

**MATERNAL HEALTH IN RURAL ZAMBIA:
CHALLENGES IN THE AGE OF GLOBALIZATION**

by

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ABSTRACT

In September 2000, the United Nations adopted the Millennium Development Goals to encourage collective action toward reducing global poverty. The global community was unable to accomplish these goals by the 2015 deadline largely due to disparities in progress between the developed and developing worlds. The finish line has since been pushed and the number of targets has been expanded with the ratification of the Sustainable Development Goals, causing many to question whether the new development agenda is too idealistic to be achieved. This analytical case study of the Republic of Zambia's experience with Millennium Development Goal 5, improving maternal health, aims to address these concerns by determining if the failure to achieve the Millennium Development Goals was a product of ineffective policy or rather indicative of a much larger problem. An examination of the statistical outcomes of the Millennium Development Goal Five policies in Zambia demonstrates that they were effective but unable to create sustainable improvements in maternal health in rural areas. Further examination of the barriers to maternal health access in rural Zambia provided evidence that this problem is a byproduct of early imperialism that has since been maintained by the economic interests of a globalized world. Consequently, it is unlikely that the goals of the new sustainable development agenda can be achieved in a world still dominated by imperial economic interests.

Chapter 1

INTRODUCTION

In September 2000, the United Nations General Assembly convened at the United Nations Headquarters in New York City for the Millennium Summit. This meeting of Heads of State, high ranking government officials, and UN representatives from 189 countries marked the beginning of a new era in the United Nations in which the international agenda would be defined by a commitment to collectively “uphold the principles of human dignity, equality, and equity” amidst the rapid globalization of the twenty-first century (United Nations 2000).

To achieve this vision, the United Nations Member States crafted the Millennium Development Goals (MDGs), an implementation framework for collective action to reducing global poverty. The Millennium Development Goals were a series of eight broadly-defined goals to be accomplished by the year 2015, including: (1) eradicating extreme poverty; (2) achieving universal primary education; (3) promoting gender equality and empowering women, (4) reducing child mortality; (5) improving maternal health; (6) combatting HIV/AIDS, malaria, and other diseases; (7) ensuring environmental sustainability; and (8) developing a global partnership for development. To measure progress between 1990 and 2015, these goals were then broken down further into 21 quantifiable targets and 60 performance indicators (United Nations Children’s Fund [UNICEF] 2014). Compliance and accountability were ensured through the issuance of national, regional, and global “progress reports,” which were

used to track improvement over time and highlight areas of notable success, as well as those in need of additional attention (MDG Monitor 2016).

When examining the statistical data collected between 1990 and 2015, it is evident that, as a whole, the international community made advancements in each of the components of the Millennium Development Goals. Since the implementation of the MDGs, the percentage of the population in the developing world living on less than 1.25 USD per day has decreased from 50 percent to 14 percent, the HIV infection rate has declined by 40 percent, and 2.6 billion people have gained access to better drinking water (MDG Monitor 2016). However, as of 2015, nearly none of the established MDG targets had been achieved. Substantial gaps between the developed and developing worlds remained, contributing to the failure to ultimately achieve the established MDG targets at the global level. The Millennium Development Goals Report, published in 2015, noted that improvements were inconsistent both across and within regions, often leaving the poorest and most vulnerable behind (United Nations 2015, 8).

Recognizing the need for continued improvement through a more targeted approach, the United Nations General Assembly reconvened in September of 2015 for the Sustainable Development Summit to negotiate a new development agenda (United Nations Population Fund 2015). The post-2015 agenda intended to build on the momentum of the Millennium Development Goals by expanding the development priorities and emphasizing sustainable progress. The newly implemented Sustainable Development Goals (SDGs) included seventeen broadly-defined goals and 169 embedded targets to be achieved by 2030 (United Nations 2016), as well as 232 performance indicators to measure national, regional, and international progress

(United Nations Department of Economic and Social Affairs Statistics Division 2017).

This comprehensive list of goals includes:

1. Ending poverty in all its forms everywhere.
2. Ending hunger, achieving food security, improving nutrition and promoting sustainable agriculture.
3. Ensuring healthy lives and promote well-being for all ages.
4. Ensuring inclusive and equitable quality education and promote lifelong learning opportunities for all.
5. Achieving gender equality and empower all women and girls.
6. Ensuring availability and sustainable management of water and sanitation for all.
7. Ensuring access to affordable, reliable, sustainable and modern energy for all.
8. Promoting sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all.
9. Building resilient infrastructure, promoting inclusiveness and sustainable industrialization and foster innovation.
10. Reducing inequality within and among countries.
11. Making cities and human settlements inclusive, safe, resilient and sustainable.
12. Ensuring sustainable consumption and production patterns.
13. Taking urgent action to combat climate change and its impacts.
14. Conserving and sustainably using the oceans, seas, and marine resources for sustainable development.
15. Protection, restoring, and promoting sustainable use of terrestrial ecosystems, sustainably manage forests, combating desertification, and halting and reversing land degradation and halt biodiversity loss.

16. Promoting peaceful and inclusive societies for sustainable development, providing access to justice for all and building effective, accountable and inclusive institutions at all levels.
17. Strengthening the means of implementation and revitalizing the global partnership for sustainable development (United Nations 2016).

This expanded list of goals reflects the United Nations' new vision for development, which emphasizes fighting inequality and injustice and addressing the issue of climate change while continuing to work to end extreme poverty (United Nations Population Fund 2015). Several new goals have been added to the development agenda, and the finish line has been moved for those MDG targets that have yet to be achieved, clearly demonstrating higher expectations for this new era.

For those regions and countries that were unable to achieve their Millennium Development Goal targets by 2015, working to accomplish the SDGs will be a daunting task, and success will not be guaranteed, even with substantial changes in the use of resources and significant adjustments to policy. Recognizing the gravity of the challenge that the Sustainable Development Goals pose, we must consider the question of what can be done to ensure that the global community is able to reach the SDG targets. Moreover, is it even possible for the developing world to achieve the progress necessary to realize these goals, given limited time, resources, and support?

I had originally hoped, with this thesis research, to answer these questions by analyzing how national policies and strategies could be improved in the future to more effectively address prevalent development problems. However, as I conducted a more thorough survey of the available literature pertaining to the Millennium Development Goals, I became increasingly aware of the limitations of devising solutions based on MDG quantifications of underdevelopment. These numbers could only provide evidence of the problem and indicate who might be most affected. They could not

explain the origins of these problems of underdevelopment, and perhaps more importantly, why they have continued to persist even when we are aware of their existence. Crafting effective solutions would require a more complete understanding of the context of the problem.

To provide evidence of this notion, I have chosen to conduct a literary case study, which analyzes the challenges facing the Republic of Zambia as its government continues to work toward improving maternal health in accordance with the goals of the international development agenda. I have chosen to focus specifically on Zambia's progress toward achieving Millennium Development Goal 5, improving maternal health, and consequently the challenges presented by the Sustainable Development Goals for two key reasons. First, I felt it most appropriate to address this question through the lens of a problem and a context with which I am familiar. In January of 2017, I traveled to rural Zambia with a group of nursing students to work in urban and rural health clinics where we assisted in the provision of maternal and infant health care to low-income women. This experience has allowed me to approach the literature with a certain degree of specialized knowledge of the subject matter and an understanding of its practical implications. Secondly, the challenges that Zambia has faced in working to improve maternal health simulate the experiences of many other developing countries and the global community more broadly, particularly with regard to MDG 5.

Since achieving independence in 1964, the Zambian government has been devoted to developing its health infrastructure and expanding access to primary health care. With the dawn of the new millennium and creation of the Millennium Development Goals, maternal health was identified as one of the Zambian Ministry of

Health's top priorities. But despite the government's best efforts to improve maternal health, the Republic of Zambia ultimately failed to achieve the high standards of Millennium Development Goal 5 by the year 2015. There has remained limited maternal health infrastructure, a shortage in maternal health personnel, an uneven distribution of maternal health workers, and inadequate transportation and communication capabilities to support referral services, particularly in rural areas.

In looking beyond the numbers to trace the origins of poor maternal health in Zambia, this thesis seeks to demonstrate that the Republic of Zambia's failure to achieve the desired progress of the Millennium Development Goals with regard to maternal health is not necessarily a reflection of the inadequacies of modern national policies and strategies. Rather, the struggle to improve maternal health is predominantly a residual effect of systematic inequality created by early expressions of globalization, namely Western economic, social, and political imperialistic intervention. And thus, it will be nearly impossible to achieve the level of progress needed for the global achievement of the new maternal health targets of the Sustainable Development Goals, without first addressing the underlying issues of inequality from which development problems stem, including poor maternal health.

Chapter 2

MATERNAL HEALTH AND THE DEVELOPMENT AGENDA

When the United Nations General Assembly convened for the Millennium Summit in September 2000, maternal and perinatal conditions, which refer to health conditions directly associated with pregnancy or birth, were among the leading causes of death for women of reproductive age in the developing world. Maternal and perinatal conditions were also *the* leading cause of disability among this same population group (National Research Council 2000). In the year 1990, there were 532,000 maternal deaths, which equates to nearly 1,500 pregnancy and childbirth-related deaths per day, while the number of women suffering from lifelong injuries as a result of childbirth was estimated to be twenty times that (WHO et al. 2015). The magnitude of the problem alone was enough to warrant attention. However, it was the broader implications of poor maternal health for the success of the international development agenda that ultimately persuaded the United Nation's General Assembly to include improving maternal health among the Millennium Development Goals.

Poor maternal health, often defined by the prevalence of maternal mortality and morbidity, which refers to injury as a result of childbirth, can have a devastating impact on a family, community, and the nation in both the short and long-term (UNICEF 2008, 2). Studies have repeatedly shown that maternal death during childbirth increases an infant's risk of death before the age of two (UNICEF 2008, 3). Debilitating conditions associated with pregnancy and childbirth such as obstetric fistula and anemia associated with intrapartum and post-partum hemorrhage, can also

make it difficult for a woman to care for and provide for her family (UNICEF 2008, 3 & 6), and in instances of maternal morbidity, children are more likely to experience conditions associated with undernutrition, such as stunting (National Research Council 2000, 7).

The loss or reduction in female productivity and subsequent loss of income and household support that results from the death or injury of a maternal figure also amplifies the risk of poverty consequently increasing household dependency on children. When this occurs, children are more likely to be absent from school, as they are needed to work on the family farm or find a paying job to support their families. As a result, children in areas that suffer from widespread maternal health issues often have lower levels of educational attainment. In the long-term, these effects are magnified at the local, national and international levels, as poor maternal health ultimately inhibits the productivity of future generations (UNICEF 2008, 3).

Recognizing maternal health as a critical component of successful international development, the United Nations General Assembly gave maternal health a prominent position on the collective action agenda, including it among the eight global priorities for the new millennium. Millennium Development Goal 5: Improving Maternal Health would be defined by two quantifiable targets, and a total of six performance indicators, all of which can be found in the table below.

- | |
|--|
| <ul style="list-style-type: none"> • Target 5.A: Reduce by three quarters, between 1990 and 2015, the maternal mortality ratio <ul style="list-style-type: none"> ○ Indicator 5.1: Maternal mortality ratio, measured as the number of maternal deaths per 100,000 live births, women aged 15-49 ○ Indicator 5.2: Proportion of deliveries attended by skilled health personnel • Target 5.B: Achieve universal access to reproductive health <ul style="list-style-type: none"> ○ Indicator 5.3: Proportion of women aged 15-49, married or in union, who are using any contraception |
|--|

- **Indicator 5.4:** Number of births to women aged 15-19
- **Indicator 5.5:** Proportion of women aged 15-49 attended four or more times by any provider during pregnancy
- **Indicator 5.6:** Proportion of women aged 15-49, married or in union, who have an unmet need for family planning

(United Nations Department of Economic and Social Affairs Statistics Division 2008)

Global Progress toward the Achievement of MDG 5

While elevating the importance of maternal health has led to significant improvements in this area, the MDG targets proved difficult to achieve for the international community. When compared to the outcomes of the other Millennium Development Goals, MDG 5 was among those where the least amount of progress was made between 1990 and 2015 (United Nations Department of Economic and Social Affairs Statistics Division 2010). According to the Millennium Development Goals Report published in 2015, the global maternal mortality rate (MMR) decreased by 45 percent, between 1990 and 2015, from 380 maternal deaths per live births to 210 maternal deaths per 100,000 live births, falling short of the MDG target of a 75 percent decrease. This statistic translates to approximately 800 maternal deaths per day or 289,000 maternal deaths per year. Between 1990 and 2015, the number of births attended by skilled health personnel only increased from 59 to 71 percent, signifying that more than one in four women were without necessary medical care services during childbirth (United Nations 2015, 38-39).

