Lund-Henriksen said of the relationship between UNICEF and the Tanzanian government, “We share an agenda that we both feel strongly for, which is not motivated by anything except helping improve the rights of children basically… We have a strong relationship, I would say, based on trust and mutual respect, and because of that the government listens to us and takes what we say into consideration and we collectively look at how we can jointly move forward.”

On the UNICEF Tanzania website, UNICEF categorizes its support as, “maternal and child health,” “nutrition,” “water, sanitation, and hygiene,” “education equity and quality,” “child protection and justice,” “children and AIDS,” and “social policy, analysis and development.” UNICEF’s Tanzania office has supported many development programs that likely improved the above indicators. For example, regarding the female completion rate of

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primary education, UNICEF advocates for “quality and equity education.”\textsuperscript{503} They support the use of educational quality standards, in-service teacher education and training, the development of preschools, and the Tanzania Gender in Education Initiative, which advocates for gender issues in 2008.\textsuperscript{504} UNICEF has also encouraged effective maternal and child health policy reform, particularly by aiding the provision of health supplies.\textsuperscript{505}

Tanzania had dismal national birth registration rates for over a decade, and this low number masked the inequality of registration between groups, particularly among urban and rural and rich and poor children. Though Tanzania had signed international agreements recognizing the right of every child to a nationality and name, millions of its children remained invisible. This problem was a result of an inefficient, complex, and costly birth registration process and a lack of awareness of the procedure and value of birth registration. Tanzania’s lack of a CRVS system stood in contrast to many of its neighbors increasing birth registration rates, some because of new programming and policy reform. In 2011, though, the process of change began because of a grant from the Canadian government and technical support from UNICEF. It was this international support that made direct change in Tanzania feasible and that encouraged Tanzania to take larger steps to improve its CRVS system. Using innovative methods and communications technology, the Tanzanian government has improved birth registration coverage with increasing success in each region that changes according to the new system. Thus, low development levels and a less democratic, less free, less effective government did not impede Tanzania from cultivating its CRVS system and improving birth registration rates. Rather it was


\textsuperscript{505} Ibid.
a lack of concrete policy reform, international support, and dedicated government efforts to the true goal of universal birth registration that denied millions of children a legal name.

VII. Policy Recommendations

Several policy implications follow from this analysis of the determinants of birth registration. Improvement in birth registration requires commitment, innovation, and targeted reform. Donors, development partners, and governments can learn from others’ experiences and create action plans to achieve their objectives. In countries that maintain low registration rates, the first crucial step of CRVS reform is proper data collection and analysis. To create an effective program that registers everyone without any discrimination or bias requires an understanding of the barriers that prevent registration and what groups of children are largely unregistered. Governments should identify registration disparities between children of different localities, socio-economic statuses, or ethnic groups. Otherwise lack of understanding of these gaps may lead to government policies that either neglect or even exacerbate the inequalities of birth registration.

Given what scholars know about birth registration and the situations of most countries, the barriers for individuals are often due to cost, distance to registration centers, and lack of awareness of birth registration opportunities. Governments should make explicit changes to improve birth registration and develop their CRVS systems. Governments can take certain steps to overcome these barriers, especially with assistance from donors and/or development partners. I recommend ten steps countries can take to improve birth registration:
1. Use data to identify barriers to birth registration and which groups are vulnerable to low registration rates.

2. Give sufficient budgetary support to a CRVS system to then eliminate the explicit cost of registration.

3. Create more registration centers.

4. Decentralize the registration system by delegating registration authority and responsibility to local officials.

5. Improve the availability of health services to pregnant women and their children after birth. Increase the number of births attended by the skilled staff.

6. Link the CRVS system to the health system. Utilize health officials, facilities, and databases to complete registration and transfer information between local communities and the national government.

7. Revise the law to support mandatory, complete, standardized, free, and decentralized registration. Ensure officials and citizens are aware of and follow the laws at every level.

8. Make birth registration and certification a one-step process.

9. Utilize ICT to simplify the registration and certification process, the transfer and storage of data, and communication between all involved components and actors.

10. Promote the importance and process of birth registration and other civil registration. Utilize community leaders, posters, radio announcements, and health facilities to continue public information campaigns and increase awareness.

The quantitative analysis revealed that the efficacy of the health system has a significant effect on the level of national birth registration rates. Without capable health systems and/or
local governments, operationalization of these steps can be difficult. Governments can and should improve functionality of these systems if they are weak in conjunction with improving birth registration. CRVS systems are important and governments should not entirely neglect one aspect of development in favor of another. Rather as they strengthen the health systems, they should ensure that birth and death registration remains an important component. Countries with less effective health or government systems may require additional steps to improve birth registration given the realities and specificities of the country. An effective CRVS system and universal birth registration are not limited to developed countries, as seen by the less developed countries that have achieved high birth registration rates. Therefore, these steps are crucial for countries (both less-developed and more-developed) to address this problem.

Donors, development partners, and governments should support these policy reforms. They emphasize the importance of simplification, decentralization, increased public awareness, and linkage with the health sector. Developing CRVS systems requires more than just making birth registration mandatory or funneling money towards a project. Registration of the invisible children requires deliberate targeting and policy reforms to overcome common and country-specific barriers to an effective CRVS system. This thesis has aimed to provide insight and guidance as to how to do so.

