

The Future is Female: Women are the Key to Successful Population Control in Nigeria and Angola

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Abstract

This article analyzes the patterns of population growth in the developing countries of Nigeria and Angola. Over the last several decades, population has soared in the two countries due to high birth rates, early marriages, and a lack of female agency in family planning. Government intervention in the form of population control programs has been successful, but recent periods of steadily high birth rates indicate a need for further action. As these programs are designed, a focus on female agency must be included to ensure successful implementation. Although cultural differences have previously prevented these methods, they must be overcome in order to successfully mitigate population growth and assist development in Sub-Saharan Africa.

I. Introduction

Until recently, most scientists had concluded that the Earth can hold up to nine or ten billion people,¹ a target that the human population is expected to hit within the next thirty years. This large number of people will exacerbate current issues with food and water supply, emphasizing the need to ethically control this growth. Population growth has also been inexplicably tied to poverty, especially in developing countries. Women in wealthier countries have more access to modern contraceptives, and social and cultural norms in developing countries can further limit female decisions related to family planning.

This article analyzes some of these connections between female agency and population growth in developing countries. Using the family planning programs of Nigeria and Angola, the efficacy of different approaches will be examined based on several standard indicators provided by the World Bank (2022). The various cultural factors that influence these rates will be also considered when doing so. Lastly, the various ethical approaches that these programs are based on will be identified and analyzed.

¹ McGuigan (2011).

In order to do so in an organized manner, this article is structured in six sections. Following this introduction (Section I), Section II reviews existing articles on population growth in Nigeria and Angola. Section III provides a socioeconomic background to both countries in terms of their GDP per capita, life expectancy at birth, and adult literacy rate over time. Section IV expands upon this basic knowledge, analyzing rates more specific to population growth. Section V examines some ethical issues by first detailing past and present family planning programs in Nigeria and Angola, and then analyzing ethical dimensions of these programs. Section VI summarizes the findings of this article and lists additional considerations for future programs.

II. Literature Review

Due to the typically negative relationship between population growth and economic development, there is a considerable amount of research and analysis on several aspects of this relationship. Countries that are still developing and experiencing high population growth have become the subject of several different theories, many of which are outlined below. This brief literature review covers four recent contributions: Essein (2016) and Alimi, Fagbohun and Abubakar (2021) focus on population growth and development in Nigeria, while Ben-Ari (2014) and Oden (2019) discuss economic development and population growth of Angola.

- Essein (2016) discusses the provisions necessary to utilize the growing Nigerian population for the development of the economy. Using time series data from the last three decades, Essein's econometric analysis concluded that Nigeria is capable of economic growth if it puts forward measures to increase the quality of its working population. Such policies include skill-enhancing education and training in both formal and informal educational settings. Other general provisions, most notably being accessible and affordable healthcare, are necessary to protect the welfare of the workforce and, in turn, the economy of the developing country.
- Alimi, Fagbohun and Abubakar (2021) is a very recent analysis of Nigeria's income per capita growth, population growth and growth in output from 1981-2018. The authors concluded that population growth is beneficial to Nigeria's economy in the long-run but has adverse effects in smaller portions of time. These short-term consequences result from the high number of dependents in the population, who eventually reach workforce age. The paper concludes that this demographic dividend is potentially beneficial when the younger population becomes economically productive, but not guaranteed. Government support in human capital development, including health and education, are recommended to maximize the economic potential of the younger population groups.
- Ben-Ari (2014) highlights several problematic factors of Angola's expanding economy and its social repercussions. Although the country has one of the fastest growing economies, it lacks diversification and relies heavily on its natural resources. Ben-Ari states that this reliance is not beneficial for the long-term economy. It also does not take advantage of the quickly growing workforce population. Additionally, the money generated is not equitably invested into the country's infrastructure, hence, increasing inequality.
- Oden (2019) explains some of the reasons for the rapid population growth in Angola. The article relays that high infant mortality rates have created a culture in which families are more inclined to have more children. This strategy increases the odds of having more children reach adulthood. Oden describes several fallbacks of the current Angolan

healthcare system, including understaffed clinics and a lack of broad availability. By increasing the strength of the healthcare system, infant mortality rates would decrease enough to stabilize the fertility rate. This ripple effect will in turn allow for overpopulation to slow and give room for further development in the healthcare system.

III. Socioeconomic Background

Within the African continent, Nigeria has both the largest population (which was 206.1 million people in 2020)² and the highest GDP (which was US\$432.3 billion in 2020),³ making it frequently looked at as one of the leaders of the continent. It is an extremely young country, with over 75 percent of the population below the age of 35 years.⁴ Natural resource extraction was the main driver of the \$432 billion GDP in 2021.⁵ Large deposits of crude oil, coal and natural gas have brought wealth to the country, and a mostly untapped solar energy market has a promising future. A dependence on these resources caused Nigeria to enter a recession in 2016 when oil prices fell, worsening poverty. Some progress has been made since the drop, but economic stagnation due to the Coronavirus pandemic has prevented a full recovery.

Angola is with its 32.9 million people in 2020 only the 12th most populous country in Africa, but it has one of the highest population growth rates of the continent, and boasts a fertility rate of 5.5 births per woman.⁶ The country is extremely young as well, with a median age of 16.7 years.⁷ Decades of civil war severely limited the development of the Angolan economy for many decades, and infrastructure was a policy priority in the years following the civil war. Today, Angola is one of the world's fastest growing economies, almost entirely dependent on gas and natural resources. In 2017, the oil sector accounted for 90 percent of export value and over half of all government revenues.⁸ An immense amount of corruption has ruled and distorted Angola's economy since its development.