Universal access to reproductive health was also far from being achieved. As of 2014, only 52 percent of women in the developing world had received the

recommended amount of antenatal care – at least four visits– during pregnancy. While the number of women using contraception increased 55 to 64 percent between 1990 and 2015, more than 10 percent of married or in-union women, who indicated that they would like to be able to delay or prevent pregnancy, did not have their contraceptive or family planning needs met (United Nations 2015, 41). Furthermore, the birth rate among adolescent girls, ages 15-19, decreased by a relatively small margin, from 59 per 1,000 women in 1990 to 51 per 1,000 women in 2015 (United Nations 2015, 41).

However, these numbers tell only part of the story, underplaying the tremendous strides that were made in reducing maternal mortality and increasing access to reproductive care in many regions throughout the world, and most notably in the developing world. For example, In Southern Asia, the maternal mortality rate declined by 64 percent, from 530 maternal deaths per 100,000 live births to 190 per 100,000 live births (United Nations 2015, 38), and the number of births to women ages 15-19 decreased from 88 to 47 per 1,000 women (United Nations 2015, 42). But, because of where these countries began their journey, their progress has not been enough to meet the high demands of the MDGs.

Sub-Saharan Africa is perhaps the most prominent example of a region that, despite making some considerable improvements, has continued to lag behind the rest of the world in terms of development. Between 1990 and 2014, the maternal mortality ratio was reduced by nearly 50 percent, from 990 maternal deaths per 100,000 live births in 1990 to 510 in 2014 (United Nations 2015, 42). And yet, the number of maternal deaths in Sub-Saharan Africa continued to account for more than 50 percent of all maternal deaths worldwide each year (World Health Organization 2016). The

risk of dying during pregnancy or childbirth remained very high at 1 in 38 women, particularly when compared to the risk borne by women in the developed world of 1 in 3700 women (World Health Organization 2015). These numbers indicate significant progress for the Sub-Saharan African region, but not nearly enough to meet the expectations of the Millennium Development Goals.

As previously discussed, one of the greatest hindrances to the achievement of the Millennium Development Goals was the persistence of inequality across regions. With regard to MDG 5 in particular, inequality in access to adequate care across and within regions was the greatest inhibitor to improved maternal health. In those regions, such as Eastern Asia, where access to contraceptives, antenatal care, and care during delivery was nearly universal, maternal mortality declined by the greatest margin (World Health Organization 2015, 39). Meanwhile, in regions such as Sub-Saharan Africa, where access to maternal health care was both limited and inconsistent throughout the region, less progress was made toward reducing maternal mortality.

As of 2015, Sub-Saharan Africa's maternal mortality ratio was nearly double its regional goal of approximately 248 maternal deaths per live births, as large gaps in maternal care access between urban and rural populations remained. According to the Millennium Development Goals 2015 Report, even the smallest gap in maternal access to care between urban and rural populations in a Sub-Saharan African sub-region (i.e., North Africa) was larger than nearly any other region measured, with the exception of Southern Asia (United Nations 2015, 40).

Maternal Health as a Sustainable Development Goal

The relationship between access to care and maternal health ultimately became the launching point for the succeeding Sustainable Development Goals for 2030, which were adopted in September 2015. While most of the targets and indicators for maternal health have remained relatively the same, the goal of improving maternal health has been interwoven into the twelve total targets of the SDGs primary health goal, Sustainable Development Goal 3: Ensuring healthy lives and promoting well-being for all at all ages, four of the targets are directly related to maternal health. The targets and indicators that are directly associated with the underlying goal of improving maternal health consist of:

- **Target 3.1:** By 2030, reduce the global maternal mortality ratio to less than 70 per 100,000 live births (with no country having more than double the global average).
 - **Indicator 3.1.1:** Maternal mortality ratio
 - **Indicator 3.1.2:** Proportion of births attended by skilled health personnel
- **Target 3.7:** By 2030, ensure universal access to sexual health and reproductive health-care services, including for family planning, information and education, and the integration of reproductive health into national strategies and programs.
 - **Indicator 3.7.1:** Proportion of women of reproductive age (aged 15-49 years) who have their need for family planning satisfied with modern methods
 - **Indicator 3.7.2:** Adolescent birth rate (aged 10-14 years; aged 15-19 years) per 1,000 women in that age group
- **Target 3.8:** Achieve universal health coverage, including financial risk protection, access to quality essential health-care services and access to safe, effective, quality and affordable essential medicines and vaccines for all.
 - **Indicator 3.8.1:** Coverage of essential health services (defined as the average coverage of essential services based on tracer interventions that include reproductive, maternal, newborn and child health, infectious diseases, non-communicable diseases and service capacity and access,

- among the general and the most disadvantaged population)
 - **Indicator 3.8.2:** Number of people covered by health insurance or a public health system per 1,000 population
 - **Target 3.C:** Substantially increase health financing and recruitment, development, training, and retention of the health workforce in developing countries, especially in the least developed countries and small island developing States
 - **Indicator 3.C.1:** Health worker density and distribution
- (United Nations Department of Economic and Social Affairs 2016)

This expanded list of targets and indicators clearly demonstrates an increased awareness of the relationship between access and the ability to achieve the desired effect of improving maternal health. These added measurements are tools that will allow us to better understand the impact of inequality, however, like the Millennium Development Goal indicators, they are not capable of explaining the inequality that exists, or for that matter determining how best to address it. To effectively improve maternal health, we must change our approach and look to isolate the policies and practices that have created the disparities that have left some populations of women disadvantaged and without care.

The following case study of Zambia will apply a microanalytical approach to this problem, addressing the issue of poor maternal health in Zambia through a historical lens. In doing so, I hope to illustrate the necessity of using these measurements as a guide, rather than a subscription, for collective action on development problems in the future in order to create more permanent solutions.

Chapter 3

DEFINING THE CONTEXT: AN OVERVIEW OF MODERN ZAMBIA

Before embarking on a case study of maternal health in Zambia, it is important to understand the geographic, social, political, and economic landscape of the country in question. Formerly known as Northern Rhodesia, the Republic of Zambia is a landlocked country located in south-Central Africa, most identifiable by its “butterfly shape[d]” borders (Burdette 1988, 5), a byproduct of both its geographic features and its colonial past. The Zambezi River, which originates in the North-Western Province of Zambia, and Victoria Falls form a natural boundary between Zambia and its neighbors to the South and Southwest, Zimbabwe, Namibia, and Botswana, while Lake Tanganyika defines Zambia’s northeastern border with Tanzania. The remaining borders – Democratic Republic of the Congo to the North, Malawi to the east, Mozambique to the southeast, and Angola to the west – are largely political in origin, drawn during the “Scramble for Africa” (1884-1885) to fit the preferences of the imperial states that colonized the region (Taylor 2006, 3).

Situated between 8° and 18° south, Zambia is located in the southern tropics; however, variations in altitude modify the climate (Central Statistical Office 2013b, 1). The majority of the country sits atop high plateaus, where the climate is far more temperate with relatively low humidity and lower temperatures. In contrast, the Zambezi River Valley and various other river basins experience high temperatures and extreme humidity (Taylor 2006, 4). Amidst the wet season, which begins in December and continues through March, the rains can be unpredictable. In the northeast and

western regions, rainfall in excess of sixty inches, combined with poor infrastructure, leaves these areas “virtually inaccessible” during the rainy season due to the extreme flooding that ensues (Taylor 2006, 4).



Figure 1 Geographic location of the Republic of Zambia (Central Statistical Office 2015, xxi).

For administrative purposes, the country has been divided into ten provinces: Central, Copperbelt, Eastern, Luapula, Lusaka, Muchinga, Northern, North Western, Southern, and Western provinces (Statistical Office 2013a, 1). Of these, two are predominantly urban, the Lusaka and Copperbelt provinces, while the remaining are mostly rural (Zambia Central Statistical Office 2013b, xiii).



Figure 2 An administrative map of modern Zambia (Central Statistical Office 2013c, 4).

The provinces are broken down further into 105 districts, each maintaining its own local governmental body (Central Statistical Office Information Research and Dissemination Branch 2016, 4). Due to the decentralization of governance, district governments have the most direct impact on the lives of Zambian citizens, as they are responsible for the provision and maintenance of all public goods and services, including water and sanitation services, health services, fire services, road services, police services, primary education, and agricultural services (Commonwealth of Nations n.d.).

Zambia has one of the fastest growing economies in the world, averaging nearly 6.7% annual growth in GDP in the early 2010s, although this rate has begun to

slow since 2015, largely due to failed economic diversification. Compared to the rest of the world, Zambia has the 102nd highest GDP globally (Central Intelligence Agency [CIA] n.d.). In 2017, Zambia's real GDP was 68.9 billion USD, up from 66.27 billion USD in the previous year (Central Statistical Office 2015, 2). However, per capita economic growth has not experienced the same upward trend. GDP per capita, which is total GDP divided by the total population, has held constant at 4,000 USD, over the last three years, suggesting little improvement in individual welfare over time, despite a rapidly growing economy (CIA n.d.). When compared to the rest of the world, Zambia's GDP per capita falls significantly below the global average of 15,800 USD (The World Bank 2016).

The compositional breakdown by sector of Zambia's national GDP provides evidence of the country's failure to economically diversify. 59.1% of GDP is concentrated in the provision of services, which includes government activities, communications, and transportation, while industry accounts for nearly 36% of GDP. Only 5.4% of GDP comes from agricultural production (Central Statistical Office 2015, 1). Zambia's heavy reliance on industry, particularly copper mining and processing, which is Zambia's sole export, has left the country vulnerable to fluctuations in foreign markets, as well as issues associated with production. Over the last two years, economic growth has slowed due to the decreasing demand for copper and the corresponding fall in copper prices, as well as the energy shortage, which resulted from the mismanagement of water resources (Central Statistical Office 2015, 2).

A Socioeconomic Portrait of Modern Zambia

Economic strain and increased spending in the last several years has led the Zambia government to seek financing from the IMF and external support from international investors through the issuance of bonds, effectively increasing publicly held debt from 58.6% of GDP in 2016 to 62.8% of GDP in 2017. External debt also rose from 9.562 billion USD in 2016 to 10.79 billion USD in 2017 (CIA n.d.).

Despite the fact that agriculture comprises only a small portion of Zambia's GDP, employment in the agricultural sector accounted for more than half of total employment in Zambia in 2012. This includes employment in both the formal sector (2.1 percent), which constitutes the commercial farming sector, and the informal sector (55.4 percent), which refers to subsistence farming activities with generally minor revenue generation (Central Statistical Office 2013b, 2).

Unemployment is fairly high relative to the world average (5.78 percent). Despite steadily decreasing since the early 1990s, Zambia's unemployment rate sits at 7.6 percent (The World Bank 2017b). The GINI coefficient for Zambia, which is used to measure the degree of inequality, given the distribution of family income, is also relatively high compared to the rest of the world – 57.5 on a scale of 1 to 100 in 2013 – indicating the presence of significant inequality within the population (The World Bank 2017a).

The current population of Zambia is approximately 15.972 million. At nearly 3 percent, the population growth rate of Zambia was the ninth highest in the world in 2017 (CIA n.d.), with the expectation that the population will nearly double in size between 2010 and 2035 (Central Statistical Office 2013a, 10). This high rate of population growth can be attributed to extremely high birth/fertility rates (41.5

births/1,000 population), and declining mortality rates (12.2 deaths/1,000 population) (CIA n.d.), indicating that the country is in the second stage of demographic transition (Ponga 2017, 1).

Nationwide, the poverty level remains high, with 60.5 percent of the population falling below the poverty line, and 42.3 percent being classified as ‘extremely poor’ (Central Statistical Office 2013a, 3). The burden of poverty falls heavily on the rural populations; the poverty level in rural populations (77.9 percent) was almost three times higher than in urban populations (27.5 percent), even though the total population sizes of the urban and rural areas were comparable (CIA n.d.). Approximately 60 percent of the Zambian population lives in rural areas, while the remaining forty percent is concentrated in the cities of Lusaka, Ndola, Kitwe, and Mufulira (CIA n.d.).

Knowledge of the geographic and socioeconomic landscape of modern Zambia will be critical for analysis throughout this case study. It allows us to recognize the connections between the policies of the past and the conditions of the present and more thoroughly understand the problem. With this fundamental understanding of the Zambia context, we can proceed to the focus of this thesis, the case study of maternal health challenges in Zambia, beginning with a statistical analysis of the problem at the national and subnational levels.

Chapter 4

DEFINING THE PROBLEM: MATERNAL HEALTH IN ZAMBIA

Since 1992, the Central Statistical Office of Zambia has conducted five national Demographic and Health Surveys (ZDHS) to assess the country's overall state of health, as well as the population health of various subgroups, including urban and rural populations, provincial populations, and age groups. Over time, these surveys have become more comprehensive, gradually expanding the list of indicators used to assess health in Zambia.

Despite undergoing these changes, the survey's primary purpose has remained the same: to evaluate reproductive, maternal, and child health determinants and risk factors, and to measure primary care access and use within the Zambian population. Because of the consistency in data collection, collection methods, and analytical processes, the Demographic and Health Survey has been instrumental in terms of benchmarking maternal health in Zambia and the country's progress toward achieving the maternal health MDG targets in light of national investments in health infrastructure, the healthcare workforce, and community health education.

