

# Global Majority E-Journal



# Volume 12, Number 2 (December 2021)



# Global Majority E-Journal

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The *Global Majority E-Journal* is published twice a year and freely available online at: <u>http://www.american.edu/cas/economics/ejournal/</u>. The journal publishes articles that discuss critical issues for the lives of the global majority. The global majority is defined as the more than 80 percent of the world's population living in low- and middle-income countries. The topics discussed reflect issues that characterize, determine, or influence the lives of the global majority: poverty, population growth, youth bulge, urbanization, lack of access to safe water, climate change, agricultural development, etc. The articles are based on research papers written by American University (AU) undergraduate students as one of the course requirements for *Econ-110—The Global Majority*, which is an elective within the New AU Core.

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# **Stormy Days Ahead: Climate Change and Migration in the Philippines and Thailand**

# Alyssa Petelo

# Abstract

This article examines climate change and its effects of extreme weather events, rising sea levels, losses in agricultural productivity, and forced migration on populations in the Philippines and Thailand. Climate change in these countries has ethical implications because their citizens' per capita emissions are relatively low on a global scale, but they face some of the world's most alarming consequences due to being coastal/archipelago nations in Southeast Asia. This ethical issue is also reflected on a subnational level. This article attempts to gain a deeper understanding of the more discreet inequities caused by the climate crisis and explains what causes their existence despite the implementation of climate legislation. The Philippines and Thailand have similar geography, histories, patterns of development, and institutions, so they may be able to work together in order to advance their national interests, promote equality, and ensure security for their respective populations moving forward.

# I. Introduction

Climate change is one of the most pressing global issues in not only our lifetime, but almost certainly of several future generations' lifetimes as well. As greenhouse gases (GHGs) are emitted into the air mainly through deforestation, industrial production, and transportation, the earth's long-term average surface temperatures are increasing. People around the world are facing harsh consequences: sea levels are rising, droughts are threatening the food supply of most developing countries, extreme weather events are causing mass destruction, and people are being forced to migrate as their homelands become uninhabitable. Unfortunately, the industrialized countries have the highest per capita emissions while developing countries, many of whom have histories of colonialism and imperialism, must deal with the worst effects. In this way, climate change is a multilevel justice issue that both individual countries and the global community must face.

This article is a case study of the Philippines and Thailand. It explores the ways in which climate change has impacted the two countries through land loss, natural disasters, and migration. Despite relatively low per capita emissions, both countries hold a top-ten spot on the Global Climate Risk Index measured over the past two decades, meaning they each have high numbers of fatalities and billions of dollars in economic losses attributed to this issue (Eckstein et al., 2021). This article

analyzes climate change-related data for the two countries and discusses the ethical challenges surrounding them.

Following this introduction, the article begins with a literature review outlining prior research conducted regarding climate change in the Philippines and Thailand. It continues by offering insight into the socioeconomic evolution and human development of each country. Next, this article provides data and visuals quantifying the impacts of the climate crisis before applying various ethical lenses to institutions and policies implemented by different levels of government. Finally, the article offers recommendations for next steps to combat climate change and reduce the inequities associated with it.

# **II.** Literature Review

There are various publications that focus on the climate change effects of rising sea levels and extreme weather events, often leading to forced migration of Thai and Filipino citizens. Mosuela and Matias (2015) and Bohra-mishra et al. (2017) focus on these effects in the Philippines, while Marks (2011) and Curran and Meijer-Irons (2014) focus on these effects in Thailand. Beech (2020) attempts to provide a more personal, local perspective of how life is impacted by climate change in the Philippines. Hoffman and Muttarak (2017) describe education and disaster preparedness in both of these countries.

- Mosuela and Matias (2015) begin by providing background on the high vulnerability of the Philippines to extreme weather events and climate change due to relatively low economic development, geography, and unequal distribution of resources. On average, the Philippines comes into contact with twenty typhoons each year, many causing immense damage and deaths, like Typhoon Haiyan in 2013. Migration plays an important role in the Philippines, as citizens are being forced to leave the region, following instability, and in order to gain access to economic resources that will then be sent back home to family members. Members of the international community, including Canada and the United States have been able to assist this crisis by loosening immigration policies. Mosuela and Matias (2015) conclude that transnational networks and economic migration help to improve cooperation and alleviate the impacts of climate change.
- Curran and Meijer-Irons (2014) identify Thailand's rural communities as vulnerable to the effects of climate change, since climate patterns polarize to extensive periods of drought and excessive rainfall. These extreme conditions jeopardize the growth and harvest of key agricultural crops, including rice, which rural communities rely on to sell for income. Furthermore, much of the Thai economy relies on the manufacturing process from these key crops to final goods, so yield loss threatens economic stability for the country as a whole. The study found that long-term exposure to variable weather patterns correlates with migration in search of better economic opportunities. The authors also identify a gender dimension to this topic, in which men are more likely to migrate due to gender norms impacting household, labor, and land ownership roles.
- Marks (2011) delves deeper into the climate change impacts of drought, declines in agricultural productivity, and sea level rise in Thailand. For example, on page 250, he asserts: "The problems these impacts could create or exacerbate include water management challenges, heightening of class-related tensions, floods of new immigrants and refugees, damage to the tourism industry and conflict with neighbouring countries over dam-

building." Therefore, climate change manifests itself in a wide range of development issues, causing instability and threatening widespread poverty. The author argues that climate change mitigation is obstructed by the current political institutions in place, such as relatively undemocratic structure and ruling interests of the elite class.

- Beech (2020) provides an illustration of rising sea levels in Batasan, Philippines. She recounts the personal struggles these islanders face. The highest point on the island is just 6.5 feet above sea level, and when the tides rise, the island is swept with ocean water. There is little capacity for farming and no fresh water source, so inhabitants must fish or eat processed foods. They have to collect rainwater or import clean water for drinking. The Philippines government rolled out a program aimed at relocating the population to farmland, however, fishing is a major dietary and cultural staple for the island, so many refused to migrate. Beech argues that rather than encouraging mass migration, the community should invest in local adaptations to mitigate the effects of climate change.
- Bohra-mishra et al. (2017) focus their research on the causes of climate migration in the Philippines, as well as the demographics and gender dimensions attached to it. Temperature changes and more frequent typhoons were found to prompt migration. Migrants were most likely to be male, well-educated, and of the younger generation. Interestingly, females dominate emigration in general, which differs from specifically climate-related migration. The authors also found a relationship between low agricultural yields and emigration, and that rural people were more likely to migrate than urban dwellers.
- Hoffman and Muttarak (2017) have conducted a study on natural disaster education and preparedness in the Philippines and Thailand. They found that education plays a role in Filipino and Thai citizens' ability to effectively respond to disaster. Without having had to experience a disaster, those who were educated were more equipped to deal with it. The authors also found that income does not play a significant role, but there are important disparities between the Philippines and Thailand based on the contexts of society and education. In other words, in Thailand, highly educated people and communities with more social capital were more prepared, whereas in the Philippines, preparedness was more evenly distributed among the population. This helps to understand what steps must be taken at the national and community levels in ensuring the safety of all groups, educated or not.