Figure 1 on the next page depicts Nigeria and Angola's development of gross domestic product (GDP) per capita, purchasing power parity (PPP)-adjusted, in constant 2017 international dollars. Although Nigeria has a GDP seven times higher than Angola,⁹ its GDP per capita is lower than that of Angola. Both countries experienced an economic contraction when oil prices dropped in 2016. Angola's recession, however, was much worse than Nigeria's due to Angola's heavier reliance on the oil sector. During this time both countries continued to experience high birth and fertility rates.

Figure 2 illustrates average life expectancy of people born in Angola and Nigeria from 1970 to 2019. Both countries had very similar levels of life expectancy until 2002. Since its initial economic growth in 2002, however, Angola's higher life expectancy is consistent with its higher GDP per capita. The HIV/AIDS epidemic in the 1990s caused both countries' life expectancies to similarly flatten out, and still presently impacts citizens. Other causes for Nigeria's lower life expectancy are Nigeria's high infant and maternal mortality rates, which are, respectively, 75 per

² World Bank (2022).

³ World Bank (2022).

⁴ United Nations, Department of Economic and Social Affairs, Population Division (2021).

⁵ World Bank (2022).

⁶ World Bank (2022).

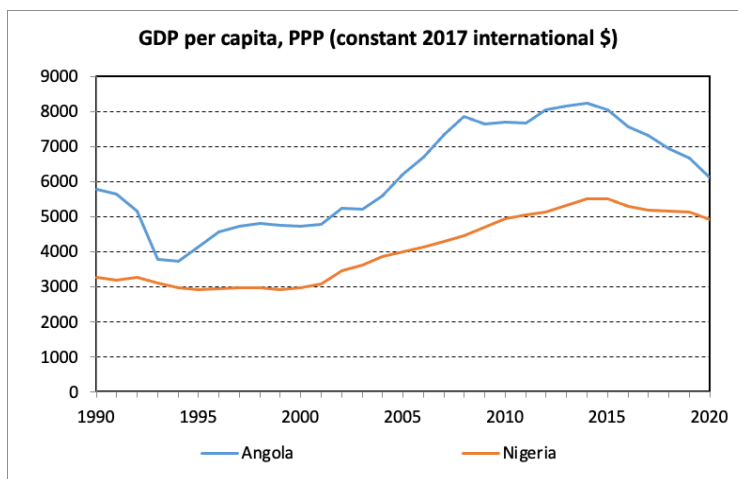
⁷ World Bank (2022).

⁸ International Monetary Fund (2018).

⁹ World Bank (2022).

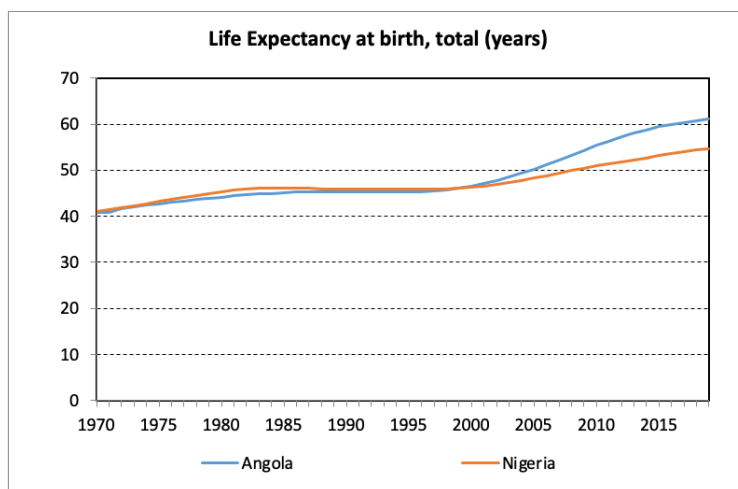
1,000 live births and 917 per 100,000 live births. Both of these figures are some of the highest on the continent.¹⁰

Figure 1: GDP per capita, PPP (constant 2017 international \$), 1990-2020



Source: Created by author based on World Bank (2022).

Figure 2: Life Expectancy at Birth (years), 1970-2019



Source: Created by author based on World Bank (2022).

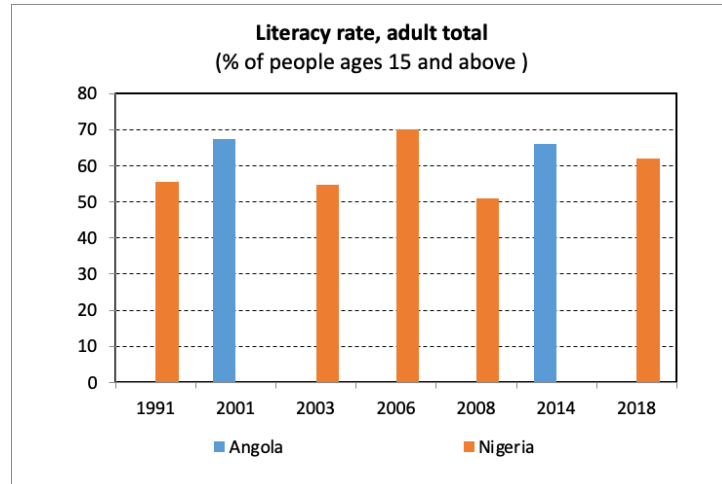
Figure 3 shows the available adult literacy rates for Angola and Nigeria. Angola's rate remains consistently higher than Nigeria's with the exception of 2006. However, the large gap in data makes it difficult to use this figure as an indication of differences in education between the two countries. Both countries have experienced a large increase in youths not in education, employment, or training, with Nigeria having 21.4 percent categorized as such in 2016, while Angola's percent of youths not in education, employment or training was 27.9 percent for the same year.¹¹ Once again, the higher GDP per capita in Angola is consistent with higher literacy rates in

¹⁰ World Bank (2022).