The date of the first Zambian Demographic and Health Survey, 1992, roughly corresponds to the base year against which Millennium Development Goal progress has been benchmarked, while the date of the most recent survey, 2014, is proximate to the end of the MDG implementation period. In comparing the data collected in these two years, we can measure Zambia's progress in accordance with the Millennium Development Goals. For the purpose of this analysis, I have selected a few of the

indicators used in both the 1992 and 2013-2014 surveys that are among the statistics most commonly used to determine the state of maternal health at the national and subnational levels.

The indicators that have been incorporated into this analysis include those associated with the MDGs – (1) the maternal mortality ratio, (2) the adolescent birth rate, contraceptive prevalence, the unmet need for contraception, (3) the percent of the population that attended the recommended number (four) of antenatal visits, (4) and the number of births attended by skilled health personnel – in addition to several other international metrics of maternal health, such as the (5) total fertility rate, (6) wanted fertility rate, and (7) the place of birth. As you can see, they are comprised of both reproductive care and obstetric care indicators, as maternal health encompasses all activities that may affect the mother at any time throughout her pregnancy or birth.

The maternal mortality ratio (MMR), which is often treated as the most comprehensive indicator of maternal health, was not among the statistics included in the initial 1992 survey. However, the World Health Organization, United Nations Children’s Fund, the World Bank Group, and the United Nations Population Fund have aggregated and published this data every five years, beginning in 1990, to monitor Zambia’s maternal health progress. Thus, I will be using Zambia’s 1990 MMR, as calculated by these organizations, for comparison with the MMR recorded by the 2013-2014 ZDHS.

Maternal Health in Zambia before the Millennium Development Goals

In 1990, Zambia's maternal mortality ratio was approximately 577 maternal deaths per 100,000 live births, one of the highest in the world. Maternal deaths, in Zambia, accounted for more than twelve percent (12.6%) of all deaths among women of reproductive age, indicating low rates of maternal survival (World Health Organization et al. 2015). There were several factors that contributed to this statistic, many of which constitute high-risk behavior because they have been closely linked with high rates of maternal morbidity and mortality (University of Zambia et al. 86-87).

In 1990, the average number of children a woman would have in the course of her childbearing years, given the population's current total fertility, also known as the total fertility rate (TFR) was roughly 6.5 children per woman (University of Zambia et al. 1993, 27). This relatively high fertility rate was a direct result of early marriage, and transitively, early childbearing. According to the 1992 Demographic and Health Survey report, the average age of marriage among women in Zambia was 18.5 years of age (University of Zambia et al. 1993, 60), while the median age of first birth among women ages 20-49 in 1992 was 18.6 years-old (University of Zambia et al. 1993, 34). More than 40 percent of women between the ages 25 and 49 reported giving birth to their first child before the age of eighteen (University of Zambia et al. 1993, 33), while more than 33 percent of the teenage population (women ages 15-19) had begun childbearing at the time this survey was conducted (University of Zambia et al. 1993, 35).

In an attempt to provide clarity as to why women engage in these high-risk behaviors, The Zambian Demographic and Health Survey collected data pertaining to

women's fertility preferences and contraceptive access with the aim of determining whether these behaviors are a result of individual choice or barriers to access.

Knowledge of and access to different contraceptive methods allows women to regulate their fertility, effectively reducing their risk of morbidity and mortality. According to the 1992 ZDHS, almost 90 percent of women of reproductive age in Zambia knew of at least one modern or traditional contraceptive method (University of Zambia et al. 1993, 37). Approximately 87 percent of women were familiar with at least one form of modern contraception, such as female or male sterilization, the birth control pill, intrauterine devices (IUD), injectables – most commonly Depo-Provera, which is a hormone shot that prevents pregnancy by temporarily interrupting ovulation – and male or female condoms, while 66.4 percent of women indicated an awareness of at least one traditional method of contraception. Traditional methods include, but are not limited to rhythm, also known as periodic abstinence, which refers to timing sexual activity to coincide with points of low fertility during a woman's menstrual cycle, and withdrawal, colloquially known as the “pull-out” method (University of Zambia et al. 1993, 37).

Despite widespread knowledge of conception, contraceptive use in Zambia was relatively low in 1992. Less than 40 percent of women said that they had ever used any form of contraception, modern or traditional, and only 11.6 percent of all women of childbearing age stated that they were currently using a contraceptive method (University of Zambia et al. 1993, 40-41). This number was only slightly higher among married women, at approximately 15.2 percent (University of Zambia et al. 1993, 41). The discrepancy between the number of women who are using contraception and the number of women who are knowledgeable about contraception

suggests that even when informed about the benefits of contraceptive usage, the majority of women in Zambia were not using contraceptives during their reproductive years in 1992. The data presented by the 1992 ZDHS report pertaining to the demand for contraceptives and desired fertility suggests that this was primarily due to a lack of access.

Of the women surveyed in 1992, 48.6 indicated that they would like to be able to control when and how many children they have in their lifetime, implying a demand for contraception. However, 33.4 percent of those included in this category were not using any family planning method at the time of this survey; these women were considered to have an unmet need for contraception (University of Zambia et al. 1993, 73). Further evidence of this unmet need for contraception is provided by the difference between the total fertility rate (TFR) and the wanted fertility rate (WFR). As previously discussed, the total fertility rate is equal to the average number of children a woman is expected to have in her lifetime, given the current fertility rates. In comparison, the wanted fertility rate represents the ideal number of children that the survey population would like to have if given the opportunity to control their fertility. According to the results of the ZDHS, Zambian women reported a desired average of 5.8 children in 1992 (University of Zambia et al. 1993, 75). Recalling the total fertility rate of 6.5 children, it is evident that there was a greater demand for family planning services in Zambia than was available. To further support this point, the survey report also notes that the recorded WFR may have even been inflated because women may be uncomfortable acknowledging that, given the opportunity to start over, they would not have chosen to have as many children (University of Zambia et al. 1993, 75).

These behaviors all affect the health of the mother prior to and during her pregnancy and thus have an impact on her maternal health.

In addition to family planning, access to adequate care during pregnancy and childbirth are also strongly linked to the quality of maternal health. The indicators most commonly used to evaluate access to these services are the number of antenatal visits attended, – also known as prenatal visits – the percentage of births attended by skilled health personnel, and the location of delivery, as each of these elements has the capacity to minimize or maximize the risks associated with childbirth. According to the 1992 ZDHS, 93.7 percent of women reported that they had received some antenatal care by a trained maternal health provider. However, only 69 percent attended the minimum recommended number of four antenatal visits, and the majority did not seek antenatal care until almost the sixth month of gestation (i.e., pregnancy) (University of Zambia et al. 1993, 89-91).

It is important to note that the recommended number of antenatal visits is based on a study conducted by the World Health Organization, which was intended to estimate the minimum number of antenatal visits necessary for a skilled health worker to convey the knowledge necessary for a perfectly healthy woman with a healthy pregnancy to deliver safely. It is generally advised that women attend more than four visits if there is the potential for any complications, such as an obstructed labor, a premature birth, multiple births, or preeclampsia, all of which are more common in the developing world, due to increased health risks associated with malnutrition and adolescent births (Lincetto, et al. 2006, 51). Thus, these fairly low rates of antenatal care among Zambian women correlate to an increased risk of maternal morbidity and mortality, as women may be unaware of preexisting conditions related or unrelated to

their pregnancy that may make them more vulnerable to complications during pregnancy and childbirth.

As of 1992, approximately half (48.7 percent) of births were delivered at home, while 50.6 percent were delivered in a medical facility. The place of birth appears to be directly correlated to the degree of antenatal care that mothers received. Those that attended a greater number of antenatal visits were among those that were more likely to deliver in a healthcare facility (University of Zambia et al. 1993, 93). The percentage of those whose births were attended by trained health personnel correlates directly to the percentage of births delivered in a health facility; approximately 50.5 percent of births were delivered by skilled healthcare workers. Of the remaining 49 percent, 9.4 percent of births were attended by a traditional birthing attendant, who is typically an elder woman in the community who has been trained in maternal care by her ancestors, while 32.8 percent of births were delivered by relatives. 7.2 percent of births remained unattended (University of Zambia et al. 1993, 94). The risks associated with delivering without assistance by skilled health personnel are similar to those that may result if one does not receive the recommended amount of antenatal care. In the event of a complication during delivery, those that are not attended by a skilled health worker may face a greater risk of maternal morbidity or mortality, as they will be incapable of resolving the issue on their own.

Zambia's Progress: Maternal Health after the Millennium Development Goals

The results of the 1992 Zambian Demographic and Health Survey clearly indicated the necessity of maternal health reform, as limitations in access to

contraception and care during delivery exposed many women to the risk of morbidity and mortality during pregnancy and childbirth. Thus, over the course of the next two decades, the Zambian government worked in conjunction with several nonprofit and intergovernmental organizations, as well as foreign governments, to change the landscape of maternal health and increase women's access to care through the expansion of the healthcare workforce, investment in healthcare infrastructure and equipment, and mobilizing community resources. The foremost initiative implemented during this period was executed in conjunction with USAID. The program, known as *Saving Mothers, Giving Life*, sought to address the delays in receiving care by improving community perceptions of facility-based care, reinforcing and strengthening the capabilities of health facilities, and incentivizing providers to practice in high need areas (Henry, et al. 2017, 2). The impact of these efforts can be measured by comparing the maternal health data presented by the 1992 survey report with the results of the 2013-2014 ZDHS report.

As of 2014, the total fertility rate had declined noticeably, falling to 5.3 children per woman of reproductive age from 6.5 in 1992 (The Republic of Zambia Central Statistical Office 2015, 70). The median age of first birth among those ages 20 to 24 at the time of the survey rose to approximately 19.3 years of age, representing a slight increase since 1992, when the median age of first birth was 18.6 years of age, and more than 61 percent of women surveyed reported that they had given birth at exactly twenty-years-old (Central Statistical Office 2015, 75). The prevalence of teenage pregnancy also fell by almost 14 percent between 1992 and 2014, declining from the previous rate of 33 percent to 28.5 percent in 2014 (Central Statistical Office 2015, 77).

These positive changes in fertility behaviors were a direct result of increased access to maternal health resources and services, including family planning, antenatal care, and obstetric care during delivery. As of 2014, knowledge regarding the benefits of contraceptive use was nearly universal. 98.8 percent of female respondents were reportedly aware of at least one form of modern contraceptive, and 75 percent indicated an awareness of at least one traditional method. In fact, the average woman was able to identify at least eight methods of fertility planning. Knowledge of contraception was even more widespread among male respondents, with approximately 99.5 able to name at least one form of modern or traditional (Statistical Office 2015, 88).

In terms of contraceptive prevalence, the number of women using some contraceptive method more than doubled; in 1992, 11.6 percent of all women and 15 percent of married women were using contraception compared with 35 percent of all women and 49 percent of married women in 2014 (Central Statistical Office 2015, 88). Specifically, there was a significant upsurge in the use of injectables due to a national initiative to increase access to injectables within community-based health facilities (Chin-Quee, et al. 2011). The prevalence of injectables increased from approximately 0.1 percent to almost 20 percent among married women. The prevalence of modern contraception also increased overall from 8.9 percent to 44.8 percent, while the prevalence of traditional contraceptive methods declined from 6.3 to 4.3 percent (Central Statistical Office 2015, 93). Accordingly, the total unmet need for contraception declined from more than 33 percent in 1992, to just over 21 percent in 2014 (Central Statistical Office 2015, 101).

Care during pregnancy and childbirth also increased in prevalence between 1992 and 2014. In 2014, 95.7 percent of women reported that they had some accessed antenatal care, compared with 93.7 percent in 1992 (Central Statistical Office 2015, 120), and the majority of women reported attending at least two antenatal visits. On average, women in Zambia also began seeking antenatal care earlier on in their pregnancy. While women in 1992 were waiting until almost their sixth month to access antenatal services, most women in 2014 sought care before the end of their fourth month, which increased knowledge of potential complications during pregnancy, thereby improving birth preparedness. However, the number of women who received the recommended number of antenatal visits (four) fell from 68 percent in 1992 to 55.5 percent in 2014 (Central Statistical Office 2015, 120). The reason for this decline was unexplained in the report, but based on recent publications, it can be assumed that it is the result of the renewed shortage in skilled health personnel due to a lack of funding and capacity for staff training (Association of Chartered Certified Accountants, 2013, 16).

