

Abortion in Cote d'Ivoire and El Salvador: A Consequence of High Fertility and a Cause of Maternal Mortality

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Abstract

While maternal mortality and fertility rates are much higher in Cote d'Ivoire than in El Salvador, both countries have made little progress during the last decade with the reduction of their maternal mortality rates despite experiencing a continuous decline in fertility rates. This article seeks to understand and address the relationships between abortion, maternal mortality and fertility within Cote d'Ivoire and El Salvador as well as the difficulties both countries face when reducing maternal mortality rates. The existing literature has specified the critical role of contraception in reducing the number of abortion-related maternal deaths. Hence, this article will also examine the differences in access to modern contraceptives in Cote d'Ivoire and El Salvador, and how these differences affect each country's goal to pursue lower maternal mortality rates.

I. Introduction

Approximately 830 women die every day from preventable causes related to pregnancy and childbirth, and 99 percent of all maternal deaths occur in developing countries.¹ At the United Nations (UN) Millennium Summit in September 2000, all countries committed themselves to reduce maternal mortality by three quarters between 1990 and 2015. However, since 1990, the number of maternal deaths worldwide has dropped by only 43 percent.²

In Cote d'Ivoire, the maternal mortality rate was reduced by only 13.4 percent from 1990 to 2015, resulting in a maternal mortality rate of 645 deaths per 100,000 live births in 2015. During the same time period, El Salvador reduced its maternal mortality rate by 65.6 percent, which is impressive compared to Cote d'Ivoire as well as the world average. Concerning still is the fact that most of El Salvador's reduction in maternal mortality happened during the 1990s. During the last ten years (from 2005 to 2015), El Salvador reduced its maternal mortality rate by only 20.6 percent.³

¹ World Health Organization (WHO) (2015).

² World Health Organization (WHO) (2015).

³ The data in this paragraph has been calculated by the author based on World Bank (2015) annual data.

Reflecting and building on the existing literature, this article reviews the legal restrictions of abortion in Cote d'Ivoire and El Salvador and examines the evolutions of fertility rates, access to contraceptives, the unmet need for contraceptives, and maternal mortality rates of these two countries. Following this introduction, it also provides a brief review of the literature and some empirical background for Cote d'Ivoire and El Salvador.

II. Brief Literature Review

While there is little literature examining abortion, fertility, and maternal mortality in either Cote d'Ivoire or El Salvador, there are fortunately a variety of global studies that shed some light on these issues for both countries. Kent (2010) and Nolen (2015) are focusing on El Salvador, Stewart, Stecklov and Adewuyi (1999) review the family planning programs in West Africa, while Cohen (2009), Guillaume and Desgrées Du Loû (2002), a joint policy brief by the Guttmacher Institute and International Planned Parenthood Federation (2010), and the extensive survey by Kassebaum et al. (2014) cover issues related to abortion and maternal mortality from a global perspective.

- Cohen (2009) illustrates that the primary obstacle to preventing unsafe abortion is the antiabortion policymakers' refusal to understand that the illegality of abortion does not quell its occurrence. Furthermore, fewer women would be breaking the law if contraception was more readily available and less stigmatized. Cohen stresses that El Salvador must understand that legal abortion saves lives in that it provides for the safety of the procedure, while Cote d'Ivoire may benefit more immediately and substantially from expanding the accessibility of contraception when endeavoring to reduce maternal mortality rates.
- Guillaume and Desgrées Du Loû (2002) found that although the vast majority of women in their survey were aware of modern contraception methods, only 12 percent were using such methods to control their family size. The article designates closing the gap between the need and availability of contraception as the most viable means of lowering the numbers of both clandestine abortions and maternal deaths, an insight distinctly applicable to El Salvador, where abortion is banned, regardless of the woman's health.
- The Guttmacher Institute and International Planned Parenthood Federation (2010) address the nature of adolescent fertility rates worldwide. Overall, married adolescent women in low-income countries are less likely than those in high-income countries to be willing to avoid pregnancy, suggesting that poorer women have not only fewer options but also different priorities for having children. They designate the prevention of unwanted pregnancy among adolescent women as critical to the reduction of maternal deaths.
- Kassebaum et al. (2014) is a survey by about 400 researchers, who worked together to collect data on global, regional, and national specificities of abortion-related deaths. While such deaths have declined significantly at the global level, they actually have increased in Sub-Saharan Africa. Health system reengineering would most immediately and substantially minimize the number of deaths due to causes like complications resulting from attempted abortion.
- Kent (2010) attests to the importance of access to contraception in developing countries. Referring to a 2008 family planning survey by El Salvador's Ministry of Health, which found that fertility dropped 60 percent in 30 years (from 6.3 lifetime births per woman in the mid-1970s to 2.5 in the 2003-2008 period), Kent points out that much of this long-term