¹¹ World Bank (2022).

Angola than in Nigeria. Low literacy rates can be detrimental to the economic future of a country, limiting the amount and quality of employment opportunities.

Figure 3: Adult Literacy Rate for Angola and Nigeria (all available years)



Source: Created by author based on World Bank (2022).

IV. Analysis of Facts

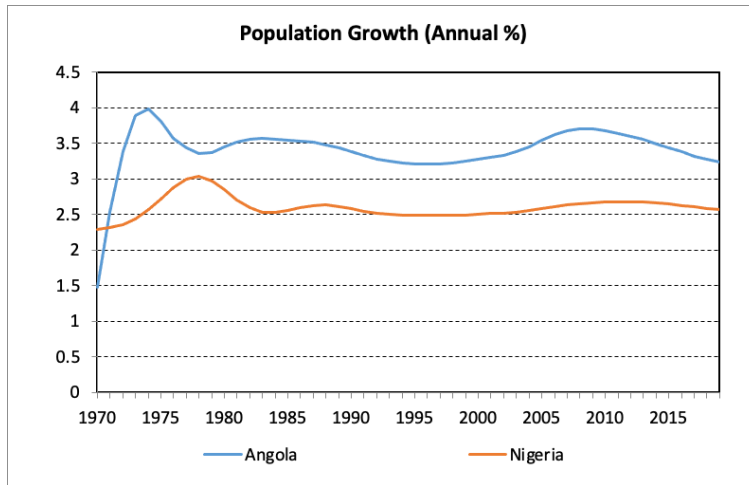
This section is structured into four subsections. The first subsection analyses patterns of population growth, fertility, and infant mortality rates. The second subsection reviews gender differences primary, secondary and tertiary school enrollment. The third subsection examines gender differences in employment-to-population ratios while the fourth subsection examines differences in contraceptive prevalence.

IV.1. Population Growth, Fertility, and Infant Mortality Rates

Over the last five decades, both Angola and Nigeria have experienced high population growth, with both countries staying above the average world population growth rate of 1.05 percent.¹² As Figure 4 shows, Angola underwent its highest period of population growth from 1972 to 1973, peaking at precisely four percent. This time period saw the tapering and ultimate end of Angola’s nearly 15 year war of independence, lowering the death rate and causing the increase in population growth. Immediately after, however, Angola’s population growth rate dropped by half of a percentage point due to the civil war that followed the country’s independence in 1975. Nigeria experienced the height of its population growth during same period in which Angola’s rate decreased, with its maximum height of 3 percent in 1978. An end to Nigerian military rule and economic success in the petroleum industry assisted this growth in Nigeria’s population, which ultimately leveled out in the following decades at around 2.5 percent. Angola’s population growth rate fluctuated more than Nigeria’s in recent history, gradually rising and falling in decade-long increments. This difference can be partially attributed to the difference in a.) the HIV/AIDS incidence and b.) the implementation of population controls. While Nigeria has adopted some population controls in the early 1980s, Angola has not implemented any such initiatives.

¹² World Bank (2022).

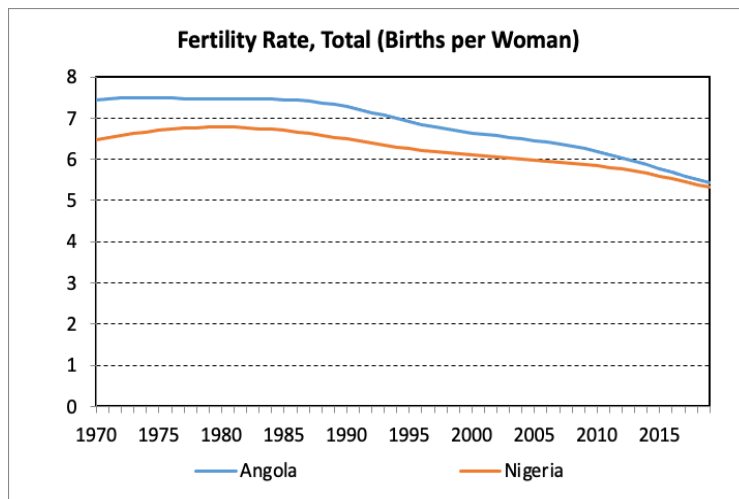
Figure 4: Population Growth (percent) in Angola and Nigeria, 1970-2019



Source: Created by author based on World Bank (2022).