Perhaps the most drastic improvements in maternal health between 1992 and 2014 were those pertaining to birthplace and delivery, as women became more likely to access care during childbirth. In 2014, the number of births that took place in a health facility grew by almost a third to 69 percent of births, up from 50.6 percent in 1992 (Central Statistical Office 2015, 126). The prevalence of home births diminished significantly in accordance with this change, falling from 48.9 percent in 1992 to 31 percent in 2014. However, these births were still attended by a skilled healthcare worker, as were 64.2 percent of births in 2014, a notable increase from 1992, when half of all women delivered with the assistance of skilled health personnel (Central

Statistical Office 2015, 126). It is worthwhile to note that the percent of births attended by a traditional birthing attendant (TBA) also grew from approximately 9.4 percent of all births to 16.7 percent of births (Central Statistical Office 2015, 126), due to a national Safe Motherhood action group initiative to mainstream the training of traditional birthing attendants and integrate them into the modern healthcare system (Sialubanje, et al. 2017, 2). This increase in TBAs suggests that even if women did not deliver in a health facility with the assistance of trained health personnel, the majority still received some form of care during childbirth. This inference is supported by the marked decrease in the number of women giving birth without any support at all from 7.2 percent in 1992 to 3.3 percent in 2014 (Central Statistical Office 2015, 127).

From this statistical analysis of the improvements in maternal health between 1992 and 2014, it is evident that policies enacted to address this problem in accordance with the Millennium Development Goals were effective and ultimately resulted in a reduction of the risk associated with motherhood in Zambia. This is ultimately demonstrated by the dramatic decline in maternal mortality over a twenty-two-year period; according to the ZDHS, by 2014, the maternal mortality rate had fallen to 398 maternal deaths per 100,000 live births (Central Statistical Office 2015, 247).

However, the success of these policies was no match for the high standards of the Millennium Development Goals. As of 2015, the Republic of Zambia was among those countries furthest from achieving Millennium Development Goal 5. This can largely be attributed to the inequality and resulting disparities in healthcare access between the urban and rural regions of Zambia.

Chapter 5

DISPARITIES BETWEEN MATERNAL HEALTH IN URBAN AND RURAL ZAMBIA

The inclusion of population subgroups in the data collected by the *Zambian Demographic and Health Surveys* in 1992 and 2013-2014 allow us to compare the progress made toward improving maternal health in urban and rural areas. I have chosen to employ a technique often used in development economics referred to as *diff-in-diff*, or the difference in differences, which allows you to measure the effects of a program, initiative, or policy by comparing the magnitude of the change that has occurred in two different populations. In this case, I will be measuring the effects of policies in Zambia targeting maternal health between 1992 and 2014 to illustrate two critical points. First, maternal health policies have resulted in the greatest increase in maternal health access for those women residing in rural areas. However, because these populations started from a place of disadvantage, the progress that has been made at the national level has not met the standards of the Millennium Development Goal targets. Second, despite this significant increase in access, rural fertility preferences and obstetric care behaviors have not changed as substantially within this population.

Since 1992, there has been a considerable increase in access to contraceptives among both urban and rural populations in Zambia. In 1992, approximately 20.8 percent of urban women were using contraceptives, compared with just over 10 percent of women in rural areas (University of Zambia et al. 1993, 42). By 2014, the

number of women using contraceptives in urban areas nearly doubled, increasing to more than 56 percent of women. In rural areas, contraceptive prevalence more than tripled; approximately 44 percent of women were now using contraception (Central Statistical Office 2015, 92). This can predominantly be attributed to policies intended to increase the use of injectable contraception in rural community health clinics, as discussed in the previous chapter. However, the unmet need for contraceptive has remained relatively high in rural areas and has not seen the same reduction as urban areas, indicating that there is still a long way to go to ensure universal access to reproductive care. As of 2014, the unmet need for contraception in rural Zambia had only fell by a little over 25 percent, whereas in urban areas, there was more than a 50 percent reduction in the number of women with an unmet need for contraception (Central Statistical Office 2015, 101; University of Zambia et al. 1993, 73).

Similarly, with regard to improvements in obstetric care, the number of births attended by skilled health personnel in rural areas has doubled as a result of increased access to birthing facilities. This can primarily be attributed to the expansion of health infrastructure in rural areas in accordance with recent development initiatives. As of 2014, more than half of all women in rural areas delivered in hospitals with the support of a skilled healthcare worker. However, this number remains substantially lower than in urban areas where approximately 90 percent of women deliver in health facilities; this number represents only a 12 percent increase since 1992 (Central Statistical Office 2015, 172; University of Zambia et al. 1993, 94). Once again, the greatest improvements in maternal healthcare access have been made in rural populations, yet this progress was inadequate to meet the desired target of universal access under the Millennium Development Goals.

Unfortunately, this significant expansion in maternal healthcare access has not fully eliminated the barriers to maternal healthcare access in rural areas, nor has it significantly impacted fertility preferences or behaviors among rural populations, indicating that other contextual forces have remained at play, which has acted as an obstacle to creating substantial change at the national level. As of 2014, 42 percent of women living in rural areas gave birth at home, rather than in a health facility (Zambia Central Statistical Office 2015, 126). Most women cited the reason being that a health facility was too far for them to reach and that they did not have access to the transportation necessary to reach these facilities (Central Statistical Office 2015, 129). Approximately 50 percent of these women were assisted by a traditional birthing attendant, marking a near 90 percent increase in the number of births attended by TBAs since 1992, which can be attributed to the mainstreaming of TBA training (Statistical Office 2015, 172; University of Zambia et al. 1993, 94). The remaining 25 percent of rural births in 2014 were attended by a relative or no one at all, indicating a continued lack of access to maternal healthcare among rural populations, despite national efforts to expand health infrastructure and human resources in these areas (Central Statistical Office 2015, 127).

According to the 8,826 responses recorded by 2013-2014 ZDHS, nearly 80 percent of women experienced at least some problem accessing healthcare. Some of the most notable barriers included the distance to the nearest health facility (57.2 percent), an inability to access the necessary transportation (52.4 percent), concerns that there may not be drugs available (41.7 percent), inadequate funds to pay for services, concerns regarding poor or rude treatment by providers (32.5 percent), and a concern that there may not be any health providers available (31.3 percent) (Central

Statistical Office 2015, 134). Distance to a health center was also the most commonly cited reason for not accessing care specifically during labor; 32.5 percent of women in rural areas noted that the distance presented a challenge for them (Central Statistical Office 2015, 129).

With regard to fertility behaviors, little had changed in rural Zambia. In 1992, the average age of first birth was 18.8 years of age urban areas (University of Zambia et al. 1993, 34). By 2014, this number had risen to 19.7 years of age, indicating delayed sexual activity and fertility (Central Statistical Office 2015, 76). The average age of women in rural areas when they first experienced childbirth in 1992 was similar to that of urban areas at 18.6 (University of Zambia et al. 1993, 34), however, unlike in urban areas, this number only rose marginally to 18.7 years of age (Central Statistical Office 2015, 76). Teenage pregnancy was also more prevalent among rural populations in both 1992 and 2014, yet it was urban areas that experienced the greatest decrease in the adolescent birth rate. According to the 1992 ZDHS, 22.6 percent of teenagers in urban areas (i.e., women ages 15-19) had begun childbearing, compared with 32.5 percent in rural populations (University of Zambia et al. 1993, 34). By 2014, the number adolescents experiencing teenage pregnancy in urban areas had fallen by nearly 17 percent to 16.4 percent, while the number of teenage pregnancies in rural areas remained relatively high at 29.4 percent, indicating a decrease of less than 10 percent (Central Statistical Office 2015, 76).

Similarly, in urbanized areas in 1992, the total fertility rate was approximately 5.8 children (University of Zambia et al. 1993, 28), and decreased by nearly two children to where the typical urban woman in Zambia would have an estimated 3.7 children in the course of her reproductive years (Central Statistical Office 2015, 85).

Alternatively, women residing in rural Zambia, had, on average, 7.1 children during their reproductive years in 1992 (University of Zambia et al. 1993, 28). This number only fell by .5 children to an average of 6.6 children by 2014 (Central Statistical Office 2015, 85).

Continued high fertility in rural areas can partially be attributed to the remaining unmet need for contraception among women in this population; however, it is also a reflection of the continued desire for high fertility. While the wanted fertility rate, that is the average ideal number of children per woman, decreased by almost two children in urban areas between 1992 and 2014, falling from 5.2 children in 1992 to 3.3 children in 2014 (University of Zambia et al. 1993, 76; Central Statistical Office 2015, 84), the wanted fertility rate fell by less than one child in rural communities during the same period. The average ideal number of children among women in rural areas remained high at 5.6 children per household, indicating that there remains a strong desire for a large family within the rural context 2014 (University of Zambia et al. 1993, 76; Central Statistical Office 2015, 84).

Summary

This analysis of the progress that has been made toward improving maternal health in Zambia provides evidence of the effectiveness of the policies and programs implemented in accordance with the goals of the international development agenda. It also illustrates that the country's inability to achieve these goals is due to the barriers embedded in the rural context that have persisted despite the government's best efforts to target this population in its maternal healthcare access initiatives. Therefore, we

must look past the numbers to determine what these barriers are and determine how best to address them.

Throughout the next three chapters, I will be examining the evolution of maternal health in rural Zambia with the intention of identifying the nature and origin of these barriers, and ultimately determine how they can be addressed to ensure the achievement of the maternal health goals of the Sustainable Development Agenda. This analysis will begin with an analysis of the role of women and reproduction in early African societies.

Chapter 6

ZAMBIA BEFORE COLONIALISM: THE ROLE OF WOMEN

Prior to the arrival of Bantu peoples from the north, the inhabitants of present-day Zambia primarily consisted of small, loosely-connected and moderately transient hunter-gatherer groups descended from the Khoisan Twa people of Southern Africa. These nomadic communities relied entirely upon the natural bounty of their environment for sustenance, traveling thousands of miles in search for food, as they had not yet developed the tools required to cultivate the land or raise livestock (Gann 1969, 4). The members of the group relied upon one another for survival, dividing the labor according to individual skills and strengths. This generally translated to a gender division of labor, in which the men were responsible for game hunting and defending the group against danger, while the women were charged with the gathering of roots, berries, grasses, and insects (Ehret 2016, 43). This division of labor and sense of communalism ultimately fostered the establishment of an egalitarian social and political system among the Khoisan people, one in which all clansmen were considered of equal value and importance.

The influx of the Bantu peoples in South-Central Africa during the late Iron Age completely altered the social landscape of Zambia (Ehret 2016, 170 & 173). Bantu groups first arrived in modern-day Zambia in 300 AD, bringing with them livestock and subsistence farming techniques that allowed them to establish more permanent settlements (Ehret 2016, 173). The population of Zambia continued to grow throughout the first and second millennia, as several other Bantu groups began to

arrive, including the Tonga people in the 12th century, the Nsenga, and the Chewa in the 15th century, the Bemba, now the largest ethnic group in Zambia, Lala, and Lamba peoples in the 16th century, the Kaonde, Lovale, Mbunda, Luanda, and Mambwe in the 17th century, and finally the Ngoni in the 18th century (Hall 1976, 12).

While these communities resembled the early Khoisan communities of Zambia in many ways, the permanence of Bantu villages initiated a departure from the unadulterated egalitarianism of Stone Age hunter-gatherer communities. The Bantu villages of precolonial Zambia were organized and governed according to kinship systems, which in essence describes the understanding that all members of a community are in a sense related, either by blood or by marriage, and are therefore accountable to an entity larger than themselves. Many of the groups that settled in Zambia were customarily organized according to a matrilineal kinship system, meaning that most members of a village could trace their mother's lineage to a common ancestor, often the founder of the clan (Mbiti 1969, 104).

Kinship systems established a structural hierarchy amongst members of the community, according to genealogical lineage. Those that held similar positions in their respective genealogical lineages relative to their shared ancestor would be considered equals, or 'brothers,' by society, and would treat each other as such; they would show each other equal amounts of respect (Mbiti 1969, 104). Alternatively, individuals that differed in ontological status – that is their relation to the original ancestor – were expected to treat each other with the respect owed to a person of their position, according to the normative laws of their society. John Mbiti's *African Religions & Philosophy* provides the example that if two strangers were to meet and

discover that they are ‘uncle’ and ‘nephew,’ the younger would treat his elder with greater reverence than if they were of similar genealogical stature (Mbiti 1969, 105).

As indicated by the terms used to describe an individual’s organizational status, it is evident that the African ‘family’ was all-encompassing. Contrary to the Western understanding of the family as a singular unit in which all members are immediately related, the term ‘family’ was used to describe all members of the community, regardless of the genealogical distance between individuals. Consequently, an individual may have hundreds of ‘brothers,’ ‘sisters,’ ‘sons,’ ‘daughters,’ ‘mothers,’ or fathers’ in their family (Mbiti 1969, 105). However, these terms were much more than the recognition of a shared ancestor; they were representative of one’s inherent duty to the community and to one another.