# III. Socioeconomic Background

The Philippines and Thailand are both Southeast Asian countries that have seen at least some economic growth in the past several decades, joining Asia's newly industrialized economies. However, Thailand has seen faster, more steady growth than the Philippines in terms of per capita gross domestic product (GDP). The Philippines ranks 114<sup>th</sup> in per capita GDP (PPP-adjusted), while Thailand ranks 69<sup>th</sup> among all the countries with such data.<sup>1</sup>

The economic history of the Philippines is an interesting and complex one, being rooted in colonial rule and post-colonial reforms. The Philippines was a colony of the United States until 1946, and its development was stunted especially during Japanese occupation in the Second World War (WWII). Gerardo P. Sicat (2015) explains that in the decades following independence, the Philippine leaders implemented economic protectionist policies and discouraged economic

<sup>&</sup>lt;sup>1</sup> This paragraph is based on World Bank (2020a and 2020b) and World Bank (2021).

interaction with foreign entities. In the 1970s and 1980s, authoritarian ruler Marcos instituted economic reforms, but political instability hindered economic progress. Later in the 1990s, the Philippines saw economic liberalization and opened up to the global economy, which resulted in economic growth. However, inadequate energy and infrastructure have been an obstacle (Sicat, 2015). Yet, the Philippines is increasingly urbanizing and expanding its industries. It relies heavily on outsourcing by multinational corporations and remittances from the diaspora (World Bank, 2020a).

Thailand has seen much more stable growth due to a sound political and economic strategy. It is the only country in Southeast Asia that has never been under colonial rule. Robinson, Teja, Byeon, and Tseng (1991) explain that the government invested in infrastructure to support agriculture in the Post-WWII period. Thailand attracted foreign investment and pursued growth based upon private enterprise, conservative fiscal policies, and openness to the global market. The country saw a decline in economic growth rates in the 1970s and 1980s but has since recovered by focusing on strengthening industry and increasing manufacturing exports. Additionally, private investment has stimulated the economy.<sup>2</sup> The World Bank (2020b) notes that COVID-19 has been particularly harmful to the Thai economy because it relies heavily in part on tourism. Thailand is on track to continue rapid development, but climate change may pose a threat to its success.

Figure 1 shows purchasing power parity (PPP)-adjusted GDP per capita (in constant 2017 international \$) in the Philippines and Thailand. It shows that the gap between the two countries in terms of GDP per capita has risen over time. In the Philippines, GDP per capita rose slowly from \$4,232 in 1990 to \$4,454 in 2000. The rate has increased a bit since then, reaching \$5,918 in 2010 and \$8,908 in 2019. On the other hand, Thailand had a GDP per capita of \$7,109 in 1990, which grew to \$9,819 in 2000, after a slight downturn. Its per capita GDP reached an impressive \$18,460 in 2019.



Figure 1: GDP per capita, PPP (constant 2017 international \$), 1990-2019

Source: Created by author based on World Bank (2021).

<sup>&</sup>lt;sup>2</sup> Robinson et al. (1991).

As shown in Figure 2, the Philippines and Thailand have had relatively comparable life expectancy rates throughout the last fifty years. Thailand overtook the Philippines in 1978, and Thai life expectancy continued to be above that of the Philippines, but only by a few years. The Philippines' life expectancy was 63.2 years in 1970, only marginally higher in 1980 (with 63.7 years), then increased more steadily to 66.4 years in 1990, 68.8 years in 2000, 69.8 years in 2010, and most recently reached 71.1 years in 2018. Thailand's life expectancy was 59.4 years in 1970, 65.0 years in 1980, and 70.2 years in 1990. It then increased only marginally during the next ten years, reaching 70.6 years in 2000, and then grew again more rapidly, reaching 74.2 years in 2010, and 76.9 years in 2018. Figure 2 shows a couple of plateaus, which are from about 1995 to 2005 for the Philippines and from about 1990 to 2000 for Thailand. However, both have overall seen steady, albeit slow, increases in life expectancy over time. For the most recent year with such data (2018), Thailand has a life expectancy almost 5 years greater than the Philippines. As shown in Figure 2, Thailand experienced a steeper incline than the Philippines, thus resulting in an increasing gap between the two countries. This trend coincides broadly with differences in GDP per capita discussed earlier in this section.



Figure 2: Life expectancy at birth, total (years), 1990-2018

Source: Created by author based on World Bank (2021).

The evolution of literacy rates shown in Figure 3 is mostly inconsistent with the evolution of GDP per capita and life expectancy. The Philippines had a literacy rate of 83.3 percent, which jumped to 93.6 percent in 1990. Thailand's literacy rate was higher than the Philippines' literacy rate in 1980. They were then almost the same at the turn of the century, with the Philippines having a literacy rate of 92.60 percent and Thailand of 92.65 percent. While we cannot compare these two countries' literacy rates between 2000 and 2013 as the years with data availability do not match, it is clear that by 2013, the Philippines' literacy rate was with 96.4 percent nearly 3 percentage points higher than that of Thailand (93.7 percent). Two years later (in 2015), the Philippines' literacy rate had increased further to 98.2 percent, while Thailand's literacy rate decreased further to 92.9 percent, leaving a 5.3 percentage points difference between the two countries. These different trends are puzzling considering Thailand's impressive GDP per capita growth over the

past decade, relative to the Philippines' more stagnant GDP per capita growth as shown in Figure 1.



Figure 3: Adult literacy rate (percent of people ages 15 and above), all available years

Source: Created by author based on World Bank (2021).

# IV. Analysis of Facts

# IV.1. Indicators of Climate Change

# IV.1.a. Greenhouse Gas (GHG) Emissions

GHG emissions, most notably carbon dioxide (CO<sub>2</sub>) emissions, are the main driver of humancaused climate change (Intergovernmental Panel on Climate Change (IPCC) (2015)). As shown in Figures 4 and 5, CO<sub>2</sub> emissions in total kilotons and metric tons per capita have followed similar patterns in each respective country. As shown in Figure 4, total CO<sub>2</sub> emissions in the Philippines has remained fairly steady relative to Thailand. In 1970, the Philippines' emissions were 24,782 kilotons, which increased slowly but steadily to 37,000 kilotons in 1980, 41,763 kilotons in 1990, 73,305 kilotons in 2000, 84,887 kilotons in 2010, and 122,287 kilotons in 2016. On the other hand, total CO<sub>2</sub> emissions in Thailand started out lower than the Philippines at 15,376 kilotons in 1970, increased to 40,135 kilotons in 1980 and then began to increase steeply to 90,722 kilotons in 1990, 172,697 kilotons in 2000, and 258,901 kilotons in 2010. It has leveled off since 2013 to 283,763 kilotons in 2016. Thailand surpassed the Philippines in total CO<sub>2</sub> emissions in 1980 and has since more than twice that of the Philippines' emissions.

Furthermore, as shown in Figure 5, the Philippines's per capita emissions have increased slowly, with some ups and downs, while Thailand's have skyrocketed in the past four and a half decades. The Philippines's per capita emissions started at 0.69 metric tons in 1970, while Thailand's per

capita emissions were, with 0.42 metric tons in 1970, slightly lower. However, Thailand's per capita emissions surpassed the Philippines in 1980, and continued to steeply increase, despite some short-term volatility.



Figure 4: Total CO<sub>2</sub> Emissions (kt), 1970-2016

Source: Created by author based on World Bank (2021).

Figure 5: CO<sub>2</sub> Emissions (metric tons per capita), 1970-2016



Source: Created by author based on World Bank (2021).

#### IV.1.b. Mean Annual Temperature

As detailed in IPCC (2015), changes in long-term average temperature are an important indicator of climate change. The earth's surface temperature increases due to trapped heat from the accumulation of GHGs in the atmosphere. In addition to increased temperatures, we have also seen

an increased frequency of extreme weather events and struggles with agricultural productivity due to excessive floods and prolonged droughts (IPCC, 2015). This may ultimately force populations to migrate due to disaster hazards, food production instability, and a loss of livelihood/economic assets.