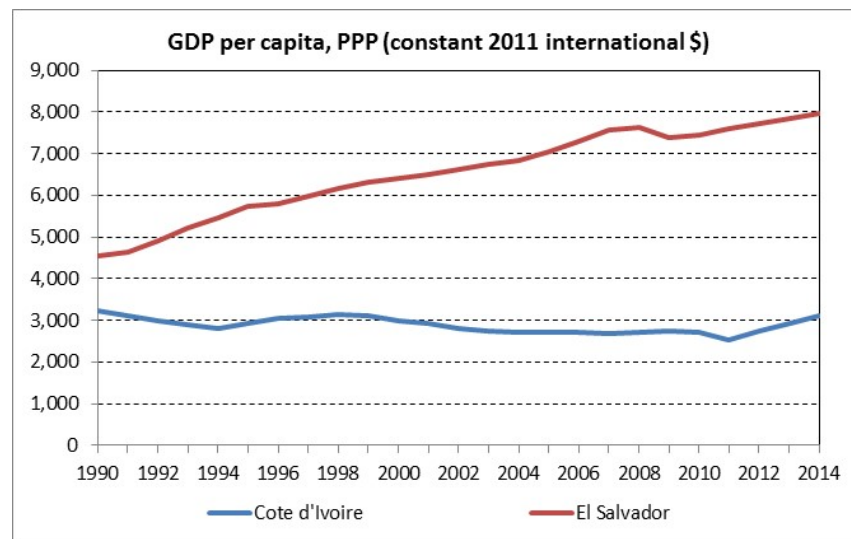
fertility decline resulted from major increases in contraceptive use (which increased from 47 percent in 1988 to 73 percent in 2008), led by large increases in the use of female sterilization.

- Nolen’s (2015) article in *The Globe and Mail* identifies El Salvador as the country with the world’s strictest anti-abortion law. She provides details about El Salvador’s law and its enforcement. The data is presented in tandem with case illustrations such as that of Myrna Ramirez, a woman who spent nearly 13 years in jail for attempted murder after she went into premature labor at home, and a neighbor reported her to the authorities for attempting to terminate a pregnancy.
- Stewart, Stecklov and Adewuyi (1999) write that Cote d’Ivoire’s ability to reduce fertility has been complicated by the fact that the Ivorian government had integrated family planning services into their healthcare systems only since 1991. On the other hand, El Salvador has been working to provide comprehensive access to family planning since the 1970s.

III. Empirical Background

While both Cote d’Ivoire and El Salvador are developing countries, this section provides details on the considerable differences between the two countries in terms of three basic socio-economic indicators: gross domestic product (GDP) per capita (adjusted for purchasing power parity (PPP)), life expectancy and literacy rates.

Figure 1: GDP per capita, PPP (constant international \$), 1990-2014



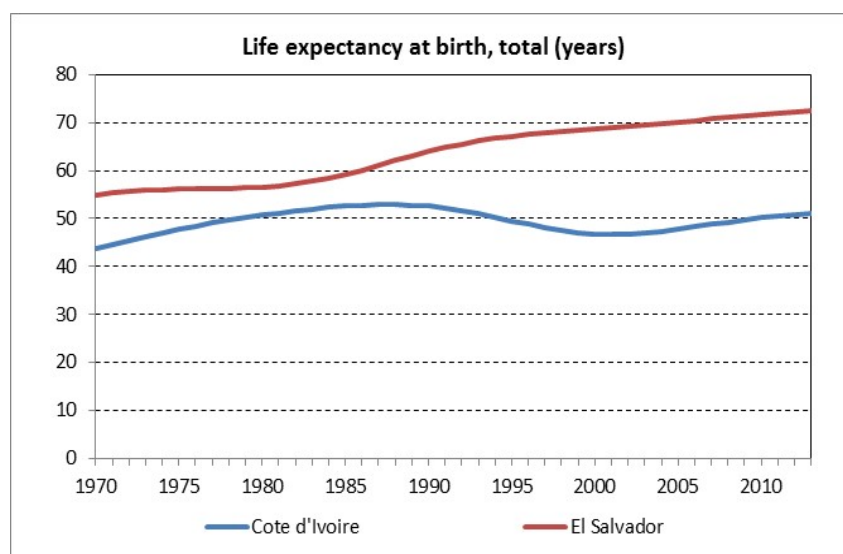
Source: Created by author based on World Bank (2015).

As Figure 1 shows, not only is El Salvador’s GDP per capita now much higher than that of Cote d’Ivoire’s, the rate at which it has grown during the last 25 years has been significantly higher in El Salvador. Cote’ d’Ivoire’s GDP per capita was actually slightly lower in 2014 (\$3,108) than it was in 1990 (\$3,220). Hence, while El Salvador’s GDP per capita was only slightly higher than

that of Cote d'Ivoire's in 1990, by 2014, El Salvador's GDP per capita was nearly three times that of Cote d'Ivoire's.