All members were expected to contribute to the village livelihood in some capacity. Most tasks were divided according to gender, but regardless of whether they were assigned to men or women, all tasks were deemed necessary for the community to thrive and were treated as such. These gender labor roles were distinct, yet complementary and equal. Because of their physical strength, men were expected to fish, hunt, defend the group, and perform heavy manual labor tasks, such as clearing land for agricultural use, or in pastoralist communities, raising livestock (Falola and Amponsah 2012, 99). Alternatively, women’s work in Bantu groups often consisted of both domestic and agricultural obligations. Women were primarily responsible for tending to the welfare of the family, giving birth to and raising the children, caring for the elderly, cooking, cleaning, weaving baskets and crafting pottery. However, their agricultural responsibilities were as equally demanding as the men’s. Women were generally expected to maintain and cultivate agricultural lands to

support subsistence farming practices and were charged with tasks such as preparing the land, planting, weeding, harvesting, and storing the food gathered (Falola and Amponsah 2012, 99).

Among women's domestic responsibilities, procreation held a prominent position as one of the most important duties that a woman must perform in the course of her lifetime. In most Bantu communities, children were deemed both a practical and spiritual necessity (Gann 1969, 6). The subsistence lifestyle of early agricultural communities required the support of a strong labor force to support the needs of the community; this included caring for the aging populations, maintaining and cultivating the land, and hunting for game. Children were required to sustain the village once the existing population had aged or become too weak to perform their duties (Gann 1969, 6). Children were, in essence, an investment in the future of the community.

The spirituality of procreation was predicated on a similar sentiment. According to Mbiti's *African Religions & Philosophy*, children also needed to sustain the legacy of the family and the broader community. On an individual level, children were living proof of one's contributions to society, as their physical being was evidence of a successful marriage. Those marriages that did not produce children were generally understood to be incomplete or unfilled (Mbiti 1969, 108).

At the community level, the significance of childrearing was even greater. According to Mbiti, the failure to bear children was arguably "worse than committing genocide, "as it signified a rejection of societal custom and marked a woman as the "dead end of human life" for herself and for her lineage. Because the husband could temper the effects of childlessness by taking another wife and raising children with her, the consequences of the failure to bear children, regardless of fault, were passed in

full to the woman (Mbiti 1969, 110). The weight and importance of childbirth in precolonial African societies is summed up in this excerpt from Mbiti's *African Religions and Philosophies*:

The childless wife bears a scar which nothing can erase. She will suffer for this; her own relatives will suffer for this and it will be an irreparable humiliation for which there is no source of comfort in traditional life (Mbiti 1969, 111).

Further emphasis was placed on reproduction by linking fertility with social status. Women who were more fertile, meaning that they produced more children, rose in social status because they had made a greater contribution to the community and, ultimately, to humanity (Gann 1969, 6). This relationship provides additional evidence of the significance of procreation in defining women's roles in precolonial Zambian societies.

While the responsibility of childbearing lay with the individual, the community was accountable for raising the child, and "creating [it] into a social being, a corporate person" (Mbiti 1969, 110). There was no ownership when it came to children, rather a communal sense of responsibility to teach the next generation how to behave as productive members of society. Children were introduced to the concepts of marriage, sex, procreation, married life, and family responsibility at a young age through initiation rites, and through interactions with elder members of the community. Young boys were educated by their brothers, fathers, uncles, and grandfathers on matters of livestock maintenance, behavior toward in-laws, wealth accumulation, and familial preservation and protection (Mbiti 1969, 135). Alternatively, young girls were taught how to perform their domestic and agricultural duties and learned about "reproductive health, customs and taboos, acceptable social behavior, and social values" from watching and listening to their mothers, sisters, aunts, and grandmothers (Falola and

Amponsah 2012, 186). This education was thorough, ensuring that they would be prepared for the demands of married life, and perhaps more importantly, the responsibility of childbearing.

The Importance and Treatment of Pregnancy and Birth

In many African societies, a woman's first pregnancy was seen as a rite of passage and the final seal of marriage, as it marked the integration of a man into his wife's kinship system (Mbiti 1969, 110), in the case of the matrilineal societies of Zambia. For the community, pregnancy signified the arrival of a new member, and thus the health and well-being of the expectant mother would be held in high regard and given special consideration. To protect the health of their child, women would observe several common conventions throughout pregnancy, usually until the child is weaned. These practices often included abstaining from sexual intercourse throughout pregnancy and adhering to a strict diet to ensure that mother and child would not be exposed to anything harmful or impure (Mbiti 1969, 111).

Birth itself was also a religious event that involved the entire community. In general, expectant mothers would give birth in the home under the supervision of elder women in the community. Men were not allowed to attend to the birth or to be present in the home where the child was being delivered, however, they would often congregate and wait for the introduction of the child into society (Mbiti 1969, 112). Typically, at least one of the women present at the delivery was a *mbusa*, or traditional birth attendant, who had been trained by her relatives or others in the community to care for the mother and child during pregnancy and birth (Kasonde et al. 1994, 82).

Because of the nature of her duties, this traditional midwife occupied a position of both social and religious importance in her community. She would have overseen the pregnancy from start to finish. Throughout the pregnancy, she would have performed physical examinations to ensure that both mother and child were healthy; at the time of delivery, she would be the one to coach the mother and tend to the cutting of the umbilical cord and detachment of the placenta, which was often used to ceremoniously celebrate birth in Bantu societies. Eventually, she would train an apprentice, usually a relative, to take over her duties and fulfill this critical role in the community once she had passed (Kasonde et al. 1994, 82). This new apprentice would be able to acquire all of the specialized knowledge that her predecessors had learned over centuries, so that she could ensure that the community continued to flourish in the future.

The religious nature of procreation and birth fostered a sense of reverence and respect for the female body among members of the community, particularly the mother's breast. The bosom was seen as a life-giving force, rather than as sexual object, and women were encouraged to breastfeed openly and nurse for extended periods of time. In some societies, women would breastfeed their children for up to two years, during which time they would also continue to abstain from sexual intercourse (Kaoma 2016, 59). Whether intentional or unintentional, these traditions also helped to regulate women's fertility and ensured that they would not resume sexual activity until they were physically prepared to carry a child once again. Those who were fully nursing would experience a period of temporary infertility, referred to as lactational amenorrhea, which meant that they would not be able to conceive a child until they had stopped nursing; abstaining from sex provided a secondary means of preventing unintended pregnancy. Collectively, these practices demonstrate the

importance of maintaining reproductive health and a respect for the wellbeing of women, who served as the givers of life, in precolonial African societies.

Summary

The necessity of procreation to support the family and the community in precolonial Africa is sufficient to explain the high fertility rate among women in rural Zambia today. As was noted in the profile of modern Zambia, the majority of the population remains heavily reliant upon subsistence farming, and thus has a strong desire for a large family to provide support for agricultural activities. However, many, if not most of the other attributes of precolonial Africa are contradictory to the current state of maternal health in modern Zambia. As was indicated by the statistics included in the previous chapters, pregnancy and birth are no longer considered communal activities, nor is there a strong support system for prenatal, obstetric, or postnatal care within both the family and community. To understand the shift that has occurred, we will now shift our attention to the impact of colonial policies on the role of women in African society, focusing specifically on the changing relationship of a woman to her community and the redefining women's work.

Chapter 7

THE ORIGINS OF INEQUALITY: THE ENTRENCHMENT OF RURAL POVERTY AND THE CHANGING ROLE OF WOMEN AMIDST COLONIALISM (1890-1964)

The colonial era represents a period of radical social change in Zambia's history, particularly with regard to the role of women in society. In seeking to advance economic interests in mining and commercial farming, the British colonial government systematically neglected and disenfranchised Bantu peoples, ultimately destroying kinship systems so that land and labor resources could be exploited. The net effect of these interventionist activities was the entrenchment of rural poverty among indigenous populations and the institutionalization of barriers to employment opportunities.

Arguably it was African women in Zambia who were most affected by colonial rule, as they were marginalized by both the conditions of rural poverty and the insertion of Western values into African culture. In exploring the effects of the migrant labor system and the commodification of women's work, this chapter seeks to elucidate the ways colonial rule undermined the value of women in society ultimately contributing to conditions of poor maternal health in Zambia throughout the twentieth and twenty-first century.

The Beginnings of Colonial Rule: Religion and Resources

In 1851, Scottish missionary David Livingstone made his first of three visits to modern-day Zambia to preach the word of God to the 'Dark Continent' (Gann 1969, 26). Prior to his arrival, the region's contact with the Western world was limited and largely centered around the gold and ivory trade with the Portuguese and slave trade with the Arabs (Gann 1969, 12). Livingstone's published account of his travels, *Missionary Travels and Research in South Africa* (1857), quickly attracted the attention of the public, most notably the British Foreign Office, who later commissioned him to return to Central Africa to determine the viability of trade with the African peoples of the Zambezi (Hall 1965, 40).

Livingstone's second expedition to Zambia essentially served as the catalyst for all succeeding European intervention in this region. Christian missionaries of various faiths, including the London Missionary Society, the White Fathers missionary, and the Church Missionary Society, began to follow Livingstone's lead, venturing further inland and establishing mission stations to bring Christianity to the 'heathens' and end Arab slave trade. The 'Scramble for Africa' in the mid-late 1880s prompted British missionaries to plead with their government to lay claim to the territory north of the Zambezi so that they could continue their work (Hall 1965, 52).

At first, the British government was reluctant to intervene in matters between the missionaries and the Arab traders (Hall, 1965, 52). But Cecil Rhodes, founder of the De Beers Mining Company, owner of the diamond mining empire, and member of the South African Cape Legislature, advocated for the expansion of British influence on the African continent, and urged government officials to claim the Northern Zambezi territory as a British protectorate in order to advance his own political and

economic interests (Gann 1969, 55-57). Rhodes hoped that by gaining control over this region, he would be able to gain access to the natural resources, particularly gold, that were available north of the Zambezi River and ultimately to expand British influence throughout the African continent (Hall 1976, 1). The British ultimately obliged Rhodes' request in February 1888 (Gann 1969, 57).

In return, Rhodes offered to relieve the Colonial Office of its administrative duties in this newly acquired territory for little cost to British taxpayers. Enticed by this offer, the British government granted the British South Africa Company (BSAC) political and administrative power over the area north of the South African Cape colony, spanning from the Limpopo River to the Great Lakes of Central Africa, and charged the Company with "preserv[ing] peace and good order" within the protectorate (Gann 1969, 58). With this came the commercial rights to develop all land contained within this territory.

In the hopes of transforming Britain's Central African holdings into a new mining center, Rhodes and the BSAC began to acquire additional lands in the area surrounding the original territory. Through manipulation tactics, Rhodes and his company men compelled local rulers, such as Lewanika, chief of the Lozi people, to concede their land and power to the British crown (Galbraith 1974, 213). Eventually, they acquisitioned enough land to extend the boundaries of British holdings as far north as the Congo river basin along the Katanaga border, encompassing what is now modern-day Zambia (Gann 1969, 62-63). In return, the indigenous rulers received only the hollow promises of a small stipend, the benefits of British civilization, and British protection against invasion, by self-determined representatives unqualified to make such agreements (Hall, Zambia 1965, 40).

This transference of power from local authorities to the British South Africa Company marked the beginning of three decades of charter rule during which administrative policies would be used as a tool for systematically disenfranchising indigenous African populations in order to support foreign commercial interests.

Zambia Under Colonial Rule

In 1891, the British Foreign Office granted an extension of British protectorate status to include all territories acquired since the issuance of the initial Royal Charter (Hall 1965, 87). This meant that the BSAC's administrative power expanded to encompass nearly all of what constitutes present-day Zambia and Zimbabwe. Under the chartered administration of the British South Africa Company, the northern and southern regions of this territory evolved separately, largely due to differences in the availability of economic inputs: land, natural resources, and labor. The discovery of natural resources, particularly gold, south of the Zambezi River initially drew the British South Africa Company's focus and attention to the southern regions of the acquired territories, concentrating the bulk of industrial and development activities in this area. It was not until the 20th century that some of the attention would be diverted to the region north of the Zambezi River (Hall 1965, 97).

With the development and expansion of the mines in Southern Rhodesia and concurrent establishment of the commercial farming industry along the rail lines that ran from the Katanga markets in the Congo to the mines in the south, came the need for a cheap source of labor to ensure that profits would be made in both the mining and agricultural sectors. To address this problem, the Company looked to the region

north of the Zambezi River, which was densely populated by indigenous peoples. In an effort to create conditions that would compel African men to provide labor for the mines and commercial farms, the Company instated a simple hut tax, the equivalent of a modern property tax (Hall 1965, 97). For most African communities living in the areas surrounding the Zambezi River, the BSAC's hut taxation policy was their first exposure to a cash-based economy. As discussed in the previous chapter, pre-colonial African societies were generally self-sufficient and relied very little on the outside world for necessary goods or services. Because of this self-sufficiency and the presence of kinship systems, the concept of private property was scarce; everything belonged to the community, and the only person with the authority to make transactions on its behalf was the chief (Hall 1965, 97). However, taxation required a cash payment, which even the chief did not have access to, as all previous payment or exchange transactions had been made through a barter system. This meant that when it came time to pay the hut tax, individuals in the community were unable to do so, and were thus required to find alternate methods to acquire the funds necessary to maintain their homes (Hall 1965, 97).