Figures 6 and 7 show the actual mean annual temperatures (°C) in the Philippines and Thailand from 1990 to 2015 and the predicted mean annual temperatures from 2015 to 2100. The blue line indicates both precise and smooth recorded data, while the orange region indicates a high emissions prediction. The green region indicates a low global emissions prediction of the future. As shown in Figure 6, the Philippines's annual temperature has risen from just below 26°C in 1990 to just above 26°C in 2015. According to the World Health Organization and United Nations Framework Convention on Climate Change (2015a), under low emissions, the Philippines' mean annual temperature will increase about 1°C between 1990 and 2100, but under high global emissions, it will increase about 3.7°C. Figure 7 shows that Thailand's annual temperature has stayed relatively similar from 1990 to 2015, around 26.5°C. However, it is expected to see a starker change in annual temperature in the future. The World Health Organization and United Nations Framework Convention on Climate Change (2015b) asserts that under low global emissions, Thailand's temperature will increase 1.3°C, and under high global emissions, about 4.3°C between 1990 and 2100. For reference, the Intergovernmental Panel on Climate Change (IPCC) (2018) warns that global climate change must not exceed 1.5°C above pre-industrial levels, as 1.5-2°C is the threshold of irreversible damage.

#### Figure 6: Mean Annual Temperature, Philippines (1900-2015)





Source: World Health Organization and United Nations Framework Convention on Climate Change (2015a and 2015b), Figure 1.

#### IV.1.c. Rising Sea Levels

Sea level rise is another important indicator of climate change, since warmer water expands. It is also a significant challenge for countries in Southeast Asia, whose populations are located mainly

in coastal cities, hence, can be wiped out by rising sea levels. This can also result in population displacement and vast economic losses.

Figures 8 and 9 display sea level rises relative to local land. Figure 8 shows data for Manila, the capital of the Philippines, while Figure 9 shows data for Phrachula Chomklao, the Permanent Service for Mean Sea Level (PSMSL) station closest to Thailand's capital, Bangkok. The two countries show similar trends in sea level rise. Figure 8 displays an increase from about 6.90 meters in 1970 to about 7.65 meters in 2017 in Manila, and Figure 9 displays an increase from about 6.75 meters in 1970 also to about 7.65 meters in 2017 in Bangkok. According to the National Oceanic and Atmospheric Administration (2017), Manila will see a rise of about 14.54 millimeters per year, while Bangkok will see a rise of 16.87 millimeters per year. Furthermore, the National Oceanic and Atmospheric Administration (2017) predicts that in 100 years, Manila's sea level is projected to increase by 4.77 feet, while Bangkok's sea level is projected to rise by 5.53 feet.





Source: National Oceanic and Atmospheric Administration (2017).

Figure 9: Relative Sea Level Rise in Bangkok, Thailand (1940-2017)



Source: National Oceanic and Atmospheric Administration (2017).

#### **IV.2.** Climate Change Consequences

Climate change consequences include extreme weather events, changes in rainfall, and population displacement. This can be measured in many ways, including by fatalities, losses in GDP, and the number of displaced persons.

#### IV.2.a. Extreme Weather Events

Table 1 shows the rankings of the top ten countries affected by extreme weather events according to long-term Climate Risk Index (CRI) scores from 2000-2019. The Philippines is ranked number 4, while Thailand is ranked number 9. The Philippines experiences a much higher fatality rate of natural disasters at 0.93 per 100,000 inhabitants, almost four and a half times Thailand's fatality rate of 0.21 per 100,000 inhabitants. However, Thailand experiences a higher economic loss in terms of GDP, with a loss of 0.82 percent. The Philippines' loss was 0.54 percent of its GDP. The Philippines has had the far greatest number of extreme weather events of all the countries in the chart since 2000, at 318. Thailand has had less than half: 146 extreme weather events.

CRI 2000-2019 (1999-2018)	Country	CRI score	Fatalities	Fatalities per 100 000 inhabitants	Losses in million US\$ PPP	Losses per unit GDP in %	Number of events (2000–2019)
1 (1)	Puerto Rico	7.17	149.85	4.12	4 149.98	3.66	24
2 (2)	Myanmar	10.00	7 056.45	14.35	1 512.11	0.80	57
3 (3)	Haiti	13.67	274.05	2.78	392.54	2.30	80
4 (4)	Philippines	18.17	859.35	0.93	3 179.12	0.54	317
5 (14)	Mozambique	25.83	125.40	0.52	303.03	1.33	57
6 (20)	The Bahamas	27.67	5.35	1.56	426.88	3.81	13
7 (7)	Bangladesh	28.33	572.50	0.38	1 860.04	0.41	185
8 (5)	Pakistan	29.00	502.45	0.30	3 771.91	0.52	173
9 (8)	Thailand	29.83	137.75	0.21	7 719.15	0.82	146
10 (9)	Nepal	31.33	217.15	0.82	233.06	0.39	191

#### Table 1: Climate Risk Index (CRI), 2000-2019

Table 2: The Long-Term Climate Risk Index (CRI): The 10 countries most affected from 2000 to 2019 (annual averages)

Source: Eckstein, Künzel and Schäfer (2021), Table 2.

To reiterate, climate change does not cause all extreme weather events. It is, however, proven to increase their frequency and exacerbate the intensity of them (IPCC, 2015). Figure 10 below breaks down the number of deaths due to extreme weather events, while Figure 11 breaks down the share of these deaths in terms of the total deaths from 1990 to 2017 in each respective year.

According to Figure 10, Thailand has had a relatively low number of deaths over time, with the exception of a huge peak of over 8,000 deaths in 2004. The Philippines has had several small spikes with a few larger peaks at about 3,250 deaths in 1990 and almost 6,500 deaths in 2013, many of these due to Typhoon Haiyan. Figure 11 shows a similar trend to Figure 10, but the Philippines peaks are shorter, and the Thai peak is taller to account for the Philippines' higher population.



Figure 10: Number of Deaths from Natural Disasters, 1990-2017

Source: Global Change Data Lab (2019b).





Source: Global Change Data Lab (2019b).

#### IV.2.b. Rainfall Changes

As stated earlier, climate change also implies changes in rainfall, which ultimately impacts agriculture and food productivity. Figures 12-15 show the actual recorded number of days with extreme rainfall and consecutive dry days from 1950-2015 in blue, projected days with high emissions in orange, and projected days with low emissions in green from 2015-2100. Figures 12 and 13 show, respectively, flood risk and drought in the Philippines. Figures 14 and 15 show, respectively, flood risk and drought in Thailand. The Philippines and Thailand could see an increased frequency of flood days by 9 and 7, respectively, by the year 2100 if global emissions are not slowed.<sup>3</sup> Fortunately, drought days are projected to remain steady in both countries.



#### Figures 12 and 13: Flood Risk and Drought, Philippines (1990-2100)

Source: World Health Organization and United Nations Framework Convention on Climate Change (2015a), Figures 3 and 4.



#### Figures 14 and 15: Flood Risk and Drought, Thailand (1990-2100)

Source: World Health Organization and United Nations Framework Convention on Climate Change (2015b), Figures 3 and 4.

<sup>&</sup>lt;sup>3</sup> World Health Organization and United Nations Framework Convention on Climate Change (2015a and 2015b).