As shown in Figure 2, people in El Salvador live consistently and notably longer than in Cote d'Ivoire. The gap in life expectancy between Cote d'Ivoire and El Salvador narrowed a little bit during the 1970s and the early 1980s, but then widened drastically in the 1990s and 2000s, especially as Cote d'Ivoire's life expectancy declined from 1989 to 2001, while that of El Salvador continued to increase. Only since 2001 has Cote d'Ivoire's life expectancy started to increase once again, though at a modest growth rate. As of 2013, the life expectancy at birth stood at 51.2 years for Cote d'Ivoire, while it reached 72.5 years in El Salvador. In both countries, women live on average longer than men, though the gender gap has declined in more recent years, especially in Cote d'Ivoire.⁴

Figure 2: Life Expectancy at Birth in Cote d'Ivoire and El Salvador, 1970-2013



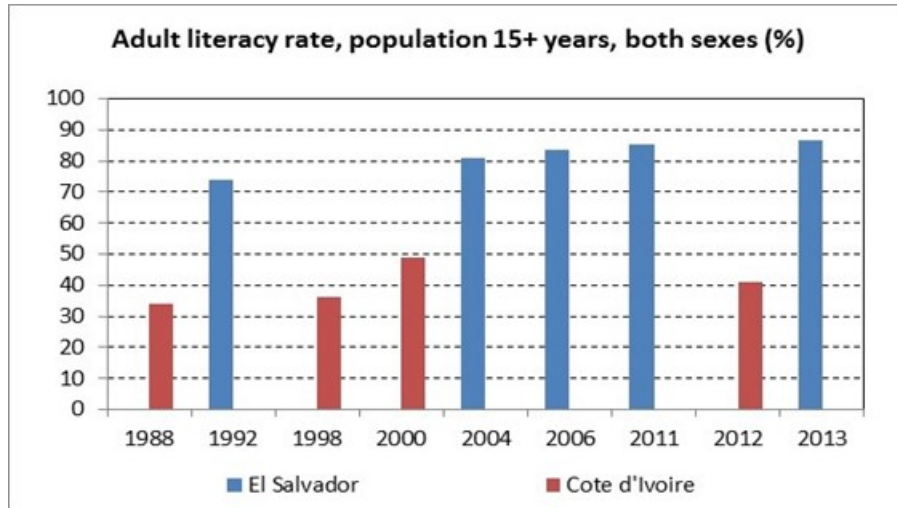
Source: Created by author based on World Bank (2015).

Despite limited data availability, Figure 3 shows slowly increasing literacy rates in El Salvador, while literacy rates are not only far lower but have also stagnated in Cote d'Ivoire. An issue of the *Asia-Pacific Population and Policy*, which looked at how female literacy affects fertility in India, found that in states with high literacy rates, fertility rates were low. Such a correlation indicates that “a literate population speeds the diffusion of information about family planning, education and healthcare.”⁵ Consequently, consistently higher literacy rates invariably contribute to El Salvador's lower fertility rate, relative to the less literate and more fertile Cote d'Ivoire.

⁴ Calculations by author based on World Bank (2015).

⁵ Robey (ed.) (1990), p. 4.

Figure 3: Literacy Rates in Cote d'Ivoire and El Salvador, all available years

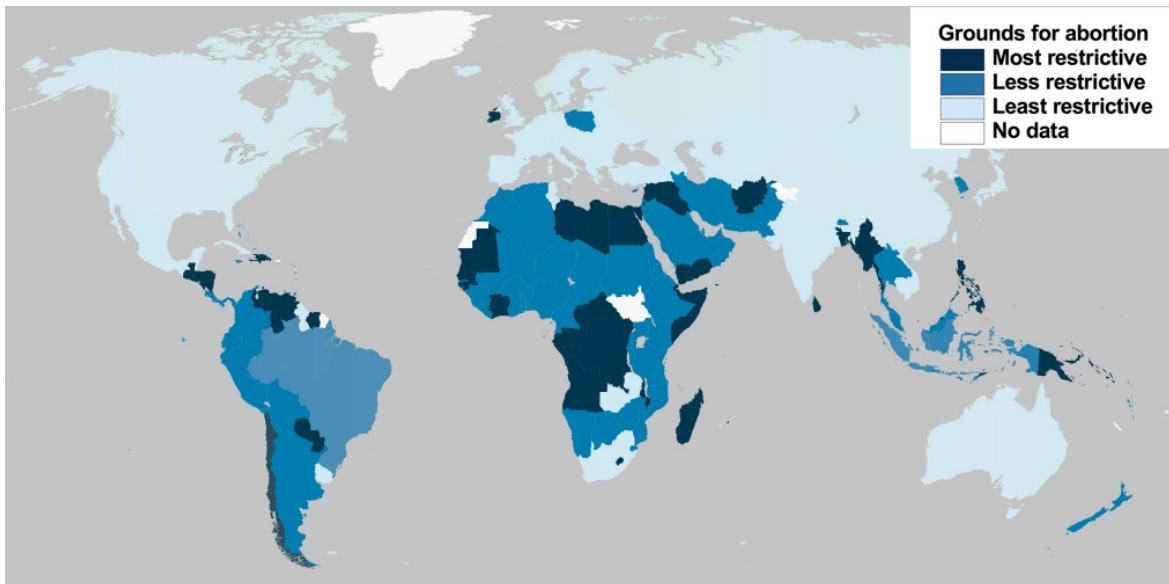


Source: Created by author based on World Bank (2015).