Despite ignoring death rates, fertility rates are an essential determinant of population growth. Typically, countries with high fertility rates also have high infant mortality rates as families increase the number of births to compensate for these young deaths. Health programs that make pregnancy and postnatal care safer are essential to lowering infant mortality rates, which in turn decrease fertility rates and overall population growth. Such programs were implemented in African nations like Nigeria and Angola in the 1990s, causing the steady decrease in both fertility and infant mortality rates that can be seen in figures 5 and 6.¹³

Figure 5: Fertility Rate (births per woman) in Angola and Nigeria, 1970-2019



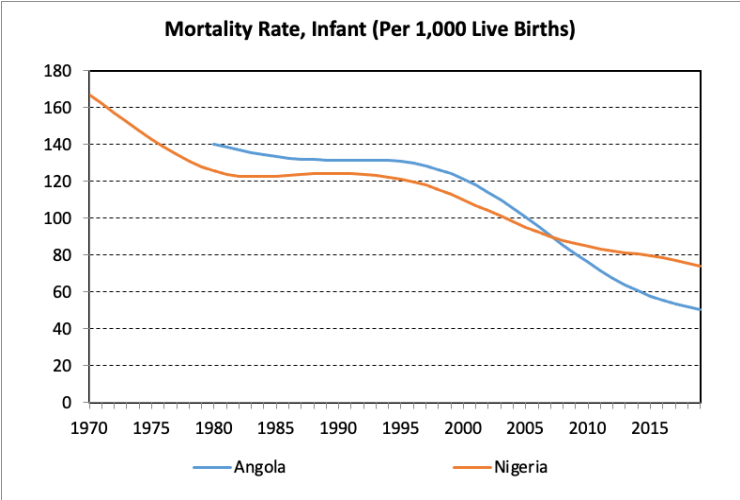
Source: Created by author based on World Bank (2022).

¹³ Adetunji (1994).

Overall, both countries experienced a steady decline in fertility over the last half century, and currently rest at just over five births per woman. Angola’s fertility rate began and stayed at one birth higher than Nigeria’s during this period of decline until meeting it within the last five years.¹⁴ Both countries' rates are presently twice that of the global average of 2.5 births per woman.¹⁴ Although fertility rates are generally indicative of population growth, the rise and fall of these particular countries do not perfectly align with their population growth rates due to external factors. The HIV/AIDS epidemic increased the mortality rate in both countries from 1990-2005. This unusually high number of deaths caused the visible dip in Figure 5, although fertility rates can be seen in decline during the same time in figure 5.

Figure 6 demonstrates the nearly steady decrease in the infant mortality rate over the last several decades. As previously mentioned, similar health initiatives were implemented in both countries around the same time, causing nearly equivalent periods of decline. Efforts were furthered in the 2000s ending the two decade-period of stagnation that occurred before. These decreases in infant mortality align with those in the fertility rate shown in Figure 5, emphasizing the connection between the two figures. While Angola had a higher infant mortality rate than Nigeria from 1980 to 2006, Angola caught up with Nigeria in 2007 and starting in 2008, Angola had a lower infant mortality rate than Nigeria.

Figure 6: Infant Mortality Rate (per 1,000 live births) in Angola and Nigeria



Source: Created by author based on World Bank (2022).

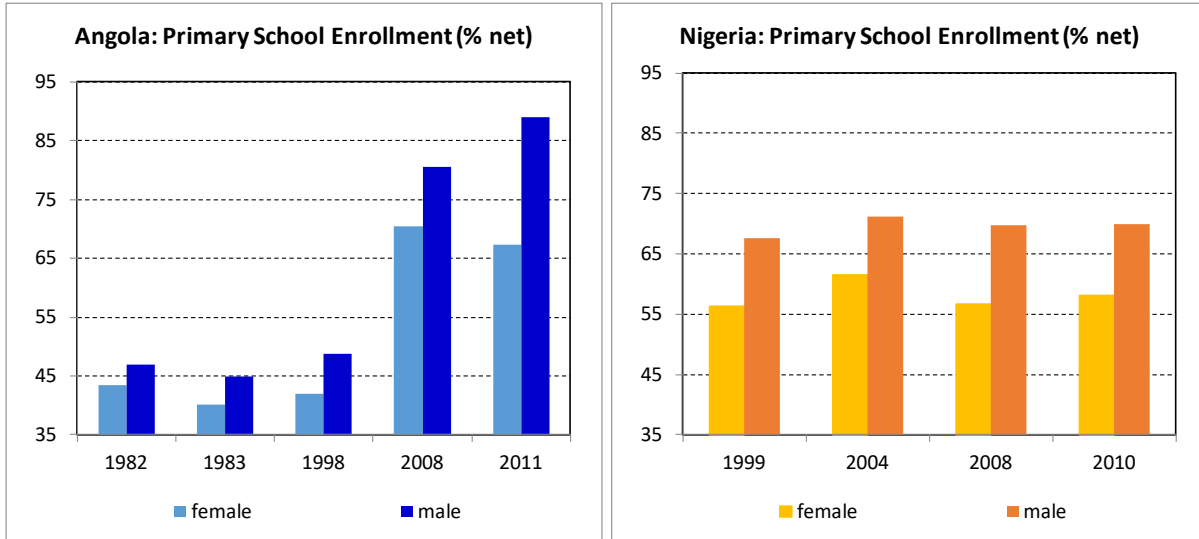
IV.2. Gender Differences in Education

Figures 7 and 8 show female and male net primary school enrollment ratios in percent, respectively for Angola and Nigeria. Even though the available data does not match exactly across the two countries, with exception for 2008, it is clear that Angola had lower net primary school enrollment ratios for both females and males until at least 1998. However, since at least 2008, Angola had higher net primary school enrollment ratios for both females and males. Persistent across countries and years, female net primary school enrollment ratios are always lower than male net primary school enrollment ratios. The gap between female and male net primary school enrollment ratios

¹⁴ World Bank (2022).

has actually become larger over time in Angola, while it remained about the same over time in Nigeria.