#### **IV.2.c.** Population Displacement

The last consequence and measure of climate change that will be discussed in this section is population displacement. Forced migration can occur internally, as people must move inland for safety from extreme weather events, which is displayed in Figure 16. According to Figure 16, the Philippines shows a much higher instance of internally displaced persons each year than Thailand. The Philippines has had a significantly higher number every year since 2008, with the exception of 2010, when the two countries were equal. The number of internally displaced persons from natural disasters in the Philippines peaked at 7 million persons in 2013 (which was caused by Typhoon Haiyan) and has since decreased to 4.1 million in 2019.<sup>4</sup> The number of internally displaced persons and has also decreased to 61,000 in 2019.<sup>5</sup>

#### Figure 16: Internally Displaced Persons from Natural Disasters, 2008-2017



Source: Global Change Data Lab (2019b).

Tying subsections 1 and 2 of this section together, we can see that the Philippines has relatively low per capita  $CO_2$  emissions compared to Thailand, but it tends to suffer greater consequences. This is only amplified on the global scale, where the poorest and lowest emitting countries suffer the greatest consequences, while mostly rich countries have historically contributed the most to climate change (Paavola, Adgar and Huq (2006)).

# V. Ethical Analysis

Section V discusses the ethical aspects of climate change in the Philippines and Thailand. The first subsection goes deeper into the ethical issues faced by these developing countries and describes

<sup>&</sup>lt;sup>4</sup> Migration Data Portal (2021).

<sup>&</sup>lt;sup>5</sup> Migration Data Portal (2021).

how global and national institutions fall short in addressing them. The second subsection applies ethical perspectives to the content of the first subsection and offers insights into possible steps towards addressing these problems.

#### V.1. Ethical Origins and Structures

Climate change poses several ethical questions on different levels. On a subnational level, different groups are forgotten in policy considerations. As a global problem that knows no national borders, entire countries face injustices based on distribution of effects and exclusion in decisions.

First of all, climate change vulnerability is highly variable on both international and subnational levels. Stephen M. Gardiner and Lauren Hartzell-Nichols (2012, paragraph 2) argue that "there are skewed vulnerabilities: at least in the short- to medium-term, many of the most vulnerable countries and people are those who have emitted the least historically, and whose emissions levels continue to be relatively low." Jouni Paavola, W. Neil Adgar and Saleemul Huq (2006, p. 263) also describe this issue of "distributive justice," meaning that the distribution of climate change effects is uneven across space. On a national level, the Philippines and Thailand have low shares of global carbon emissions. For example, the Climate Action Tracker shows the United States' actions as critically insufficient to reach the 2°C target, while the Philippines' share is 0.4 percent and Thailand's share is 0.79 percent of global emissions. Despite this fact, as mentioned in Section IV, both countries are ranked in the top ten countries with the highest climate risk (as was shown in Table 1 above). It is hard to measure the extent to which emitting countries should be responsible for mitigation, but the inequities are clear.



# Figure 17: Annual Share of Global CO<sub>2</sub> Emissions, 2019

Source: Our World in Data based on Global Carbon Project

OurWorldInData.org/co2-and-other-greenhouse-gas-emissions • CC BY

Source: Global Change Data Lab (2019a).

For the inhabitants of these countries, dealing with climate change means either adaptation or migration. Climate change has disproportionately affected rural communities in both of these countries and many others. Bohra-mishra et al. (2017, p. 300) found that increased temperatures significantly increase the incidence of out-migration in rural provinces of the Philippines, most likely due to declines in agricultural productivity. Likewise, Curran and Meijer-Irons (2014) explain in their article that Thailand's economy depends on agriculture for domestic consumption and export, and that rural villages are responsible for these agricultural products. The authors assert (p. 47) that "[t]his agricultural dependence means that rural communities are particularly vulnerable to climate uncertainties." Research done by Curran and Meijer-Irons also shows that environmental issues worsen political conflicts and intensify the push to migrate.

The ethical aspect is the consideration of those left out of climate decisions and policies on a subnational level. First off, although they are relatively low emitters, these rural communities are largely ignored. For example, the Philippines' National Climate Change Action Plan 2011-2028 outlines the country's aims to promote mitigation and adaptation.<sup>6</sup> The Action Plan discusses the way that migration will reduce security, <sup>7</sup> but the report is vague and does not mention the impact of climate change on agricultural productivity. Thailand's Climate Change Master Plan 2015-2050 is similar, citing only "migration due to the rise of sea level or other changes."<sup>8</sup>

Similarly, the Philippines' Intended Nationally Determined Contributions to the United Nations Framework Convention on Climate Change (UNFCCC)<sup>9</sup> describes the actions that have already been taken by the Philippine Government, including enacting the National Disaster Risk Reduction and Management Law of 2010 and issuing the Biodiversity Strategy and Action Plan. It does not mention the many people who are forced to migrate due to climate change. Thailand's Intended Nationally Determined Contributions to the UNFCCC was the only document found explicitly mentioning agricultural migrants.<sup>10</sup>

David Rotman (2013) asserts that future generations are also often forgotten in decision-making. However, a balance must be found in impacts for the existing and future populations. Taking immediate, transformative, and overly ambitious measures can be harmful to current inhabitants of each country. At the same time, quality of life must be ensured for those who come after.

Another ethical aspect is that developed countries often fail to fairly consider developing countries. Paavola, Adgar and Huq (2006, p. 264) refer to this as "procedural justice," and explain that "vulnerable developing countries are not equal partners in international negotiations on climate change". Paavola, Adgar and Huq (2006) also mention that these developing countries are hindered in pushing their interests by long-standing injustices. The well-known colonialism, dependency, and institution theories of development may offer insight into these injustices.

Huan Qingzhi (2017, p. 91) expresses that, "[...] the logic of ecological imperialism in international carbon politics within the framework of the Convention and the Kyoto Protocol is a demonstration of the way a few Western countries perpetuate and extend their international hierarchical superiority or exclusionist hegemony on the basis of their domestic capitalist economy and politics." This substantiates the claim by Paavola, Adgar and Huq (2006) that developed countries

<sup>&</sup>lt;sup>6</sup> Government of the Philippines (2011).

<sup>&</sup>lt;sup>7</sup> Government of the Philippines (2011), page 16.

<sup>&</sup>lt;sup>8</sup> Government of Thailand (2015a), p. 73.

<sup>&</sup>lt;sup>9</sup> Government of the Philippines (2015).

<sup>&</sup>lt;sup>10</sup> Government of Thailand (2015b).

exert power over developing countries in international climate agreements by playing on existing power dynamics. The Philippines and Thailand have both ratified the Kyoto Protocol and the Paris Agreement and are currently doing what they can to reduce GHG emissions, led by suggestions from the most powerful countries.

Moreover, Calmfors et al. (2019, p. 37) acknowledge that "developing countries that developed countries have fallen short of their promises on providing climate finance and want reassurances of predictable financial flows from developed countries." In 2020, the United States Agency for International Development (USAID) provided \$14.7 million dollars to the Philippines and \$5 million dollars to Thailand for climate change funding (ClimateLinks, 2020a and 2020b, respectively). However, referring back to Table 1, the Philippines experienced losses averaging to more than \$3 billion per year from 2000-2019, while Thailand experienced losses averaging slightly less than \$8 billion per year from 2000-2019 in climate change-related damages and lost economic assets. Due to the international injustices mentioned earlier, the Philippines and Thailand do not have the financial resources to combat climate change on their own, and it must be questioned whether the support from the richer countries is sufficient.