IV. Discussion

While many governments around the world have implemented measures to improve access to safe abortion, both Cote d'Ivoire and El Salvador remain categorized by the United Nations (UN) Population Division (2014) as countries with the most restrictive grounds on which abortion is permitted. In Cote d'Ivoire, abortions are only permitted to save a woman's life. El Salvador is one of the six countries in the world that do not permit abortions under any circumstances (regardless of if an abortion would save the mother's life).⁶

Figure 4: Types of Legal Grounds on which Abortion is Permitted



Source: UN Population Division (2014), p. 5.

⁶ UN Population Division (2014), p. 3.

Figure 4 above shows the world's countries classified by the UN Population Division (2014) into three levels of legal restrictions:

- Most restrictive: abortion not permitted or permitted only to save a woman's life;
- Less restrictive: to preserve a woman's physical or mental health, in case of rape or incest, or because of fetal impairment;
- Least restrictive or liberal: for economic or social reasons or on request.

According to Cohen (2009), the illegality of abortion as it exists in both Cote d'Ivoire and El Salvador does not persuade women to continue their pregnancies and adhere to the law but rather forces them to pursue abortion through clandestine, dangerous means. Rather than seeking out qualified but expensive healthcare providers, many women resort to inserting sharp objects into the vagina, ingesting bleach or pesticides, or applying extreme pressure to the abdomen.

Nolen (2015) describes the struggle of both doctors and patients attempting to terminate unwanted pregnancies in accordance with the law. Given El Salvador's legal restrictions on abortions, many doctors cannot save a woman's life until the pregnancy ends naturally. This often means that deformed fetuses, ectopic pregnancies and the consequences of failed unsafe abortions must simply run their course. In the case of Cote d'Ivoire, Guillaume and Desgrées Du Loû (2002) found that 47 percent of maternal deaths in one Abidjan hospital were the result of using traditional plants to induce abortion. Therefore, the illegality of abortion substantially and negatively impacts both countries' ability to mitigate fertility and maternal mortality.

While there are various sources that provide country-specific estimates for abortion rates,⁷ no such data is available for Cote d'Ivoire and El Salvador. This is largely due to intense restrictions on legal abortions in these two countries, which push many women to have unregistered abortions. Based on examining cross-country regional data, Shah and Ahman (2009) found that per 100,000 live births, about 10 abortion-related deaths occurred in Central America, compared to approximately 140 deaths in Western Africa. The continent of Africa attests to more than 50 percent of women globally who die from abortion-related causes, with approximately 38,400 deaths annually.⁸

In order to better understand how abortions are a consequence of high fertility and a cause of maternal mortality, this discussion section is structured into four sub-sections, focusing on Cote d'Ivoire's and El Salvador's evolution of fertility rates, the evolution of access to modern contraception, the evolution of the unmet need for contraception, and finally, the evolution of maternal mortality rates.

IV.1. Evolution of Fertility

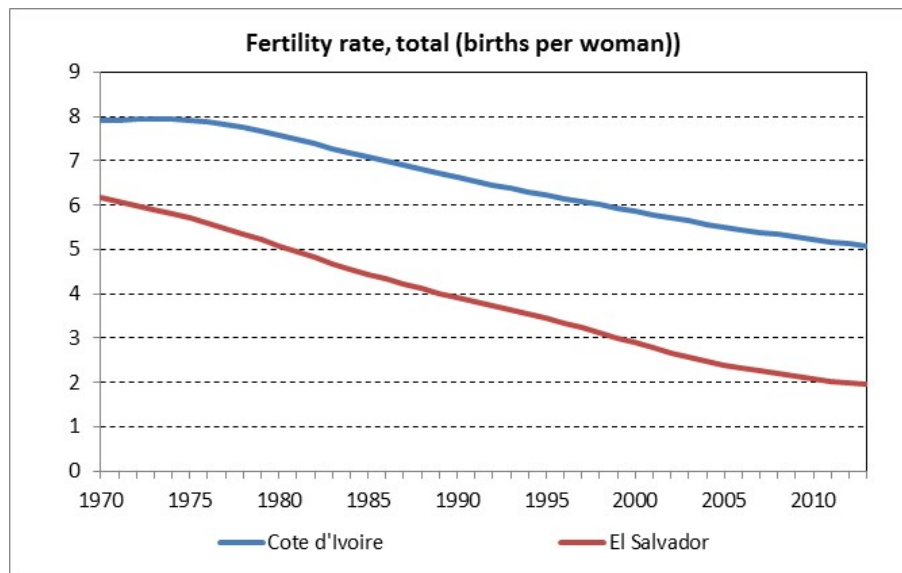
As Figure 5 shows, both countries have witnessed substantial declines in their fertility rates over the last 40 years. However, not only was El Salvador's fertility in 1970 approximately two children less than that of Cote d'Ivoire, the fertility gap between Cote d'Ivoire and El Salvador continued to increase during the last 43 years. By 2013, Cote d'Ivoire's fertility stood at 5.1 children per woman, while it declined to 2.0 children per woman in El Salvador. What has permitted Salvadoran fertility to drop slightly below the natural replacement rate of 2.1 children and prohibited Ivorian

⁷ For example the UN's data set on abortions provided at <http://data.un.org/Data.aspx?d=GenderStat&f=inID%3A12> or what is called Johnston's archive, available at <http://www.johnstonsarchive.net/policy/abortion/wrjp335pd2.html>.