VIII. Opportunities for Future Research

This analysis leveraging large-N, medium-N and small methods, while comprehensive, is not exhaustive. It answers some questions but prompts others, providing opportunities for future research. While global universal birth registration remains an unfinished development goal, there is more to learn about birth registration, CRVS systems, and the protection of children. This
thesis sought to better understand the disparities between national birth registration rates, why birth registration is lower and more varied in less-developed countries, and what factors allow for increases in birth registration. This research has answered these questions to some extent, but scholars should conduct more research to provide a complete understanding of what factors allow for increases in birth registration. Their focus should be on country initiatives and the relationship between governments, donors, and development partners.

The quantitative analysis revealed significance of a few variables. The results showed a significant correlation between higher birth registration rates and more effective health care systems and more urban populations. Given the process and barriers of birth registration, the relationship between health system characteristics and urbanization is not surprising. However, the lack of correlation between governance and birth registration was not expected, given the literature that supports the theory that more democratic governments provide public goods at a higher level. However, the data shows correlation of variables, but it does not tell the whole story. The qualitative analysis of changing birth registration rates using process tracing methods allowed for understanding of what changes birth registration and what types of countries attempt to and succeed in increasing birth registration. The results showed that many of the countries that expressed increases in birth registration made efforts to change the countries’ processes and received international support in doing so. There is a risk of bias that more information is available for countries successful in developing CRVS systems, while failed efforts to increase birth registration are not widely reported.

Future research should explore the relationship between governments, donors, and development partners regarding birth registration. For instance, how does this process begin? What types of countries receive the most money or technical assistance and are most effective in
utilizing this support? How do donors select countries to help? Who is the leader in initiating changes to countries’ CRVS systems? A lack of data and communication with donors inhibited me from answering these questions myself. Thorough research that analyzes the interactions between these players can provide guidance on how to encourage this process to occur in the most effective way. Governments should recognize the importance of effective CRVS systems and should be most involved in the creation of their own systems, strategies, and services. Donors should provide aid to countries that need it the most and will be the most likely to use the financial support as a starting point to a commitment to CRVS. Development partners should work alongside governments in countries needing assistance in a way that reflects the sociocultural realities of the countries. Initiating these actions (or maintaining them) requires detailed understanding of the environments as they currently are.

Scholars should continue to conduct in-depth country analyses regarding birth registration and CRVS systems, like the Tanzania case study included in this thesis. Governments and partners can use country analyses prior to initiatives to identify barriers and create inclusive and effective initiatives. Analyses of countries during or following the implementation of such initiatives and CRVS system modifications will allow for a precise judgement of the changes. Governments and their partners may then determine if they are achieving the proper objectives. A “checklist” to improving birth registration can ensure that the new initiatives or systems are not discriminatory. This type of analysis would especially be helpful to determine why some countries have experienced persistently low birth registration rates, despite attempts to increase rates.

Due to logistical constraints, I could not include a measurement of spillover effects. Many regional conferences have discussed increasing birth registration and CRVS development,
and countries have reiterated their commitment to birth registration in response to their neighbors’ efforts. In addition, some countries (like Tanzania) have travelled to other countries to observe and learn from the other countries’ experiences increasing birth registration. If the success of neighboring or regional countries of increasing birth registration encouraged other countries to follow suit, then partners should shift focus to regional registration efforts. Another recommendation for research is analysis of the use of ICT in developing CRVS systems. ICT has allowed for mobile and electronic registration and transmission of information in many different contexts and countries. ICT use could be a driving force in developing CRVS systems.

The explanations for low birth registration are varied, but political commitment, improved health systems, a cost-free registration process, and the elimination of distance as a barrier are crucial to increasing birth registration. Research in the previously discussed areas will create a stronger foundation for steps moving forward. It is this research which will rectify the problems that have hindered the development of countries and protection of millions of children for decades.

**IX. Conclusion**

The lack of registration of millions of children is a development failure. These children have forgone their legal identity and recognition from their government. They are more vulnerable to human rights violations, and governments with incomplete knowledge of their countries have more trouble understanding and thus meeting the needs of the people. Birth registration is thus a necessary public good that many low- and middle-income countries unsuccessfully provide. In addition to being a product of economic development, I hypothesized
that countries with improved health systems, more democratic and effective governments, high urbanization, and strong social development will have higher birth registration rates.

The results of the quantitative analysis revealed that registration rates improve as urbanization rates and the rates of births attended by skilled staff increase, which can indicate a means to facilitate birth registration. More specifically, increasing public awareness, decentralizing the process, and eliminating the cost of birth registration reform faulty CRVS systems. The governments of Cambodia, Bangladesh, Mali, Niger, and Tanzania, among other countries, implemented similar policies and consequently improved their birth registration rates. These initiatives occurred with substantial support from donors and INGOs. At the same time, many of these countries also developed their health sectors, which could have enhanced the impact of the birth registration initiatives.

I conclude that while urbanization and more births attended by health staff correlate to increased birth registration, the focus of increasing birth registration should be implementing CRVS initiatives in conjunction with development of the health sector. These initiatives should directly address the barriers to birth registration and aim to implement a functioning CRVS system that reaches the entire population. These initiatives require political commitment and a recognition of the importance of birth registration from INGOs, donors, and governments. Combatting low birth registration rates therefore becomes a demand for good governance, whether that is achieving it for one’s own country or helping another country achieve it. Ultimately, this study used a variety of methods to analyze a global development problem and provide a deeper understanding of the issue and ways to address it. This paper can hopefully stand alongside other forthcoming efforts to guide INGOs, donors, and governments at securing a safer future for the invisible children.

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