#### V.2. Ethical Frameworks and Recommendations

Several ethical approaches can be applied to the issue of climate change injustices, and since it is a multi-level problem, different levels may be better addressed using different approaches. The Markkula Center for Applied Ethics (2009) identifies five main approaches to ethics. The Philippines' and Thailand's domestic and international climate change policies follow the utilitarian approach, which is aimed at finding the most favorable balance of positive outcomes over negative. For example, by implementing an energy sector restructuring plan, the Philippines is doing what it can to promote slowed emissions, while trying to manage responsible financing for its people and addressing other problems. In the Paris Agreement, the two countries must find a balance between solving a global issue, the associated costs, and acting in their own national interests.

However, perhaps the Markkula Center's common good approach could be more successful than the utilitarian approach in responding to multi-level complications. This approach stresses that community relationships and protecting the most vulnerable of society are the foundation of strong ethics. Similarly, Paavola, Adger and Huq's (2006) communitarian theory of justice also emphasizes the role that community relationships play, as well as how contexts and relativity shape social justice. These sources of ethics apply deeply on a domestic level for the Philippines and Thailand because the government must utilize local, community-based solutions in order to adapt to climate change. Wealthy community members and those who will be less affected by climate change must contribute what they can in order to protect the most vulnerable. For instance, local governments in urban areas could create education and training programs for migrants losing their livelihoods due to declines in agricultural productivity. The Filipino and Thai governments should increase their budgets to implement more support strategies for the most vulnerable, rather than focusing the majority of their resources on reaching the targets of the Paris Agreement, which many developed countries have failed to do.

Moreover, the common good approach could also be applied on a global scale by setting more binding standards for rich developed countries that have the economic means to rapidly reduce emissions. As mentioned by Paavola, Adger and Huq (2006), contexts and relativity matter because formerly colonized countries with underdeveloped industry and infrastructure must be allowed to develop in order to sustain their populations. Additionally, countries with relatively low per capita emissions (typically the Global South) should not necessarily have the same responsibilities as those with relatively high per capita emissions (typically the Global North). The Global North must include the Global South in decision-making and possibly contribute more than their fair share for the common good.

The fairness/justice approach and rights approach may be helpful when examining the intergenerational impacts of climate change. According to the Markkula Center, the justice approach concludes that all humans should be treated equally and fairly, and the rights approach intends to preserve the rights of each individual affected by the outcome. These relate to the cosmopolitan theory of social justice detailed in Paavola, Adger and Huq (2006), as justice must be universally available, regardless of location or time. As discussed in the previous subsection, gains must be made to benefit the current population, however, the interests of future generations must also be taken into account. Using these approaches, future generations must be viewed as deserving of equal rights and fair treatment. Degrading the environment and reducing the chances of their survival and ability to make decisions is unethical. These considerations provide a framework for climate policies and actions that promote sustainability in the long-term.

# VI. Conclusion

To summarize, the Philippines and Thailand have both experienced promising rates of human development, albeit Thailand more so than the Philippines. However, this development is and will continue to be hampered by the devastating impacts of climate change. Per capita GHG emissions on the part of these two countries is on the rise, contributing to increasing earth surface temperatures, sea level rise that encroaches on highly populated cities, fatalities due to worsening and more frequent natural disasters, changing weather patterns, and rising rates of internally displaced persons attributed to any combination of these changes.

Nevertheless, as discussed in Section V, these impacts are compounded by other countries' emissions, particularly of highly developed nations who emit more than their fair share of GHGs. The Philippines and Thailand have not been given the opportunity to have an equal seat at the table in global climate decisions. Furthermore, certain communities such as rural dwellers and future generations are forgotten from national policies. These inequalities constitute ethical issues that can be looked at from a variety of different perspectives: what comprises the best balance of good compared to evil, what is in the best interest of the community, and what best protects the human rights of those involved.

Moving into the future, the global community should better integrate developing countries into the climate conversation. Better yet, lower income countries should urge high-income countries to hit binding targets on GHG emission reductions and to scale up climate mitigation and adaptation funding for developing countries. Non-governmental organizations may also have a role to play in increasing aid flows to developing countries, as long as they listen to local citizens and avoid imposing certain standards on recipients. Both, the Philippines and Thailand must go beyond reducing their emissions. They must focus on implementing legislation that considers and protects all vulnerable communities, offering support potentially through cash transfers, free/low-cost job training and higher education programs, and housing assistance for displaced persons and those impacted in any way by climate change. There are most certainly opportunities for these countries to work together in this process.

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# Trapped by Trade? Non-Reciprocal and Reciprocal Trade Agreements in Benin and Guinea

Collin Coil

#### Abstract

This article examines the impacts of the non-reciprocal trade agreements established by the Fourth Lomé Convention, the transitional agreement established by Annex V of the Cotonou Agreement, and the reciprocal European Partnership Agreements. The investigation focuses on Benin and Guinea, two members of these agreements, to quantify the agreements' relationships with changes in economic output and vulnerability in the two countries. The aim of this article is to determine if either trade agreement led to more ethical and stable development. This article also creates and applies a test to examine the ethicality of trade agreements to determine what type of agreement should play a role in the future economic development of least developed countries.

# I. Introduction

During the decolonization process, many African countries were looking for a way to increase participation in the global system of trade. At the same time, some European countries started to recognize that they played a role in the economic subordination of the global south, and they wanted to undo some damages they had caused during colonization by contributing to the development of their former colonies. To satisfy both of those goals, members of the African, Caribbean and Pacific Group of States (ACP) met with members of the European Community to negotiate the First Lomé Convention, a non-reciprocal trade agreement that was signed in 1975 to increase market access for ACP countries. This convention was renewed three times (in 1980, 1985, and 1990), with the Fourth Lomé Convention (Lomé IV) ending on February 28, 2000 (Simmonds, 1991).

This article focuses on the impacts of three trade agreements: Lomé IV, the temporary trade agreement established by the Cotonou Agreement known as Annex V, and the European Partnership Agreements (EPAs). Lomé IV was a non-reciprocal trade agreement implemented between 1990 and 2000. Annex V was reciprocal and determined trade relations between 2001 and 2014. The EPAs are reciprocal agreements that took effect in 2014 and continue to the present. As time progressed and the trade agreements became reciprocal, Benin and Guinea faced changing

economic situations. This article examines the impact of these trade agreements on Benin and Guinea to assess the ethicality of the agreements.

Following this introduction, Section II reviews some of the literature examining the impacts of entering into reciprocal and non-reciprocal trade agreements. Section III presents some socioeconomic background on the evolution of the three key development indicators in Benin and Guinea. The subsequent section, Section IV, examines specific indicators related to trade and economic development that changed in relation to the trade agreements. Section V presents an ethical test to examine which of the three trade agreements (Lomé IV, the Cotonou Agreement, and the EPAs) were ethically acceptable. Finally, Section VI provides concluding remarks and some options for improving the ethical issues posed by trade.

# II. Literature Review

Several researchers have examined the impacts of non-reciprocal trade agreements in West Africa, but few specifically focus on Guinea and Benin. The existing literature seems to agree about the effectiveness of non-reciprocal trade agreements in promoting exports and an integration into the global trade system. Some researchers, however, have raised concerns about these agreements because they might not be the most effective tool for promoting international trade. Another concern raised by researchers is that these agreements might come with negative consequences, limiting growth and economic diversification in the developing countries they were supposed to support.