⁸ Shah and Ahman (2009), Table 5.

fertility from attaining the natural replacement rate? Clearly, El Salvador's higher GDP per capita, higher life expectancy, and especially higher literacy rates are partial explanations, but there also were more direct interventions in terms of providing family planning in El Salvador that helped reduce fertility rates more in El Salvador than in Cote d'Ivoire.

Figure 5: Fertility Rates in Cote d'Ivoire and El Salvador, 1970-2013



Source: Created by author based on World Bank (2015).

IV.2. Evolution of Access to Modern Contraception

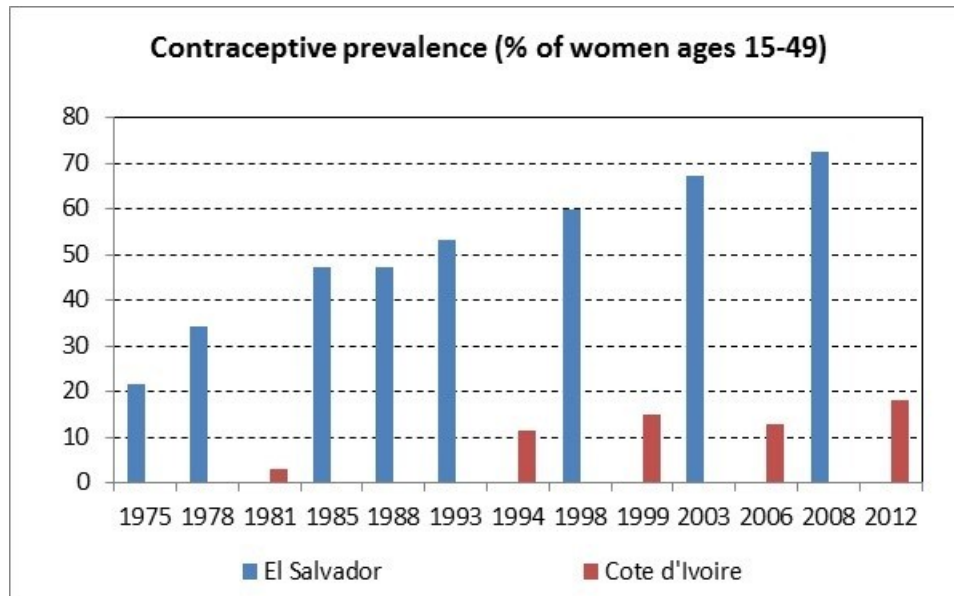
As shown in Figure 6, El Salvador has expanded contraception access since the 1970s. On the other hand, according to Stewart, Stecklov and Adewuyi (1999), it was not until 1991, that the Ivorian government made any substantial effort to integrate family planning into health care systems. Even so, family planning services were only implemented in four of Cote d'Ivoire's ten regions. All four of these regions are wealthier and more urban than the six void of family planning services.⁹

As evidenced by Guillaume and Desgrées du Loû (2002) as well as by Kent (2010), women in Cote d'Ivoire are aware of and in pursuit of modern contraception, but few have substantial access to it. Therefore, they resort to traditional contraception methods as well as abortion. Salvadoran women have more thorough access to contraception and a greater proportion of said women desire such fertility regulation. As articulated by Kent (2010), the 60 percent decline in El Salvador's fertility over the last 30 years is due largely to increased contraception use. The percentage of women of childbearing age using contraception increased from 47 percent in 1988 to 73 percent in 2008. At the helm of this fertility decline was female sterilization, currently the most common form of contraception in El Salvador, with temporary methods like intrauterine devices (IUDs) and injectable hormones following close behind.¹⁰

⁹ Stewart, Stecklov and Adewuyi (1999).

¹⁰ Kent (2010).

Figure 6: Contraceptive Prevalence in Cote d’Ivoire and El Salvador, all available data



Source: Created by author based on World Bank (2015).

As reported by Guillaume and Desgrées du Loû (2002), surveyors interviewed 2,400 women entering one of the four health centers in the two largest and most densely populated districts of Cote d’Ivoire’s capital, Abidjan. Despite that 95 percent of those interviewed were aware of at least one modern method of contraception, only 12 percent were using any form of contraception. Among those using some kind of contraception, the predominant fertility regulation behavior was the use of contraception alone, followed by the use of both contraception and abortion, indicating that most women interviewed have used abortion as a complement to or substitute for contraception, should it fail.