Knowing that the indigenous peoples would be unable to pay the tax, the British South Africa Company sent recruiters into African villages to convince men to take jobs in the mines and on commercial farms, where they would earn a small wage to pay off their debts. Recognizing that their options were limited if they wanted to keep their land, most men chose to leave their families behind in search of work as migrant laborers, in the hopes of earning enough money to pay their taxes and return home to their communities (Hall 1965, 97). As of 1909, more than 7,000 African men had joined the migrant labor force, traveling from their homes in Northern Rhodesia to

the south in search of work. By 1935, this number had risen to nearly 28,000 men (British Colonial Office 1935, 22).

Unfortunately, the combination of low pay and high taxes generally ensured that these men would remain a part of this migrant labor system for the duration of their lifetime, never returning home to their families, regardless of how much or how hard they worked. Thus, labor migration, under colonial rule, became a reality of life in Zambia under colonial rule for many African men. The perpetuity of this migrant labor system had significant implications for the welfare of indigenous peoples.

The migration of men from rural to urban areas increased the demands on women, who were forced to undertake some of the responsibilities that their husbands, brothers, and cousins once performed in order to sustain the community. While many women stepped up and became leaders in the community, heads of households, and the primary providers for themselves, their children and the elderly, there were significant constraints in their ability to ensure that their villages would survive (Falola and Amponsah 2012, 52). Despite being told that the wages that men earned in the mines would be sent back home, most women never saw the fruits of their husbands' labor. The wages provided in exchange for labor were intended only to support the individual working in the mines, and therefore the men were unable to provide adequate financial support for their families that remained in the rural areas (Burawoy 1982, 133). Thus, labor policies instituted under charter rule contributed to the expansion of the wealth gap between urban and rural populations and led to the growth of rural poverty among indigenous populations.

To mediate the effects of their husbands' absence from the community, many women began to seek work outside their villages. However, the redistribution of

agricultural lands and the commodification of women's work due to the commercialization of farming made it difficult for women to carry this burden. Under charter rule, the offer of cheap land had encouraged British farmers to relocate from South Africa to Northern Rhodesia, settling in peri-urbanized areas along the mining rail line to farm cash crops, particularly maize and beans, for sale to the copper belt and gold mining communities. By 1911, nearly 159 white settlement farms were established in Northern Rhodesia on lands previously confiscated from indigenous peoples (Kajoba 2008, 79).

The continued expansion of white settlement in Northern Rhodesia eventually required the redistribution of lands among Africans and Europeans. After assuming power from the BSAC in 1924, the British Colonial Office issued the Crown Lands and Native Reserve Act of 1928. This act defied customary law by appropriating fertile lands formerly tended by indigenous populations to white settlers and forced the relocation of displaced African persons to reserves established in what are now the Eastern and Northern provinces of Zambia (Kajoba 2008, 79). Indigenous populations – approximately 1,331,231 people – were relegated to 2,148,440 acres of land of the total 184,576,000 encompassed within the borders of Northern Rhodesia (British Colonial Office 1930, 13). The majority of this area was considered to be valueless, due to its lack of mineral wealth and arable land. Conversely, white settlers had acquired 2,786,352 acres of land for settlement alone in 1930 (British Colonial Office 1930, 13), despite accounting for less than 0.003% percent of the total population of Northern Rhodesia – about 1 in 300 people – in the late 1920s (Hall 1976, 63).

The commercialization of agriculture had a profound effect on the indigenous population of Northern Rhodesia. On a national scale, the implications of land

distribution policies were similar to those of taxation in that they contributed to the growth of the migrant labor system and to the growing wealth gap between urban and rural areas. With few opportunities for economic advancement amidst the confines of native reserve lands, men were once again forced to seek employment outside their communities, contributing to the continued disintegration of the labor force in rural communities, as well as the concentration of wealth and labor in more urbanized areas (Kajoba 2008, 79). However, it was women who truly suffered under colonial rule, as taxation and land redistribution policies created physical, legal and economic barriers to women's participation in agriculture, thereby effectively reducing women's ability to perform their customary duties and contribute fully to their communities.

The lands provided for indigenous populations by the Crown Lands and Native Reserve Act of 1928 presented challenges for subsistence agriculture due to the infertility of the soil and the limitations to space allotted for native use. In the discussion of the geographic and climatic features of Zambia in earlier chapters, it was noted that the northern region of Zambia, which encompasses a portion of the native reserve lands, is prone to extreme rainfall, often exceeding sixty inches. This level of rainfall degraded the soil, and often flooded the region, thus rendering it an inhospitable area for food production. The absence of male labor to clear-cut new lands and the physical constraints of the native reserves also contributed to the degradation of the soil in forcing women to overwork the soil and continuously plant in the same plots, effectively reducing the soil's capacity for food production and women's ability to contribute to their communities (Kajoba 2008, 79).

As mentioned earlier in this chapter, the commodification of women's work in association with the commercialization of agriculture also contributed to women's

inability to meet the demands of the growing communal burden that they experienced during the colonial era. In the face of diminishing agricultural production and limited support from their spouses in the mines, many women sought employment outside of the native reserves in order to support their families and communities. However, there was little room for indigenous women in the paid labor market. Contrary to the customary division of labor in precolonial Africa, white settlers preferred to employ male laborers in the agricultural sector, largely due to their physical strength and endurance. Women were essentially cast aside from the role that they had always played, while men were given greater responsibility. In doing so, the commercialization of agriculture effectively economically disempowered African women in Northern Rhodesia and increased their dependency, as well as the community's dependency on men (Anunobi 2002, 45).

The granting of native reserve legal land rights to indigenous men under the Crown Land and Native Reserve Act of 1928 further served to marginalize African women in Northern Rhodesia under colonial rule. When referring back to the discussion of communalism in precolonial African societies, we recall that individuals did not own property; rather, everything and everyone was seen as an extension of the community itself, ensuring that there would be no hierarchical distinction between members of the community based on wealth. However, in issuing the land rights to the native reserves to the men in indigenous communities, the patriarchal values of the British colonial government undermined this system of collectivism and asserted the dominance of men in African communities (Anunobi 2002, 45).

Summary

In relegating indigenous populations to the infertile lands of the native reserves, colonial rule in Northern Rhodesia ensured that nearly all Africans would be assimilated into an economic system that would only serve to marginalize them and consign them to conditions of rural poverty. The breakup of families due to the rise of the migrant labor system left communities unable to support themselves, increasing their dependency on men as the breadwinners, and ultimately the European settlers, business-owners, and government for employment, sustenance, and survival. The effects of these colonial policies can still be seen today; as was previously mentioned in the profile of Zambia, the majority of the Zambian population continues to reside in rural poverty without access to basic social services, and the country as a whole remains reliant upon the mining industry to support the national economy.

This had particularly negative implications for African women, as this system created conditions where African women would be unable to contribute to their communities beyond their capacity for reproduction, effectively diminishing the role of women in the community and contributing to the rise of a male-dominated culture. In the next chapter, we shall see how this culture was reinforced through the provision of social services under British colonial rule.

Chapter 8

THE PROVISION OF SOCIAL SERVICES IN COLONIAL ZAMBIA: INTRODUCING WESTERN VALUES TO THE AFRICAN CONTEXT

Throughout the colonial era, the British South African Company and the British government largely neglected the needs of the indigenous peoples of Northern Rhodesia. From their perspective, their involvement in the region was nothing more than an investment in economic interests and a means of expanding the realm of British influence in the world, which did not take into account the needs of indigenous peoples. Thus, they only invested in the provision of services where it would benefit them: urban areas. To supplement the minimal services provided in urban areas, missionaries and missionary groups assumed the role of the primary providers of educational and medical services in Northern Rhodesia, particularly in rural areas. They saw social services as vessels through which they could deliver Christianity and the civility of Western values to the African peoples, and concurrently weaken their ‘hedonistic’ traditions (Rotburg 1965, 38).

While the previous chapter examined the ways in which economic imperialist policies in Northern Rhodesia contributed to the disenfranchisement of indigenous peoples, and more specifically women, this chapter seeks to examine the ways in which the absence of colonial government intervention in the provision of education and medical services had a similar effect. The delivery of Western values through mission-driven educational and medical services effectively undermined the social structures that supported and protected women’s reproductive health in African

communities, without necessarily erasing the underlying social norms surrounding female sexuality.

Provision of Education under Colonial Rule

From the moment that the British South Africa Company assumed responsibility for the administration of the Northern Rhodesian colony, there was little incentive to invest in African social services, specifically education. Early promises of ‘schools and industrial establishment’ for African peoples went unfulfilled, as the BSAC’s annual expenditure for the whole of Northern Rhodesia as of 1924 was £348 (Hall 1976, 18).

The reasons for minimal administrative investment in the provision of educational services under the administration of the British South Africa Company were directly tied to interests in acquiring economic profits. The British presence in Northern Rhodesia was a purely economic endeavor intended only to exploit land and labor resources and establish a monopoly on mineral resources in Central and Southern Africa. Investment in social services for the indigenous peoples appeared to be an unnecessary expenditure for the goals that the BSAC wished to accomplish, as they were not understood as critical to the development and success of the mining industry (Hall 1976, 34).

However, to the missionaries that arrived throughout the late 19th century and into the early 20th century, the provision of educational services provided the perfect avenue through which to introduce the indigenous peoples to Western ideals and Christianity. They sought to expose the African people to the sin of their ‘backward’

ways and convince them to adopt wholesome, fulfilling lives as Christians (Rotburg 1965, 39). Delivering on the unfulfilled promise of the administrative government appeared to provide them with the opportunity to build a rapport of trust with the native peoples, augmenting their receptivity to the evangelical message of Christian missionaries (Rotburg 1965, 93-94).

There was also an increasing dependency on missionaries to provide these services at the administrative level. When the Colonial Office assumed administrative authority over Northern Rhodesia in 1924, missions were the largest providers of educational services throughout the colony. Missionary schools totaled approximately 2,000 across the colony, with collective enrollment as high as 89,000 students, including both children of European and African descent (Hall 1976, 83). Recognizing the capacity of missionaries to assume the role of the primary provider of social services, the Colonial Office essentially contracted out this administrative responsibility, providing funding to Christian missions to continue their work. As a result, the number of students attending mission schools grew dramatically, particularly in rural communities; by 1936, nearly 83,000 African children were enrolled in mission schools (Hall 1976, 83).

The expansion of Western influence through the provision of educational services by missionaries in Northern Rhodesia provided formalized training opportunities for indigenous peoples, specifically African men. However, the manner in which educational services were delivered and the content of the missionaries' message forced the assimilation of the indigenous peoples by undermining the role of the kinship system and working to erase African traditions, while also barring indigenous peoples from truly benefitting from the intellectual opportunities offered

by Western education (Falola and Amponsah 2012, 187). In this way colonial education was essentially used as a tool by which to subjugate the Africans, ensuring that their labor force would be disciplined and well-trained.

Initially, the missionaries' outright condemnation of the culture and customs of the various African peoples living in Northern Rhodesia and their relentless demands for behavioral change was repellant for the indigenous peoples, rendering their efforts to convert the African peoples largely unsuccessful (Rotburg 1965, 40-41). The missionaries quickly realized, however, that as African dependency on the services provided by the missionaries increased, so did their willingness to receive the Christian message. Many missionaries began to amass a following by offering small employment opportunities in exchange for students to attend their lessons, and over time, the schools began to grow (Rotburg 1965, 43). Eventually students sought the opportunity to learn how to read so that could leave their communities to become successful house servants and earn money to support their families. Under the guidance of missionaries, schooling primarily consisted of Bible studies through which pupils were taught to read and write in the English language. Additionally, they were taught basic arithmetic, geography, drawing, and religious hymns (Rotburg 1965, 108-109). But, as one early missionary wrote, the intention "was not so much to make scholars of them, but to teach them truth and righteousness..." (Rotburg 1965, 44).

As was previously mentioned in Chapter 6, entitled *Zambia Before Colonialism: The Role of Women*, there was no formalized system of education among the indigenous peoples of Northern Rhodesia. Education was largely a function of kinship systems, through which all children were able to learn about how they would be expected to contribute to their communities and to society through

observation and interaction with their kinsman, and particularly their elders. The education they received was comprehensive, encapsulating all aspects of community life. These lessons were both valuable and necessary to prepare individuals for the fulfillment of their future obligations and to ensure that future generations would be capable of assuming the burden of their position.

In comparison, missionary-led education was limited in scope. Only an elite group of men were allowed to partake in formalized European educational institutions, who, due to the nature of their schooling, emerged half-educated and indoctrinated into the patriarchal values of Western culture (Abdi, Shizha and Ellis 1955, 26). Most women were excluded from receiving formal education beyond basic primary schooling, as they were considered to be “intellectually inferior” to their male counterparts, only capable of performing domestic duties in service of men (Lamba 2006, 46). Education for females was treated more as a form of Western finishing school, where girls could be instructed in how to be a dutiful Christian wife and mother and learn how to please their husbands (Falola and Amponsah 2012, 188).