- Gil-Pareja, Llorca-Vivero and Martínez-Serrano (2014) relied on the gravity equation to estimate the increase of a developing country's exports from participation in a non-reciprocal trade agreement. They found that, in general, non-reciprocal trade agreements led to a statistically significant increase in the developing country's exports. The authors then disaggregated the data from all non-reciprocal agreements to focus on specific ones, finding that Lomé IV and the Cotonou Agreement specifically led to a significant increase in exports from participating developing countries.
- Gil-Pareja, Llorca-Vivero and Martínez-Serrano (2017) built off their 2014 paper and investigated the impacts of non-reciprocal trade agreements on the exports of "benefactor countries," which are the more developed countries in the agreement. Through the application of the gravity model for trade, the researchers found a statistically significant increase in the exports from a benefactor country involved in the agreement. Although Gil-Pareja, Llorca-Vivero and Martínez-Serrano (2017) did not focus exclusively on European and West African trade, the data did include changes produced from these trade agreements.
- Admassu (2019) investigated the differences between reciprocal and non-reciprocal trade agreements to determine which one better promoted economic growth through increasing exports. Admassu found that reciprocal trade agreements led to greater increases in African exports and imports than non-reciprocal agreements. One particular concern about non-reciprocal trade agreements raised by Admassu (2019) is that countries that participate in them tend to drive resources to the industries that are given preferential benefits, which weakens growth in other industries, leading to a non-diversified economy.

- Bouët, Laborde and Traoré (2018) examined the impact of the EPAs on West African countries and found mixed impacts on each country. In Benin specifically, the researchers found that the agreements did not significantly increase Benin's access to European markets; however, the reduction in Benin's import tariffs did lead to a 7.5 percent decrease in government revenues. This research found that the agreements led to a decrease in household welfare as individuals faced higher taxes to offset the reduction in import duties to continue a stable funding of government expenditures.
- Tröster, Arnim, Staritz, Raza, Grumiller and Grohs (2020) expands on the negative consequences that West African countries face when entering the EPAs. The computable general equilibrium model which the authors developed to examine the impacts of the agreement led to the conclusion that West African countries can expect to see declines in gross domestic product (GDP), wages, and profits. Most of the reduction in GDP, which the model suggested, was caused by the reduction in output from industrial activity as European imports crowded out domestic production in West African countries.

#### III. Socio-economic Background

Although Benin and Guinea are classified as two of the United Nations' Least Developed Countries, the two countries are making consistent strides in development. In terms of human capital development, these two West African nations have come a long way since 1970. As shown in Figure 1, Benin's life expectancy has grown from 42 years in 1970 to 61 years in 2018; that is a 45.2 percent increase in life expectancy. Guinea has seen an even larger increase in life expectancy, growing 64.9 percent, from 37 years in 1970 to also 61 years in 2018. This growth has been mostly consistent, only experiencing a relatively short period of stagnation around the 1990s.



Figure 1: Life Expectancy at Birth, Total (Years)

Source: Created by author based on World Bank (2021).

Figure 2 reveals an increase in adult literacy in both countries. Although this measure is not frequently gathered in Benin or Guinea, it is clear that adult literacy has increased over time in both countries. For Benin, the adult literacy rate improved from less than a sixth (16.5 percent) of the adult population (designated as ages 15 and above) in 1979 to 42.4 percent of the adult population in 2018. Guinea had a less dramatic growth in adult literacy, increasing from 20.6 percent in 1996 to 32 percent in 2014. Although these increases in adult literacy are substantial, neither Benin nor Guinea have yet reached 50 percent adult literacy, which reveals a weakness in their human development.

Human development is further undermined by considerable gender inequalities in literacy. In 2018, only 31 percent of Benin's women are literate as opposed to 54 percent of men (World Bank, 2021). This gender difference is even worse in Guinea, where women were half as likely to be literate than men in 2014 (which is the latest available year with such data): 22.0 percent of Guinea's women were literate compared to 43.6 percent of Guinea's men (World Bank, 2021).



Figure 2: Adult Literacy rate (percent of people ages 15 and above)

Source: Created by author based on World Bank (2021).

Not only has human development in Benin and Guinea been consistent and positive, but the economic development has broadly matched it. Both countries have experienced a growing GDP per capita (purchasing power parity (PPP)-adjusted, in constant 2017 international dollars). As shown in Figure 3, between 1990 and 2019, Benin experienced a cumulative 51.1 percent growth for this indicator while Guinea had a cumulative growth of 69.9 percent. The most recent data from the World Bank (2021) puts PPP-adjusted GDP per capita (in constant 2017 international dollars) for 2019 at \$3,287 for Benin and \$2,562 for Guinea.



Figure 3: GDP per capita, PPP (constant 2017 international \$)

Source: Created by author based on World Bank (2021).

# **IV.** Analysis of Facts

#### IV.1. Key Facts on Trade for Benin and Guinea

Both Benin and Guinea were party to the Lomé IV when it expired in 2000, which was designed to allow ACP countries access to European markets. According to Faber and Roelfsema (1997), over 90 percent of exports from Benin and Guinea entered European markets without tariffs. Even the goods that faced tariffs still received preferential access to European markets over similar goods from other countries of origin. Despite these preferential trade agreements, the export trade volumes from Benin and Guinea do not reveal a substantial benefit from Lomé IV.

As can be seen with the blue line in Figure 4, Benin's exports to Europe (as a percent of Benin's GDP) increased in the first few years of the 1990s, but then declined subsequently, ending in 2000 at the same level they were in 1990. This implies that Lomé IV did not help much with increasing Benin's exports (as a percent of GDP) to Europe over the medium term, and implicitly also suggests that Lomé IV did not contribute substantially to Benin's economic progress. As shown in with the blue line in Figure 5, Guinea's experience under Lomé IV were different as Guinea's exports to Europe (as a percent of GDP) were highly volatile, without any discernable trend during 1990-2000.

It is also relevant to note that Benin and Guinea had different experiences with regards to their imports from Europe, shown with the orange line in Figures 4 and 5, respectively. Under Lomé IV, Benin's imports from Europe grew from 5.6 percent of Benin's GDP in 1990 to 7.0 percent of GDP in 2000, with a sharp peak in 1994, reaching 18.3 percent of Benin's GDP. Unlike Benin, Guinea experienced a nearly steady decrease in imports as a percent of GDP, seeing them fall from 12.3 percent in 1990 to 7.4 percent in 2000. The difference between Benin and Guinea is likely caused by exogenous factors as Lomé IV was not specifically designed to alter the two countries' imports from the Europe, as Lomé IV was non-reciprocal.



Figure 4: Benin's Trade Volume with the EU, percent of Benin's GDP, 1970-2018

Source: Created by author based on International Monetary Fund (2021) and World Bank (2021).

Figure 5: Guinea's Trade Volume with the EU, percent of Guinea's GDP, 1986-2018



Source: Created by author based on International Monetary Fund (2021) and World Bank (2021).

Once Lomé IV expired in 2000, it was not renewed. In its place, the European Union (EU) and the West African countries negotiated a temporary trade agreement in accordance with Article 37 of the Cotonou Agreement, which is also known as Annex V. The primary principle of Annex V as described in the Partnership Agreement between the Members of the ACP and the European Community (signed in Cotonou on June 23, 2000),<sup>1</sup> is the application of the most-favored-nation

<sup>&</sup>lt;sup>1</sup> European Union (2000).

treatment. This implies a reduction of tariffs for Benin and Guinea's imports into the member states of the EU.