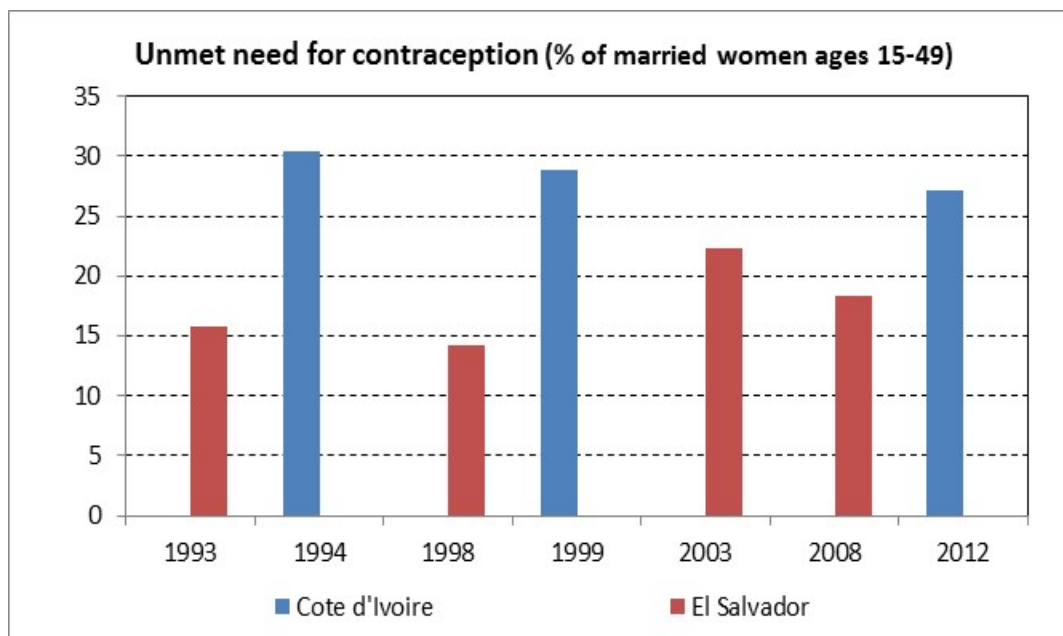
While contraception access is less thorough in Cote d’Ivoire, many Ivorian women do not consider it part of their fertility regulation plan, making the unmet need for contraception less severe. According to a joint brief of the Guttmacher Institute and the International Planned Parenthood Federation (2010) 67 percent of married adolescents want a pregnancy in Sub-Saharan Africa, while the figure is only 20 percent among Latin American and Caribbean married adolescents. The lesser prevalence of a desire to have children in Latin America and the Caribbean is, to some degree, the manifestation of the greater literacy of the Salvadoran population. As was shown in Figure 3 above, El Salvador’s literacy rate was with approximately 87 percent in 2013, more than double that of Cote d’Ivoire’s. With literacy so thoroughly provided for in El Salvador, more Salvadoran women are seeking contraception access, contributing to a decline in fertility, while Cote d’Ivoire’s lacking educational infrastructure provides women with few options other than motherhood.

IV.3. Unmet Need for Contraception

As Figure 7 shows, there is a greater unmet need in Cote d’Ivoire than in El Salvador, though it has declined every year in which data was obtained for Cote d’Ivoire, while the figure shows an overall increase in the unmet need for contraception in El Salvador. Despite higher literacy and a

better healthcare infrastructure in El Salvador, the unmet need for contraception increased by 8.1 percentage points between 1998 and 2003.

Figure 7: Unmet Need for Contraception, all available years



Source: Created by author based on World Bank (2015).

Similar to Ivorian women, prior to 1998, a number of Salvadoran women used abortion as a secondary fertility regulation method. As specified by Nolen (2015), the 8.1 percentage point jump is partially explained by the passage of an anti-abortion law in 1998. Unlike its antecedent, which made exceptions for rape, fetal deformities and the health of the mother, El Salvador's current law completely bans abortion. In Cote d'Ivoire, a 1981 law determined abortion illegal, except when saving the woman's life.¹¹ Thus, with the option of a legal, safe abortion removed, a greater unmet need for contraception has developed in El Salvador.

The fact that Cote d'Ivoire's unmet need for contraception is still greater than that of El Salvador's unmet need for contraception is inconsistent with the broader regional differences between Latin America and Sub-Saharan Africa. As detailed by the Guttmacher Institute and International Planned Parenthood Foundation (2010), while 29 percent of Latin American and Caribbean married adolescents wanted to avoid pregnancy but were not using any form of contraception, only 22 percent of Sub-Saharan married adolescents attested to the same unmet need for contraception. Thus, while there is literally a greater unmet need for contraception in the Latin American region, it is not because Sub-Saharan Africa is able to satisfy the need for contraception better, but rather there are more literate women seeking to delay pregnancy in Latin America and the Caribbean than in Sub-Saharan Africa.

¹¹ UN Population Division (2014).