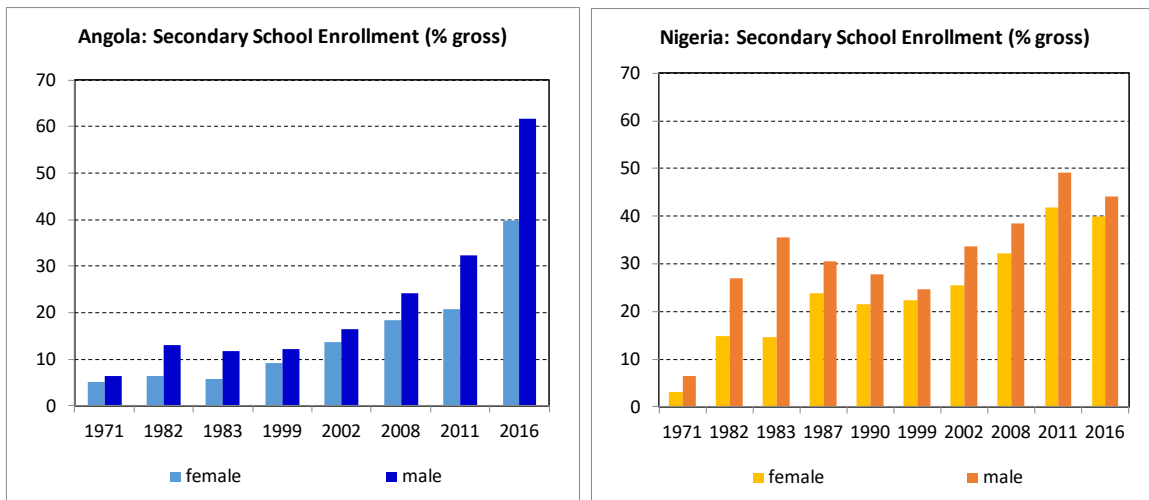
Figures 7 and 8: Female and Male Primary School Enrollment in Angola and Nigeria



Source: Created by author based on World Bank (2022).

Figures 9 and 10 show female and male gross secondary school enrollment ratios in percent, respectively for Angola and Nigeria. Though Angola overtook Nigeria in net primary school enrollment ratios by at least 2008, Nigeria remains ahead of Angola in gross secondary school enrollment ratios for all the years, except for 2016, which is the last year such data is available for both countries. Consistent with net primary school enrollment ratios there is large gender gap for gross secondary school enrollment ratios, which has increased over time in Angola while it remained about the same for Nigeria.

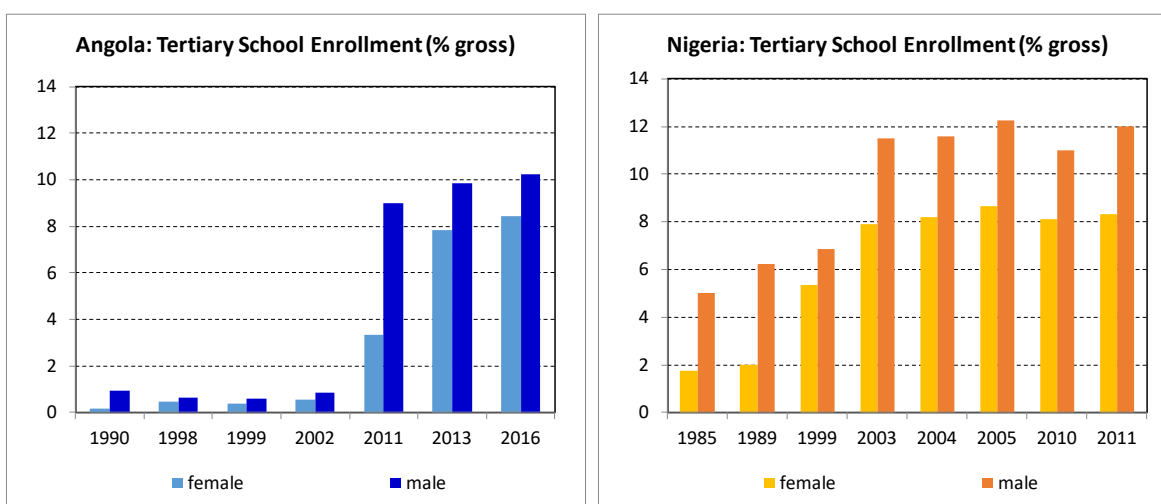
Figures 9 and 10: Female and Male Secondary School Enrollment in Angola and Nigeria



Source: Created by author based on World Bank (2022).

Figures 11 and 12 show female and male gross tertiary school enrollment ratios in percent, respectively for Angola and Nigeria. Even though the data available does not match exactly across the two countries, with exception for 1999 and 2011, it is clear that Angola had always much lower gross tertiary school enrollment ratios for both females and males than Nigeria. Persistent across time and country is however once again that females lack considerably behind males. While the gap has become much smaller from 2011 to 2013 in Angola, the available data for Nigeria shows a narrowing of the gap from 1989 to 1999. By at least 2003, Nigeria’s gender gap has again increased, and remained relatively stable until 2011, which is the last year such data is available for Nigeria.