This trade liberalization agreement had different effects in Benin and Guinea. In Benin, the anticipated impacts did not materialize. The country's imports as a percent of GDP stayed relatively constant around 6.5 percent. Guinea saw a more significant impact as its imports grew from 7.0 percent in 2001 of GDP to 12.6 percent of GDP in 2014. As can be seen in Figures 4 and 5, Annex V did not lead to both countries significantly increasing their exports. Benin's exports stayed constant, which led to a massive increase in its trade deficit. Benin's cumulative trade deficit from 2001 to 2014 was over \$7 billion (International Monetary Fund, 2021). Guinea had a high variability in its export volume during this time, but it fared much better with regards to its cumulative trade deficit over the same period, which totaled just under \$450 million (International Monetary Fund, 2021), while Benin and Guinea have relatively similar levels of GDP.

Finally, in 2014, the EU and ACP finished negotiations and instituted the EPAs as the new terms for trade. These EPAs were based on a theory described by Flint (2008) that trade liberalization would lead to economic growth and an accumulation of wealth. Despite the theory that trade liberalization would lead to an accumulation of wealth, it seems that both Benin and Guinea experienced quite the opposite effect. Since the EPAs went into effect until 2018, Benin's cumulative trade deficit increased by \$2.4 billion and Guinea's by \$2.2 billion (International Monetary Fund, 2021). The EPAs, therefore, have been hurting GDP growth by maintaining trade deficits. The EPAs have exposed the ACP countries to competition from European industries, prohibiting them from developing their industries enough to compete and starting to export goods. This analysis is in line with that of Hurt (2012), who argued that EU competition would damage local manufacturing in ACP countries.

#### **IV.2.** Specific Trade Issues Faced by Benin and Guinea

One way that trade liberalization could have helped Benin and Guinea is by increasing their access to capital goods, which would have allowed them to increase their economic output potential. Figure 6 shows the imports of capital goods from Europe in millions of U.S. dollar. Although not enough data is available from the years Lomé IV was in effect, there is enough to draw some conclusions about Annex V and the EPAs. For both Benin and Guinea, there was a major increase in the import value of capital goods soon after Annex V went into effect. From 2001 to 2014, Benin increased the value of its trade in capital goods by 280.6 percent and Guinea increased its trade value in capital goods by 103.7 percent. Once the EPAs went into effect in 2014, however, the import values of capital goods fell in Benin.

Understanding that the nominal trade data may obscure some conclusions about the trade in capital goods, Figure 7 shows the import value in capital goods from Europe as a percent of the total value of imports from Europe. While the data from Guinea is too fragmented to draw conclusions, the data from Benin shows that changing from Lomé IV to Annex V to the EPAs did not dramatically alter the percentage of imports that were capital goods. Benin consistently imported between 12 and 24 percent of its total import value from Europe in the form of capital goods. This information, combined with the increase in trade value shown in Figure 4, shows that Annex V and the EPAs increased Benin's total volume of imports while still encouraging consistent investment in capital goods. Because of this investment, Benin's economy should have been able to industrialize more than it did.



Figure 6: Imports of Capital Goods from Europe (U.S. dollar, million), 1995-2018

Source: Created by author based on World Integrated Trade Solution (2021).

Figure 7: Imports of Capital Goods from Europe (percent of import value from Europe)



Source: Created by author based on World Integrated Trade Solution (2021).

One critique of the trade agreements between Europe and ACP countries was that they would discourage processing of raw materials. This argument was presented by Mahler (1994), who stated that limits on European imports tended to be the highest for processed goods; therefore, Lomé IV would discourage ACP countries from developing industries that process agricultural goods. To shed light on the argument, Figure 8 displays the raw material from Benin and Guinea

exported to Europe as a percent of total export value. During the time Lomé IV was in effect, Mahler's argument appears to be correct; the vast majority of exports from both Benin and Guinea to Europe were raw materials. Mahler's argument does not extend past Lomé IV, however, since Figure 8 reveals a dramatic decline in the raw material exports for at least Benin. For example, during the period when Annex V was in effect, there was a 58 percentage-point decrease in Benin's raw material exports to Europe as a percent of its total export value to Europe.



Figure 8: Exports of Raw Material to Europe (percent of export value to Europe)

Source: Created by author based on World Integrated Trade Solution (2021).

Figure 9: Net Barter Terms of Trade Index (2000 = 100)



Source: Created by author based on World Bank (2021).

Another useful indicator to review related to international trade is the net barter terms of trade index. This index, shown in Figure 9 above, tracks the ratio of export prices to import prices. According to Friedrichs (1968), a decline in a country's terms of trade implies a deterioration in a country's national economy welfare. According to Gunter and van der Hoeven (2004), falling terms of trade continue to be a challenge for many developing countries. Looking at Figure 9, there has been a mixed evolution of the terms of trade for Benin and Guinea. Over the period from 1986 to 2018, Benin's terms of trade trended upwards, which implies that Benin's external economic circumstances improved over that period. Guinea, on the other hand, had a mixed evolution for its terms of trade index. Guinea's terms of trade index trended downward from 1986 to 1999, before reaching its peak in 2006. After that peak, Guinea's terms of trade index declined slightly and then remained relatively constant between 2010 and 2018. Hence, Guinea's external economic circumstances were largely inconsistent.

# V. Ethical Analysis

# V.1. Ethical Origins and Existing Ethical Structures

Despite the potential gains a country can make from international trade, some scholars have raised ethical concerns with trade. For example, Barry and Wisor (2014) discussed four moral complaints to international trade. The first is the content of trade, examining the goods themselves to see if they are illegal or immoral to trade. The second complaint is the process by which the trade came about. The third complaint is asking if the trade produced any detrimental effects. The final complaint is unfairness of trade, which would arise if the gains from trade were not distributed fairly among participants. If the evolving trade agreements are ethical agreements, then they would avoid being subject to these four moral complaints.

As the three trade agreements in question covered a wide range of goods, examining the first moral complaint of Barry and Wisor (2014) would be an impractical way to determine the ethicality of the agreements. The goods traded between the EU and ACP countries include too many items, produced in too varied methods that cannot be effectively tracked, to determine if the goods traded are unethical.

The second moral complaint, that the process by which these trade agreements have been adopted may cause harm, is easier to apply. Process can be examined by looking at the context of the different agreements to understand if the ACP countries were coerced or manipulated into these trade agreements.

The third complaint could be examined in connection with the Prebisch-Singer hypothesis. This hypothesis, as described by Todaro and Smith (2015), argues that there will be a long-term decline in the value of primary products relative to other traded goods, which then implies a deterioration in the terms of trade. Hence, we could try to connect the evolution of Benin's and Guinea's raw material exports to Europe with the evolution of the terms of trade. An argument of harm could be made if the trade agreement encouraged Benin and Guinea to produce and export primary goods, which then trapped Benin and Guinea to suffer from the Prebisch-Singer hypothesis and caused a deterioration of the terms of trade. It could be argued that ethical trade agreements need to protect the terms of trade. However, as shown in Figure 8 above, Benin's raw material exports to Europe (as a percent of export value) have overall been declining and Guinea's raw material exports to Europe have been highly volatile. There has also been a mixed evolution of Benin's and Guinea's

terms of trade index, which in any case is determined by all of Benin's and Guinea's trade, not just their trade with Europe. This complicates the analysis of this third moral complaint against international trade.