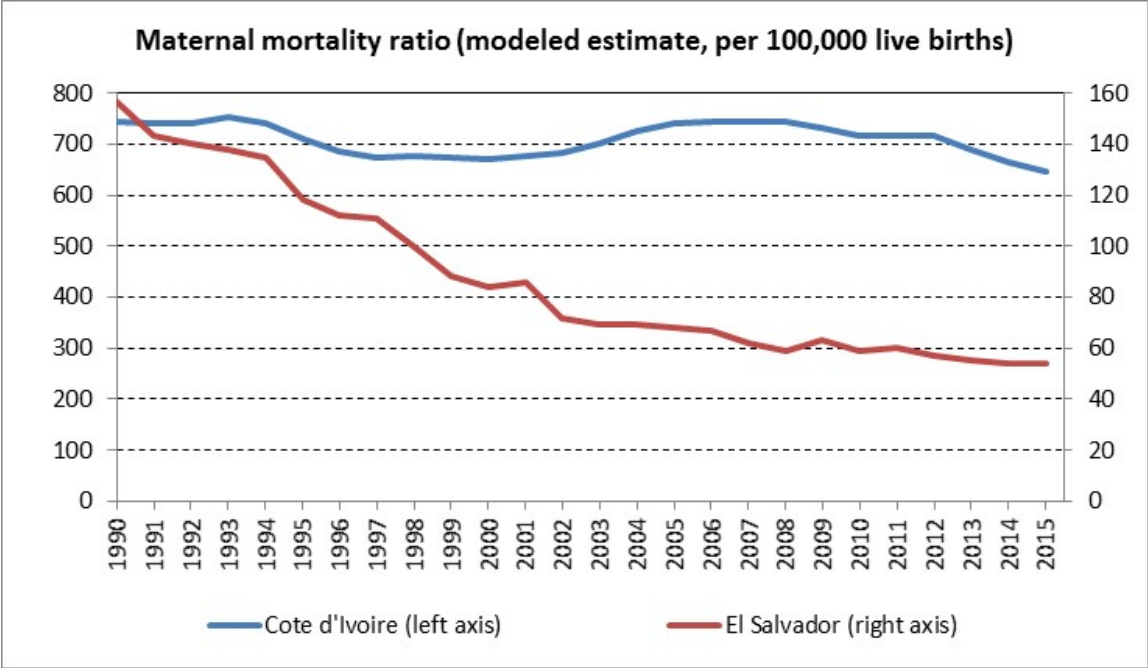
Given El Salvador’s high rates of contraception access as well as high levels of human development (as measured by life expectancy, literacy, and GDP per capita), it is no wonder that El Salvador has been able to consistently diminish its fertility rate. On the other hand, the lack of contraception use and access as well as low level of human development in Cote d’Ivoire explain the limited progress with reducing fertility.

IV.4. Maternal Mortality

Maternal mortality is a severe threat to women’s lives in developing countries. Kassebaum et al. (2014) disaggregated maternal deaths into nine causes: maternal hemorrhage, maternal sepsis and other pregnancy-related infections, hypertensive disorders of pregnancy, obstructed labor, abortion, other direct maternal disorders, indirect maternal disorders, HIV, and late maternal deaths.

Figure 8 shows the maternal mortality ratios of Cote d’Ivoire and El Salvador from 1990 to 2015. Given the very different levels of maternal mortality between Cote d’Ivoire and El Salvador, Figure 8 shows Cote d’Ivoire’s maternal mortality on the left vertical axis, while showing that of El Salvador on the right vertical axis. Looking at the left and right vertical axes, we can first of all see that Cote d’Ivoire’s maternal mortality rate of 1990 was about five times higher than that of El Salvador. Furthermore, the figure clearly shows that Cote d’Ivoire has made very little progress over the last 25 years, while El Salvador made substantial progress during most of the 1990s, but little progress after El Salvador adopted a new law that outlawed abortion in all circumstances in 1998.