Figures 11 and 12: Female and Male Tertiary School Enrollment in Angola and Nigeria



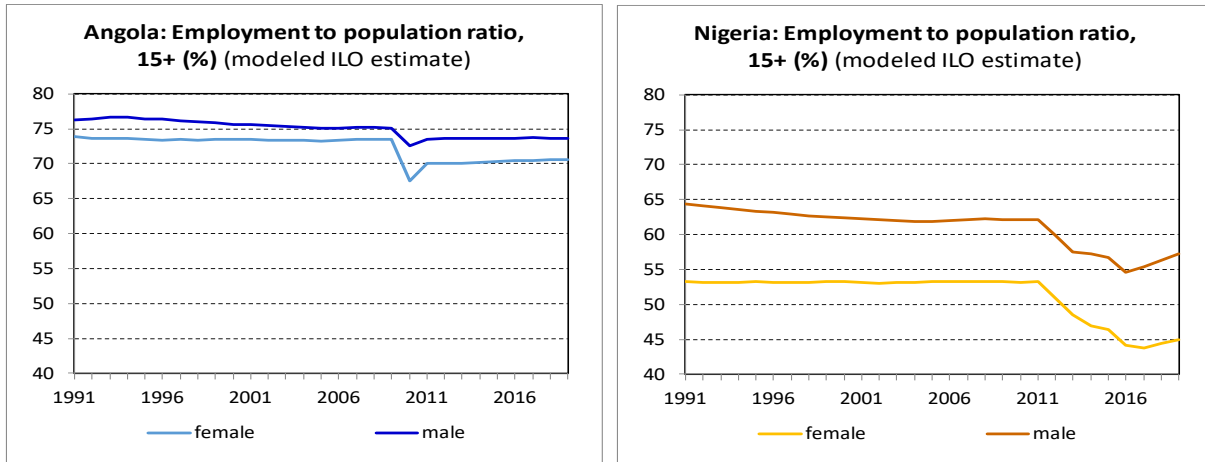
Source: Created by author based on World Bank (2022).

IV.3. Gender Differences in Employment-to-Population Ratios

Figures 13 and 14 show female and male employment-to-population ratios, respectively for Angola and Nigeria. Comparing Figure 13 with Figure 14, we can first of all see that the employment-to-population ratios are much higher in Angola than in Nigeria, for both females and males. Furthermore, we can see that despite Angola having higher ratios than Nigeria, the gender gap in the employment-to-population ratio is relatively small in Angola compared to Nigeria.

Neither country shows much progress in terms of reducing the gender gap in the employment-to-population ratio over time. In Angola, the gender gap has increased from 2.3 percentage points in 1991 to 5.1 percentage points in 2010, and then narrowed to 3.0 percentage points in 2019. In Nigeria, the gender gap remained relatively stable between 8.6 and 12.3 percentage points, with 2019 being the year with the largest gender gap in Nigeria. Though there remain considerable differences between the evolution of the gender gap in education and the evolution in the gender gap for the employment-to-population ratio, the gender gap in education is overall consistent with the gender gap for the employment-to-population ratio.

Figures 13 and 14: Female and Male Employment-to-Population Ratio for Women and Men at Least 15 Years Old (percent) for Angola and Nigeria

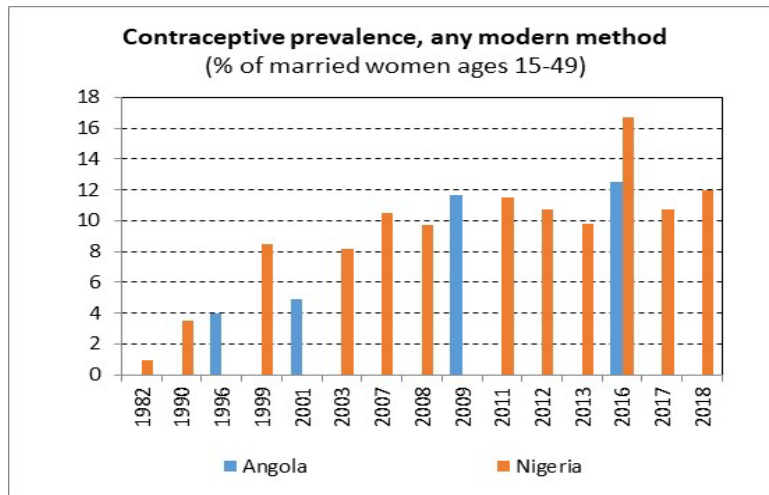


Source: Created by author based on World Bank (2022).

IV.4. Contraceptive Prevalence

Low levels of access to modern contraception are another key indicator for both population growth and gender discrimination. Figure 15 shows the contraceptive prevalence for any modern contraception as percent of married women between ages 15 to 49 years. Our first observation is that contraceptive prevalence rates are very low in both Angola and Nigeria, even though they have increased considerable over time. In Angola, they increased from 4.0 percent in 1996 to 12.5 percent in 2016. In Nigeria, they increased from 0.9 percent in 1982 to 16.7 percent in 2016, but then declined to 10.7 percent in 2017, after they increased slightly to 12.0 percent in 2018. It is not clear based on this limited data which country has higher access to modern contraceptives.

Figures 15: Prevalence of Modern Contraception in Angola and Nigeria



Source: Created by author based on World Bank (2022).