The limitations of the missionary education had several normative consequences for indigenous peoples. It undermined the role of kinship systems by removing children from their communities to attend formal schools that were neither comprehensive nor advanced in their curriculum. The gender dynamic in British colonial education fostered a system that promoted the dominance of men and, transitively, the subservience of women in all social capacities, with a particular emphasis on the robustness of male virility and shame of female sexuality (Kaoma 2016, 58). Minimal exposure to the sexual and reproductive education that had been integral to the teachings of kinship systems ensured that these teachings would define

male/female relationships, resulting in a distinct lack of respect for the responsibilities associated with human sexuality, and a misunderstanding of appropriate behavior with regard to socially sanctioned sexual relationships (Kaoma 2016, 58).

Missionary Medical Services in Rural Communities

In addition to providing educational services, missionaries were also the foremost provider of medical services under British colonial rule between 1890 and 1964. Under the administrative control of the British South Africa Company, the provision of medicine and medical services were privatized and primarily left to the discretion of the major industries of employment, predominantly the mining and rail industries. As a result, the majority of medical facilities were concentrated in more urbanized areas and maintained an emphasis on European health, while providing only the medical attention necessary to indigenous peoples to maintain a healthy and productive workforce (Mwansa 1989, 72).

Conversely, early missionaries saw the provision of health services to be a supplemental opportunity to gain the trust of the natives and evangelize the indigenous peoples, much like formalized education. Many missionaries were trained in basic curative medical practices, such as how to apply a bandage to a wound, set broken bones or dislocated joints, drain dermatological sores, and nurse the symptoms of a fever (Mwansa 1989, 71), and sought the opportunity to do as Christ had done, healing the sick and the wounded with the hope of impressing upon the native peoples the saving power of Christianity (Azevedo 2017, 338). They would travel from community to community, bringing with them medical supplies that would allow them

to treat the ailments of rural villagers, from adults to children, and even pregnant women (Rotburg 1965, 92). The novelty of Western medicine attracted the attention of the indigenous peoples, and they began seeking treatment for even those conditions not previously considered illnesses, but natural processes. Eventually, this practice allowed the missionaries to earn a reputation as miracle workers and to build public confidence in mission-driven medicine among the African peoples of Northern Rhodesia (Rotburg 1965, 92), ultimately ensuring that missionary medicine would become a critical component of primary healthcare over time.

As mission-driven healthcare became more of a permanent fixture in colonial Northern Rhodesia, mission health facilities and dispensaries were established throughout the rural countryside. The services provided were also expanded in an effort to compete with other faith-healing groups, most notably traditional African healers (Azevedo 2017, 337). Many missionaries publicly condemned and demonized the practices of traditional healers, believing that they could turn the indigenous peoples away from their ‘backward traditions’ by eliminating the use of rites and rituals in healing (Rotburg 1965, 94). In 1914, colonial authorities even passed a Witchcraft Act, which forbade traditional healers from engaging in activities believed to be witchcraft (Kasonde et al. 1994, 80). However, the stigmatization of traditional medicine did not prevent its continued use; mission health facilities were sparse and access was limited, and thus, many indigenous people continued to rely on the medicine men in their communities, despite promising the white missionary doctors that they would remain faithful to the practice of Western medicine (Azevedo 2017, 339).

When administrative power over the colony of Northern Rhodesia was transferred to the British Colonial Office, the colonial government assumed responsibility for the provision of health services. Accordingly, they began to establish public hospitals and dispensaries, predominantly in urban centers where European settlers resided. By 1935, the government had opened 18 public hospitals, seven for European use and eleven for use by the Africans, and 23 dispensaries in administrative centers (British Colonial Office 1935, 10). Services were distributed separately, as not to introduce the ‘tropical’ diseases of the Africans to the settler population, indicating that the primary motivation for investing in public health at this time was to ensure the safety and welfare of European visitors rather than providing care to those they governed (Mwansa 1989, 71). Instead of investing its resources in areas where there was little hope for the development of economic interest, the colonial government continued to rely on mission-driven health facilities. Only fifteen government dispensaries were opened in more rural areas for use by indigenous peoples (British Colonial Office 1935, 10). Recalling the distribution of the population according to the Crown Land and Native Reserve Act, it can be inferred these fifteen dispensaries were intended to serve more than a million people, suggesting limited access to the services provided.

Summary

The introduction of Western institutions, such as formalized education and curative medicine had both positive and negative effects for the indigenous populations of Zambia, but the positives were often overshadowed by the negatives.

While the provision of Western education provided the African peoples with some opportunities for professional development, it predominantly served as a tool to suppress and control the Africans and increase their dependence upon the British colonial government. This had long-term implications for development in Zambia.

At the time of Zambian independence in 1964, less than 1000 Africans had received a secondary school certificate, and only 100 held university degrees (Kasonde et al. 1994, 2). The majority of doctors were European settlers, who returned home when the British withdrew from its former colony. There was no one left to support the needs of the Africans, which created a severe shortage in healthcare providers that has continued to persist well into the current millennium. Moreover, the introduction of Western values, through the provision of educational and medical services, served to reinvent African culture and its traditions, which ultimately contributed to the marginalization of women by limiting educational opportunities, stigmatizing female sexuality, and diminishing the importance of rites of passage, such as birth, from communal events to be celebrated, to medical conditions to be treated. In this way, the introduction of Western values compounded the effects of British economic interests to embed conditions of poor maternal health into the fabric of Zambian culture, creating the development problems that continue to persist in the modern day.

Chapter 9

SYNTHESIS AND CONCLUDING REMARKS

In the introduction to this thesis, I posed the question of how, given limited time, resources, and support could we ensure that all countries are able to achieve or come close to achieving the Sustainable Development Goal targets for the year 2030. The answer, I suggested, was not in the quantitative evidence of the problem, but rather the underlying contextual factors that gave rise to the problem in the first place.

To support this hypothesis, I chose to examine the issue of maternal health access in Zambia. An analysis of the quantifiable data provided by Zambia's ministry of health provided evidence of the problem of maternal health access, while an examination of Zambia's history allowed us to diagnose its origins. We discovered that this issue is predominantly a consequence of the culture clash between the social norms of precolonial African societies and the Western values introduced to Zambia through the implementation of policies that supported British economic interests. The evidence to support this claim lies in the correlation between the disenfranchising effect of colonial policies on the indigenous people and the maternal health challenges that exist in Zambia today.

As this case study has demonstrated, many of the disparities between urban and rural areas with regard to health access can be explained by the development of the mining industry and commercial farming and the corresponding rise of the migrant labor system. The concentration of wealth and labor in urban and peri-urban areas

warranted little investment in rural infrastructure under colonial rule. As a result, there are a limited number of health centers and health providers in rural areas, as well as insufficiencies in the transportation infrastructure, which acts a barrier for women seeking antenatal and emergency obstetric care.

The effects of colonialism on women's access to maternal care can also be seen in more specific issues such as high fertility rates, particularly among teens. As discussed in the previous chapter, formalized education in missionary schools undermined the authority of kinship systems by removing children from their home during the school day and teaching values contrary to the beliefs and practices of African societies. The stigmatization of female sexuality and the corresponding lack of reproductive education has manifested in the silence surrounding sex education, which has directly contributed to the prevalence of teenage pregnancy in Zambia, particularly in rural Zambia.

The legacy of Western dependence has also created barriers to addressing these pressing development concerns in Zambia. As noted in the biographical portrait of modern-day Zambia, the country's continued reliance on the mining industry and inability to successfully diversify its economy have left the country vulnerable to the volatility of the economic market. This has repeatedly presented challenges for the government in terms of financing its development agenda, particularly with regard to healthcare.

For example, the world-wide recession that occurred between 1974 and 1979, which caused commodity prices to fall dramatically, had a substantial negative impact on Zambia's ability to support the continued growth of the healthcare sector, or even finance existing personnel and hospitals. Because of this economic downturn, the

central government was forced to curb its capital spending, which resulted in cutbacks for hospital and health center maintenance, and the financial accommodations of healthcare workers, which had already been eroded by increasing inflation (Kasonde et al. 1994, 3). In an attempt to alleviate the effects of this downturn on the country's healthcare expansion goals, the government sought to provide small allowances to those serving in rural areas, where conditions of poverty were increasingly taking their toll. However, the government was unable to follow through on this promise, as this would require the distribution of allowances across sectors, which policymakers could not afford to do (Kasonde et al. 1994, 3).

The result was a sharp decline in the number of doctors and healthcare providers serving in Zambia's healthcare sector. A survey conducted in 1987 indicated that nearly 60% of physician posts were vacant, and the majority of posts had been filled by foreign nationals receiving special benefits (Kasonde et al. 1994, 4). To this day, Zambia remains among the countries plagued by a shortage in health workers. The World Health Organization has estimated a human resources shortfall of more than 50 percent in the healthcare field with an average of only 0.8 healthcare workers per 1,000 patients. In rural areas, the circumstances are even more dire; some provinces have reported ratios of 0.5 or 0.6 healthcare workers per 1,000 patients with the most severe human resource shortages being doctors, pharmacists, and midwives (Zambia: Health Workforce 2010).

Chronic underinvestment in rural health facilities and personnel, limited opportunities for healthcare education and training, and personnel preferences for the conditions of service in urban areas have all contributed to the underdevelopment of rural healthcare, and consequently, the inadequate provision of health services

(Zambia: Health Workforce 2010). Efforts to address these issues through the integration of traditional medicine into the modern medical system have helped to alleviate some of the effects of this shortage. However, the magnitude of the health challenges that Zambia continues to face has forced the country's continued reliance on foreign economic intervention and financial support to provide necessary services for its people.

International initiatives and Western intervention in Zambia today have done little to support the country's transition from Western dependence to economic development in the post-independence period. During the 1980s and 1990s, this support was given in the form of Structural Adjustment Programs (SAPs) facilitated by the International Monetary Fund and the World Bank. These SAPs provided loan assistance with the condition that the Zambian government implement economic stabilization policies that sought to reduce fiscal imbalances by limiting government spending on health and education in favor of reorienting national policies to focus on revenue expansion through the growth of exports (Kakwani, Makonnen and van der Gaag 1990, 17). These development programs have since been replaced by foreign direct intervention, particularly on the part of the Chinese, one of the largest investors in the extraction industry in Zambia. In exchange for granting Chinese investors resource mining rights, Zambia has received billions of dollars to invest in the development of its infrastructure and expansion of social services. The growing Chinese presence in Zambia has created an influx of Chinese migrants, who have established businesses and companies that now employ thousands of Zambians throughout the country. They have even built schools and hospitals, which now service those living in areas with large Chinese populations (Okeowo 2013). This is

the age of the new imperialism, fostering the dependency of the developing world for the benefit of foreign economic interests.

This case study of maternal health in Zambia provides evidence that we must look beyond the numbers to truly understand the basis of the issues associated with global poverty that the Millennium Development Goals sought to draw attention to. The MDG indicators are simply that, indicators; they can only serve to demonstrate the prevalence of the problem and identify the populations most affected by it. They cannot tell you how to create effective policy solutions. That responsibility has largely been left to the discretion of the countries experiencing these issues of inequality.

However, as we have seen in the case of Zambia even with the knowledge and understanding of the complexity of these historically imprinted development problems these issues are difficult for developing countries to address. This is largely due to the lasting impact of colonialism and continued dependence upon the Western world in the post-independence period. Thus, there are only two possibilities for us to consider as we look toward the future of the development agenda. We must either be willing to redefine what constitutes success under the Sustainable Development Goals, accounting for the challenges faced by developing countries, or we must directly address the lingering implications of the inherently disadvantageous relationship between the developed and the developing world. Because, if not addressed, this imbalanced relationship will ultimately continue to inhibit our ability to achieve the progress necessary to realize the goals of the sustainable development agenda set forth by the United Nations.