Figure 8: Maternal Mortality Ratios in Cote d’Ivoire and El Salvador, 1990-2015

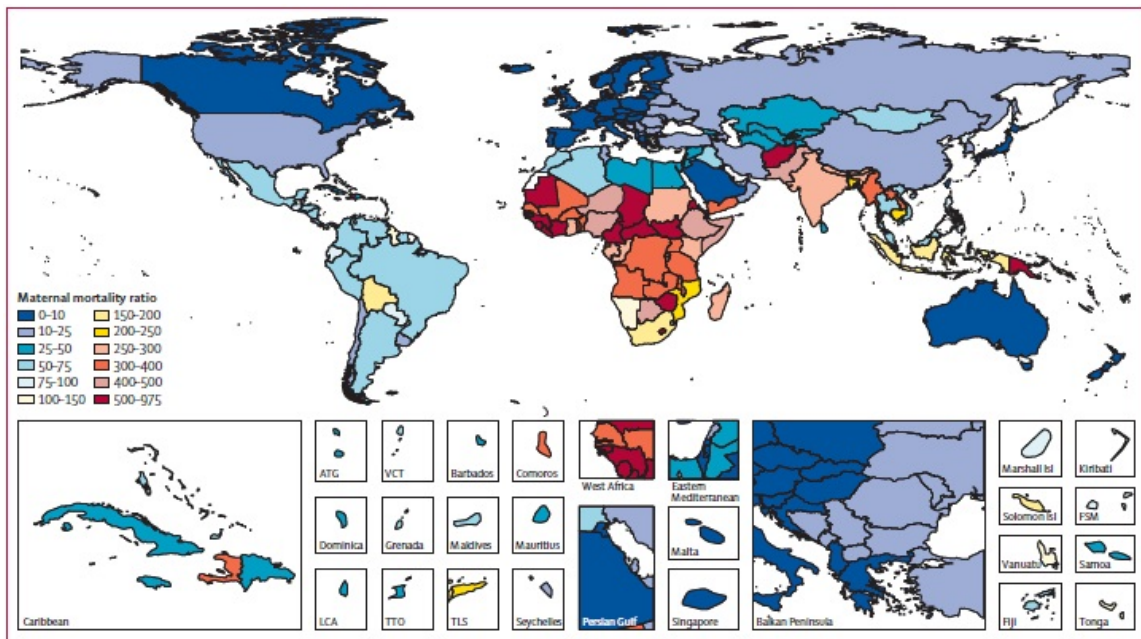


Source: Created by author based on World Bank (2015).

Despite some differences in the definition of maternal mortality used in the World Bank data shown in Figure 8 and in Kassebaum et al. (2014), Figure 8 is overall consistent with the regional differences between Latin America and Sub-Saharan Africa, which are that there have been persistent substantial maternal mortality declines in Latin America, while rates in Sub-Saharan Africa have only begun to substantially decrease since 2003.¹² The availability of healthcare infrastructure and the restrictedness of abortion are essential to determining causes of maternal mortality.

Looking at Figure 9, we can see that Cote d'Ivoire is one of the countries with the highest maternal mortality ratio in the world in 2013, while El Salvador had one of the highest maternal mortality ratios in Latin America and the Caribbean region.

Figure 9: Maternal Mortality Ratios around the World, 2013



Source: Kassebaum et al. (2014), Figure 7.

The large regional differences are partly explained by Sub-Saharan Africa having historically received less development assistance for health than other developing regions, and the more recent increases in development assistance for health and family planning have not been as large in Sub-Saharan Africa as in other regions.¹³ The large-scale absence of healthcare infrastructure, especially in rural areas of Cote d'Ivoire, and the country's comparatively short history with the institutionalized provision of family planning services imply that Cote d'Ivoire is unable to deal with the maternal hemorrhage, hypertensive disorders and unsafe abortions, which have been estimated to account for nearly 50 percent of all maternal deaths.¹⁴ As of 2014, Cote d'Ivoire's maternal mortality ratio was more than 12 times that of El Salvador. Though abortion is slightly

¹² Kassebaum et al. (2014).

¹³ Stewart, Stecklov and Adewuyi (1999).

¹⁴ See Kassebaum et al. (2014), p. 996.

less severely restricted than in El Salvador, a lack of developmental aid and far higher fertility rates have resulted in much higher maternal mortality ratios in Cote d'Ivoire.

V. Conclusion

A greater proportion of Salvadoran women are literate and consequently seek to regulate their fertility than their Ivorian counterparts. Family planning is provided much sparser in Cote d'Ivoire than in El Salvador, meaning that fewer Ivorian women seeking contraception have access to it. Furthermore, given that the general healthcare infrastructure is also much sparser in Cote d'Ivoire than in El Salvador, women in need of maternal mortality-preventing procedures (other than abortion) are able to have them in time. El Salvador's relative wealth of healthcare infrastructure and family planning services has contributed to El Salvador's more rapid and substantial declines in fertility.

However, the illegality of abortion in both countries contributes to their unnecessarily high maternal mortality ratios. Ivorian and Salvadoran women, unable to have their need for contraception met by the available infrastructure, resort to clandestine abortion, which frequently proves lethal. A lack of health care infrastructure blatantly inhibits Cote d'Ivoire's ability to mitigate such deaths, whereas the complete ban on abortion in El Salvador instigates maternal mortality caused by abortion-related deaths.

Mitigating fertility and maternal mortality in both countries will initially require an expansion of literacy and healthcare infrastructure, thereby reducing the number of women seeking pregnancy and the number of women who die as a result of inadequate healthcare. Beyond that, effective policies (as proven in numerous countries) can be adopted. As documented in Cohen (2009), Eastern Europe's abortion rate declined 51 percent between 1995 and 2003. Such a decline occurred because those countries increased the accessibility of contraception in tandem with safe and legal abortion having been available for decades. "Where contraceptive use increased the most, abortion rates dropped the most."¹⁵

The decriminalization of abortion and the expansion and continued provision of contraception are two sides of the same coin. In order to reduce fertility rates, contraception must be provided to those seeking not to become pregnant, thereby reducing the number of both maternal mortality and abortions. To reduce maternal mortality ratios, safe abortion must be available so lethal measures are not necessary to terminate a pregnancy. The complexities of El Salvador and Cote d'Ivoire are not universally observed but the failure to provide for contraception access and safe abortion enunciate a deeply familiar paradox. Only when policymakers and the cultures they manifest unequivocally respect the woman's human right to determine her reproductive life will we venerate the sanctity of life.

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¹⁵ Cohen (2009), p. 5.

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