Based on the unmet need for contraception, for which there is unfortunately data available for only one year (2016) for Angola, Angola is doing worse than Nigeria as Angola had an unmet need for contraception of 38 percent of married women ages 15 to 49 years, while Nigeria had an unmet need for contraception of 28.9 percent.¹⁵ On the other hand, in 2016, 62 percent of Angola's women ages 15 to 49 years stated that they make their own informed decisions regarding sexual relations, contraceptive use and reproductive health care, while the percentage of Nigeria's women stating so was estimated at 48.6 percent.¹⁶

V. Ethical Analysis

This section examines ethical perspectives on population growth and population control in Nigeria and Angola. The first subsection reviews past and present efforts made to create and maintain population control policies, and the ethical reasoning behind them. The second subsection analyzes current attitudes to gender roles and female agency in connection to population growth and fertility.

V.1. Population Control Policies and Ethical Reasoning

The Nigerian and Angolan governments' views and actions on population control have made considerable progress since their initial introduction, and results can clearly be seen. Assisted by global organizations and donations, many goals set by various presidents and health ministers have continuously been met. This progress has not been accomplished easily, however, as many religious and ethnic groups have resisted efforts to increase family planning education and contraception use. In both countries, cultural differences were not accounted for when designing programs, which has been cited by many as the reasoning for the failure of many population goals.¹⁷

In 1988, the Nigerian government implemented its first population control policy, a landmark in the development of Sub-Saharan Africa. This initial policy, designed in conjunction with the World Bank, aimed at decreasing the fertility rate by improving the success of birth. While the infant mortality rate did decrease, the population growth rate did not decrease to 2 percent as planned, and instead stayed at 2.5 percent.¹⁸ In 2006, Nigeria shifted its focus to contraception use and set its new goals based on family planning statistics. Continuous advancements in education, gender standards and quality of life assisted the obtention of these goals.

In 2022, the Nigerian government responded to the unwavering fertility rate with a revised population control policy. This initiative was similar in content to the family planning goals of 2006 yet expanded the scope of contraceptives available with funding from the United States Agency for International Development (USAID). President Buhari stressed the importance of educating the youthful population, 72 percent of which were under 30 years of age, and increasing the amount of space between births to a minimum of two years.¹⁹ The plan failed to fix existing distribution problems. Local and state governments are tasked with distributing the free contraceptives and family planning programs, yet many do not have the financial or physical

¹⁵ World Bank (2022).

¹⁶ Nigeria's value of 48.6 percent for 2016 has been estimated based on data available for 2013 (50.8 percent) and 2018 (46.3 percent).

¹⁷ Adegbola (2008).

¹⁸ Adegbola (2008).

¹⁹ Adesina (2022).

ability to do so. The religious and ethnic majorities that comprise some states also purposefully do not do so. The acknowledgement of these cultural and logistical differences is essential in diminishing the disparities between many regions.

Angola's population control and family planning commitment has changed throughout history as the country experienced bouts of violence and stagnation. Immediately after its independence from Portugal in 1975 the Angolan civil war broke out and continued, with some interludes, until 2002. This destabilization prevented any central government from holding the power to make population policies, which fell short from being a priority. After the conclusion of the war, international bodies like the World Bank and USAID helped Angola implement family planning policies similar to others in Sub-Saharan Africa, with a focus on lowering maternal and infant mortality rates and educating the public on contraceptive use. Angola as a whole had a lower quality of life than other Sub-Saharan countries, and the implementation of all of these goals at once was not expected to be a quick success. It is difficult to assess the progress of these goals, as there is no census data from the times of war and very little from present day.

When forming the ethical basis for their past population control programs, both Nigeria and Angola used the well-established common goods approach. This approach seeks to benefit a group as a whole, rather than individuals. The logic behind the use of this approach is sound, as both countries pursue a well maintained population at the national level. However, this ethical approach has a large weakness, as it diminishes the lives of some.

The contraceptive methods implemented in both countries have primarily been medications and treatments for women. Although effective in preventing pregnancy, these methods have documented physical and psychological effects on its users. Barrier methods, such as condoms, are sound alternatives for these medications and produce none of these side effects. Sexual education and formal family planning are also crucial yet are not used. Nigeria and Angola's governments have not included sexual education in their population programs, citing backlash from conservative religious groups.

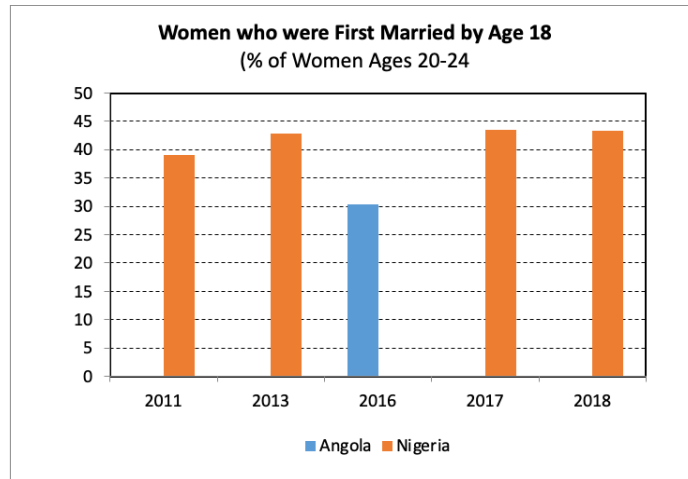
The current ethical justification for the population programs used in Nigeria and Angola focuses on the overall good of the community but ignores the negative effects these types of programs have on women. Alternative approaches for future population policies should contain elements of the rights and justice approaches. These schools of thought emphasize the rights and equal treatment of all who are affected. Making this change would ensure the health of the women in Nigeria and Angola, while still focusing on the goal of establishing a steady population.