REFERENCES

- Abdi, Ali A., Edward Shizha, and Lee Ellis. 1955. *Citizenship Education and Social Development in Zambia*. Charlotte: Information Age Publishing, Inc.
- African Health Observatory. 2010. "Zambia: Health Workforce." Accessed March 15, 2018.
http://www.aho.afro.who.int/profiles_information/index.php/Zambia:Health_workforce_-_The_Health_System.
- Anunobi, Fredoline. 2002. "Women and Development in Africa: From Marginalization to Gender Inequality." *African Social Science Review* 2 (2): 41-63. <https://digitalcommons.kennesaw.edu/assr/vol2/iss2/3>.
- Association of Chartered Certified Accountants,. 2013. *Key Health Challenges for Zambia*. April. <http://www.accaglobal.com/content/dam/acca/global/PDF-technical/health-sector/tech-tp-khcz.pdf>.
- Azevedo, Mario J. 2017. *Historical Perspectives on the State of Health and Health Systems in Africa Volume 1: The Pre-Colonial and Colonial Eras*. African Histories and Modernities. Jackson: Palgrave Macmillan.
- British Colonial Office. 1931. *Annual Report on the Social and Economic Progress of the People of Northern Rhodesia, 1930*. Annual Colonial Report No. 1561. London: Stationary Office of the Crown.
http://libsysdigi.library.illinois.edu/ilharvest/Africana/Books2011-05/3064635/3064635_1930/3064635_1930_opt.pdf.
- British Colonial Office. 1936. *Annual Report on the Social and Economic Progress of the People of Northern Rhodesia*. Annual Colonial Report No. 1769. London: Stationary Office of the Crown.
http://libsysdigi.library.illinois.edu/ilharvest/Africana/Books2011-05/3064635/3064635_1935/3064635_1935_opt.pdf.
- Burawoy, Michael. 1982. "The Hidden Abode of Underdevelopment: Labor Process and the State in Zambia." *Politics & Society* 11 (2): 123-166.
<https://doi.org/10.1177/003232928201100201>.

- Burdette, Marcia M. 1988. *Zambia: Between Two Worlds*. Boulder: Westview Press, Inc.
- Central Intelligence Agency. n.d. *Country Profile: Zambia*. Accessed October 3, 2017. <https://www.cia.gov/library/publications/the-world-factbook/geos/za.html>.
- Central Statistical Office. 2013a. *2010 Census of Population and Housing: Population and Demographic Projections 2011-2035*. Lusaka: Central Statistical Office. <https://www.zamstats.gov.zm/phocadownload/Zambia%20Census%20Projection%202011%20-%202035.pdf>.
- Central Statistical Office. 2015. *Demographic and Health Survey 2013-2014*. Lusaka: Central Statistical Office. <https://www.dhsprogram.com/pubs/pdf/fr304/fr304.pdf>.
- Central Statistical Office Information Research and Dissemination Branch. 2014. "Zambia in Figures: 1964-2014." Lusaka: Central Statistical Office. <http://www.zamstats.gov.zm/index.php/publications/category/26-dissemination>.
- Central Statistical Office. 2013b. *Preliminary Results of the 2012 Labour Force Survey*. Lusaka: Central Statistical Office. http://www.ilo.org/wcmsp5/groups/public/---ed_emp/---ed_emp_msu/documents/genericdocument/wcms_231731.pdf.
- Central Statistical Office. 2013c. "Figure 1.2: Administrative Map of Zambia with District Names." From *Zambia 2010 Census Atlas*. Lusaka: Central Statistical Office, <http://www.zamstats.gov.zm/index.php/publications/category/11-2010-census>.
- Chin-Quee, D., K. Katz, R. K. Mbewe, L. Jumbe, and J. Bratt. 2011. *Expanding Community Based Access to Injectable Contraception: Results of a Pilot Study in Zambia*. GM-0038 Research Triangle Park, NC, USA and Lusaka, Zambia. FHI 360 and Zambia Ministry of Health. <https://www.k4health.org/sites/default/files/23-Zambia%20CBA2I%20Pilot%20Final%20Report.pdf>.
- Commonwealth of Nations. n.d. "Zambia: Regional & Local Government." Accessed October 11, 2017. <http://www.commonwealthgovernance.org/countries/africa/zambia/local-government/>.
- Ehret, Christopher. 2016. *The Civilizations of Africa: A History to 1800*. Charlottesville: University of Virginia Press.

- Falola, Toyin, and Nana Akuna Amponsah. 2012. *Women's Roles in Sub-Saharan Africa*. Santa Barbara: ABC-CLIO, LLC.
- Galbraith, John S. 1974. *Crown and Charter: The Early Years of the British South Africa Company*. Berkley: University of California Press.
- Gann, L. H. 1969. *A History of Northern Rhodesia: Early Days to 1953*. New York: Humanities Press.
- Hall, Richard. 1965. *Zambia*. London: Pall Mall Press.
- Hall, Richard. 1976. *Zambia 1890-1964: The Colonial Period*. London: Longman Group Limited.
- Henry, Elizabeth G., Donald M. Thea, Davidson H. Hamer, William Dejong, Kebby Musokotwane, Kenneth Chibwe, Godfrey Biemba, and Katherine Semrau. 2017. "The Impact of a Multi-Level Maternal Health Programme on Facility Delivery and Capacity for Emergency Obstetric Care in Zambia." *Global Public Health*. <https://doi.org/10.1080/17441692.2017.1385824>
- Kajoba, Gear M. 2008. "Vulnerability and Resilience of Rural Society in Zambia: From the View Point of Land Tenure and Food Security." Working Paper on Social-Ecological Resilience Series, Research Institute for Humanity and Nature. <http://www.chikyu.ac.jp/resilience/files/WorkingPaper/WP2008-003.Kajoba.pdf>.
- Kakwani, Nanak, Elene Makonnen, and Jacques van der Gaag. 1990. "Structural Adjustment and Living Conditions in Developing Countries." Policy Research Working Paper Series 467, The World Bank. <http://documents.worldbank.org/curated/en/501571468739307588/pdf/multi0page.pdf>.
- Kaoma, Kaypa. 2016. "Unmasking the Colonial Silence: Sexuality in Africa and in the Post-Colonial Context." *Journal of Theology for Southern Africa* 155 (Special Issue: July): 49-69.
- Kasonde, Joseph M., John D. Martin and World Health Organization. 1994. *Experiences with Primary Health Care in Zambia*. Geneva: World Health Organization.
- Lamba, Isaac C. 2006. "African Women's Education in Malawi, 1875-1952." *Journal of Educational Administration and History* 14 (1): 46-54. <https://doi.org/10.1080/0022062820140106>.

- Lincetto, Ornella, Seipati Mothebesoane-Anoh, Patricia Gomez, and Stephen Munjanja. 2006. "Chapter 2: Antenatal Care." In *Opportunities for Africa's Newborns*, edited by Joy Lawn and Kate Kerber, 51-62. Geneva: WHO on behalf of The Partnership for Maternal Newborn and Child Health. http://www.who.int/pmnch/media/publications/aonsectionIII_2.pdf.
- Livingstone, David. 1874. *The Last Journals of David Livingstone in Central Africa, From 1865 to his Death, Volume I*. Edited by J. Murray. <https://library.si.edu/digital-library/book/lastjournalsofda011ivi>.
- Mbiti, John. 1969. *African Religions & Philosophy*. Oxford: Heinemann Educational Publishers.
- MDG Monitor. 2016. "Category: Millennium Development Goals." Accessed November 15, 2017. <http://www.mdgmonitor.org/millennium-development-goals/>.
- Moore, Reginal J. B. 1939. "Labour Conditions in Northern Rhodesia." *Journal of the Royal African Society* 38 (153): 438-441. <http://www.jstor.org/stable/717995>.
- Mwansa, Lengwe-Katembula. 1989. "Rural-Urban Health Care Service Imbalances in Zambia — Forces and Outcomes." *Journal of Social Development in Africa* 4 (1): 69-83. <http://pdfproc.lib.msu.edu/?file=/DMC/African%20Journals/pdfs/social%20development/vol4no1/jsda004001010.pdf>.
- National Research Council. 2000. "The Consequences of Maternal Morbidity and Maternal Mortality: Report of a Workshop." Washington D.C.: National Academy Press. <https://www.ncbi.nlm.nih.gov/books/NBK225438/?report=reader>.
- Okeowo, Alexis. 2013. "China in Africa: The New Imperialists?" *The New Yorker*. June 12, 2013. <https://www.newyorker.com/news/news-desk/china-in-africa-the-new-imperialists>.
- Ponga, Auxilia. 2017. "Changing Population Age Structures and Sustainable Development." Statement delivered at the Fifth Session of the Commission on Population and Development. New York: United Nations. https://www.un.org/en/development/desa/population/pdf/commission/2017/country/AgendaItem3/zambia_en.pdf.
- Richards, Audrey I. 1939. *Land Labour and Diet in Northern Rhodesia: An Economic Study of the Bemba Tribe*. Oxford: Oxford University Press.

- Rotburg, Robert I. 1965. *Christian Missionaries and the Creation of Northern Rhodesia 1880-1924*. Princeton: Princeton University Press.
<http://www.jstor.org/stable/j.ctt183ptgb>.
- Sialubanje, Cephas, Karlijn Massar, Larah Horstkotte, Davidson H. Hamer, and Robert A. C. Ruiter. 2017. "Increasing Utilisation of Skilled Facility-Based Maternal Healthcare Services in Rural Zambia: The Role of Safe Motherhood Action Groups." *Reproductive Health* 14 (81). <https://doi.org/10.1186/s12978-017-0342-1>
- Taylor, Scott D. 2006. *Culture and Customs of Zambia*. Westport: Greenwood Press.
- The World Bank. 2016. "GDP per capita (current UD\$)." Accessed October 28, 2017. <https://data.worldbank.org/indicator/NY.GDP.PCAP.CD>.
- The World Bank. 2017a. "GINI index (World Bank estimate)." Accessed October 28, 2017. <https://data.worldbank.org/indicator/SI.POV.GINI?locations=ZM>.
- The World Bank. 2017b. "Unemployment, total (% of total labor force) (modeled ILO estimate)." Accessed October 28, 2017. <https://data.worldbank.org/indicator/SL.UEM.TOTL.ZS>.
- United Nations Children's Fund. 2008. "Progress for Children: A Report Card on Maternal Mortality." https://www.unicef.org/publications/files/Progress_for_Children-No._7_Lo-Res_082008.pdf.
- United Nations Children's Fund. 2014. "Statistics and Monitoring: Millennium Development Goals (MDG) Monitoring." Accessed November 13, 2017. https://www.unicef.org/statistics/index_24304.html.
- United Nations Department of Economic and Social Affairs Statistics Division. 2008. "Official List of MDG Indicators." Accessed November 8, 2017. <http://mdgs.un.org/unsd/mdg/host.aspx?Content=indicators/officiallist.htm>.
- United Nations Department of Economic and Social Affairs Statistics Division. 2017. "SDG Indicators: Global Indicator Framework for the Sustainable Development Goals and Targets of the 2030 Agenda for Sustainable Development." Accessed October 4, 2017. <https://unstats.un.org/sdgs/indicators/indicators-list/>.
- United Nations Department of Economic and Social Affairs Statistics Division. 2010. *The World's Women 2010: Trends and Statistics*. New York: United Nations.

- United Nations Department of Economic and Social Affairs. 2016. "Sustainable Development Goal 3: Targets & Indicators. " Accessed October 4, 2017.
<https://sustainabledevelopment.un.org/SDG3>.
- United Nations Development Programme. 2015. "MDG Reports: Regional and Country Progress Reports." Accessed November 9, 2017.
<http://www.undp.org/content/undp/en/home/librarypage/mdg/mdg-reports.html>.
- United Nations. 2000. "Millennium Summit (6-8 September 2000)." Accessed October 12, 2017.
http://www.un.org/en/events/pastevents/millennium_summit.shtml.
- United Nations. 2016. "Sustainable Development Goals: 17 Goals to Transform our World." Accessed October 18, 2017.
<http://www.un.org/sustainabledevelopment/summit/>.
- United Nations. 2015. *The Millennium Development Goals Report 2015*. New York: United Nations.
[http://www.un.org/millenniumgoals/2015_MDG_Report/pdf/MDG%202015%20rev%20\(July%201\).pdf](http://www.un.org/millenniumgoals/2015_MDG_Report/pdf/MDG%202015%20rev%20(July%201).pdf).
- United Nations Population Fund. 2015. "Events: United Nations Sustainable Development Summit." Accessed October 12, 2017.
<https://www.unfpa.org/events/united-nations-sustainable-development-summit-2015>.
- University of Zambia, The Republic of Zambia Central Statistical Office, and the Zambian Ministry of Health. 1993. *Zambia Demographic and Health Survey 1992*. The World Bank Microdata Catalog.
<http://microdata.worldbank.org/index.php/catalog/1524>.
- World Health Organization. 2017. "Country Cooperation Strategy: At a Glance." http://apps.who.int/iris/bitstream/handle/10665/136991/ccsbrief_zmb_en.pdf?sequence=1.
- World Health Organization. 2016. "Maternal Health Fact Sheet." <http://www.who.int/mediacentre/factsheets/fs348/en/>.
- World Health Organization. 2015. "MDG 5: Improve Maternal Health." Accessed November 18, 2017.
http://www.who.int/topics/millennium_development_goals/maternal_health/en/.

World Health Organization, United Nations Children's Fund, United Nations Population Fund, World Bank Group, and United Nations Development Programme. 2015. "Current Status and Progress: Maternal Mortality fell by almost half between 1990 and 2015." UNICEF Data. Accessed December 7, 2017. <https://data.unicef.org/topic/maternal-health/maternal-mortality/>.