V.2. Ethical Perspectives on Gender Roles and Contraceptive Use

In both countries, stark cultural and religious differences have proved difficult to plan for, especially regarding attitudes about contraception and women's roles in society. Both Nigeria and Angola have large, conservative Muslim and Christian populations, with elements of both religions worked into daily life. Historical ethnicities and cultures vary from region to region and determine social structures where they are present. The cross section of these two influences mostly views reproduction and women's roles in similarly restrictive manners. It is imperative for population control that women command their own destinies and decisions, making the dismantling of these barriers to reproductive health essential.

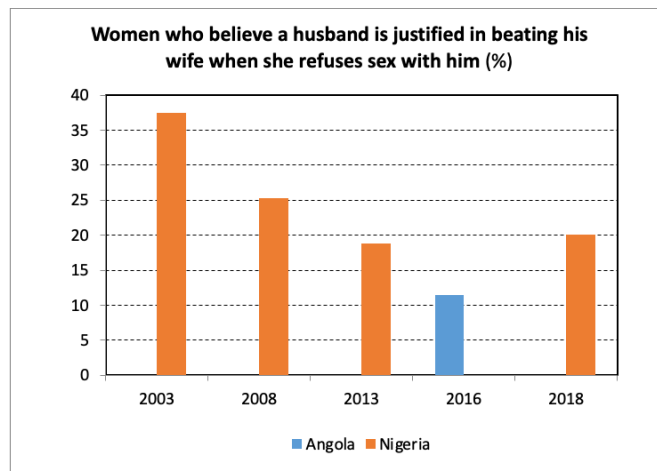
Abstinence was very prevalent among youth in Nigeria and Angola before modern family planning was introduced and is still seen by many as the primary form of birth control.²⁰ This method is effective but contributes to the high rates of young marriages seen in Figure 16. Women who are married longer are more likely to have given birth at a young age, and more children over their lifetime. Having children at such a young age also prevents women from pursuing further education or employment at points, decreasing the financial stability of the family. Lower financial stability decreases the quality of life, which has been frequently connected to the population growth of a country. Therefore, younger marriages contribute to a higher population growth rate in several ways.

Figure 16: Women who were First Married by Age 18



Source: Created by author based on World Bank (2022).

Figure 17: Woman Who Believe a Husband is Justified in Beating His Wife when She Refuses Sex with Him (percent)



Source: Created by author based on World Bank (2022).

²⁰ Somefun (2019).

Female agency is another item that has been controlled by religion and culture in Nigeria and Angola. Access to healthcare and contraceptives are important to population control, but a woman's decision on when to have sex is an even larger determinant. As seen in figure 17, large portions of women believe that physical abuse is justified if sex is refused, clearly influencing the woman's decision. These social stigmas that grant men the power to make decisions also influence decisions on contraceptive use and desired fertility, no matter what the desire of the woman is. This reality stresses the importance of changing these attitudes, because no matter how many contraceptives and resources there are available, if a man chooses not to use them then they are useless. If women are able to control reproductive decisions for themselves, population growth rates would most certainly decrease.

The data in figure 17 shows promising progress, with percentages being reduced by nearly half in Nigeria in only a decade. The rate did slightly increase in recent years, however, signaling the need for further education and change. If population control methods are to be implemented successfully, attitudes towards women will need to be changed and agency must be improved.

VI. Conclusion

This article sought to address the problem of high population growth in Nigeria and Angola by analyzing past and present government efforts to mitigate this growth. This examination was performed through the review and evaluation of several standard indicators and their connection to several general cultural instances. The indicators reviewed clearly show that the implementation of family planning programs and an increased availability of healthcare services help to slow population growth. Population growth rates, fertility rates, and infant mortality rates all decreased at points related to the inclusion of these new strategies, demonstrating the efficacy of intervention as a whole.

While overall beneficial, a lack of further action influenced the present periods of stagnation that annual population growth has remained at since the various policies were introduced. The still-declining infant mortality rates indicate that expansion of healthcare is not the source of the stasis. Rates detailing female agency and contraceptive use have experienced relative steadiness similar to that of the population growth rate, naming these factors the more likely cause of influence. The seemingly direct effect that contraceptive use and female agency have on population growth rates emphasizes the importance of their inclusion in future programs. Unfortunately, this action cannot be completed easily, as both countries have cited cultural differences as the reason for their absence in present programs.

Empowerment programs in Sub-Saharan Africa have typically emphasized female agency in the form of running a household. As modernization has occurred, these roles have adapted to include the acceptance of women pursuing higher education and a living wage outside of the household. This transformation demonstrates the ability for cultural norms to continue to develop and include ideas that presently seem foreign. It is essential that these programs include ideas related to women's control over family planning when encouraging female agency in communities. Once it becomes more culturally acceptable for women to decide what contraceptive methods and number of children are right for them, it is likely that population growth rates will begin to decrease to a manageable level.

The expansion of current ideas of female agency to include control over contraceptive use and birthing factors are necessary. The inclusion of these views in future family planning programs

will assist with further declines in Nigeria's and Angola's population growth and aid the general development of both countries.

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