The fourth moral complaint referred to by Barry and Wisor (2014), i.e., an unfair distribution of benefits, could be examined by reviewing the evolution of Benin's and Guinea's trade balance with Europe. Given that trade deficits have negative implications on employment and growth, an argument could be made that Benin's continuous trade deficit with Europe (as shown in Figure 4 above) has harmed Benin. On the other hand, Guinea's trade balance with Europe (as shown in Figure 5 above) was highly volatile.

In his examination of the Cotonou Agreement, Nwobike (2006) argued to analyze three human rights impacts of trade agreements: Market access, impact on government revenues, and the right to economic development. None of these are human rights by themselves, but they all have an impact on human rights. Market access helps satisfy the right to have a job and make a living. Government revenues can be spent on social programs that lift people out of poverty and provide basic services to satisfy human rights. Economic development is a powerful tool for ensuring human rights for all. These three impacts are quantifiable measures that fall into the moral complaint of fairness. Hence, they can effectively serve as a test for fairness.

To conclude about the ethicality of the trade agreements, a test made from the combination of the arguments from Barry and Wisor (2014) and Nwobike (2006) can be created and applied. Such a test would check each of the three agreements for process, harm, market access, revenues, and development. A trade agreement that is ethical should satisfy a preponderance of the elements in the test, which is attempted in the next sub-section.

# V.2. Applying the Ethical Test for Trade

The first trade agreement to face the ethical test is Lomé IV. This agreement passes the process argument. According to Simmonds (1991), both Benin and Guinea were original signatories of Lomé I, so they would have had ample opportunity to leave the trade agreements before Lomé IV if it were not satisfactory. Because of that option, they were not pressured into the trade agreement. The next element of the test is harm, and Lomé IV fails overall. Within this category, the first indicator is the terms of trade index, which fails because the terms of trade fell for Guinea the entire time Lomé IV was in effect. The second indicator examine raw materials exports, which also fails because Benin and Guinea primarily exported raw materials when Lomé IV expired. The last indicator within our examination of harm reviews trade deficits, which passes. Between 1990 and 1999, both Benin and Guinea were able to maintain a small trade deficit or even a trade surplus with Europe. Lomé IV passes the last three categories of market access, government revenues, and development.

Lomé IV ensured that Benin and Guinea were able to participate in European markets without facing significant competition from subsidized European goods in their own markets. Since Lomé IV was non-reciprocal, Benin and Guinea did not need to lower their tariffs and reduce their revenues, allowing the two developing countries to continue investing those funds in economic and social development programs. The last element, development, is satisfied because the trade agreement allowed participating governments to choose their own development goals, the path to achieve them, and partners to help with the process. After being subjected to the ethical test, Lomé IV passes.

The next trade agreement is the Cotonou Agreement (Annex V), but it fails the ethical test. According to Nilsson (2002), Lomé IV was struck down and replaced with the Cotonou Agreement to conform to the World Trade Organization's rules. As Annex V was the transitional agreement between Lomé IV and the EPAs, it was the immediate outcome of the global community dictating what trade agreement was appropriate. Through this process, Benin and Guinea were marginalized by the industrialized countries in control of the World Trade Organization since they were forced to renegotiate a trade agreement that was long-standing and ethical. Because of this, Annex V fails the check for process. Annex V is mixed for harm, neither passing nor failing. As seen in Figure 9, the terms of trade reached highs for both Benin and Guinea while Annex V was in effect. During this period, as Figure 8 shows, Benin and Guinea also diversified their exports and shifted away from raw materials. The previous two indicators pass, but the trade deficit indicator fails substantially. During the time Annex V was in effect, the trade deficit for both countries ballooned. The sheer magnitude of the trade deficits is enough to outweigh the benefits Benin and Guinea saw in the other two indicators, causing no clear pass or fail in the harm category.

Annex V fails the final three elements of the ethical test. First, the trade agreement opened markets in Benin and Guinea to competition from subsidized European goods, damaging the competitiveness and access of Benin and Guinea. Second, Annex V slashed tariff rates, harming government revenues. Finally, this trade agreement fails the development point. Nwobike (2006) explained that the Cotonou agreement, and therefore Annex V, did not come from negotiations that represented regional development groups but instead groups superimposed by Europe. This weakened the negotiating power of ACP countries and limited their options for development since the agreement of one negotiating group might drag multiple regional African development groups to Annex V. When considering all these factors in the ethical test, Annex V fails.

The last trade agreement to undergo the ethical test are the EPAs, but this test is inconclusive. The first aspect of the test, which is process, yields no result. The EPAs were born out of the Cotonou agreement, which means they also arose when the WTO objected to Lomé IV. Unlike Annex V, however, the ACP countries had much more time to negotiate the terms of this treaty. Hence, it is difficult to argue that Benin and Guinea were forced or manipulated into accepting a detrimental trade agreement. The EPAs pass the harm test. Since the EPAs went into effect, the terms of trade for both Benin and Guinea improved.

The next indicator, raw material exports, significantly increased when the EPAs went into effect, suggesting the EPAs played a role in pushing the developing countries back to relying on raw materials exports. While this is a failure for the EPAs, this indicator was a part of the Prebisch-Singer hypothesis. When contextualized with the increasing terms of trade in both Benin and Guinea, the hypothesis does not hold. More time is needed to determine if this shift to raw materials exports is a short-term fluctuation or a long-term trap. More time will also help shed light on the Prebisch-Singer hypothesis in this context to see if there will be a long-term decline in terms.

The last indicator of harm, trade deficits, passes because both Benin and Guinea reduced the size of their annual trade deficits after the EPAs went into effect. This reduction was not enough to make Benin and Guinea have a trade surplus, but it was a significant reduction from the peak trade deficit during Annex V. The EPAs appear to pass the market access test because they allowed for the developing countries to more forcefully negotiate trade laws that would allow entry into European markets without facing consequences from increased competition with subsidized European goods. The EPAs fail the government revenues test. As described by Bouët, Laborde and Traoré (2018), the EPAs led to a 7.5 percent decline in Benin's government revenue. That

decline in revenues spilled over into public welfare as the government could no longer spend as much on social programs. The EPAs also fail the final test for development. Since the EPAs were negotiated as a part of the Cotonou agreement, they suffer from the same ethical failings as Annex V that were described by Nwobike (2006). Since the ethical test is split for the EPAs, no firm conclusion can be drawn for their ethicality.

# VI. Conclusion

International trade is an issue that heavily determines economic development in developing countries. As seen with Benin and Guinea, the changing trade agreements had an impact on their development. The liberalization of markets in Benin and Guinea did connect them more with Europe, pushing the two countries to diversify their economies away from raw material exports. Unfortunately, it also severely increased the trade deficits of the two developing countries, draining capital that is vital for continued social spending to improve institutions and human development. It also seems that the three trade agreements did not have an impact on Benin and Guinea's imports of capital goods, suggesting that the agreements did not promote industrialization; in other words, Benin and Guinea were trapped by trade and were not sufficiently encouraged to industrialize.

The three agreements also presented some ethical concerns. This article developed an ethical test based on Barry and Wisor (2014) to check the process, harm, and fairness for each agreement. While Lomé IV passed the ethical test, Annex V failed, and the EPAs were equivocal. The failure of Annex V and the EPAs suggests that reciprocal trade agreements may not be the most ethical tool to accelerate a developing country's economic development. The issues with Annex V and the EPAs came from the harm and unfairness the agreements brought about. Considering this, Benin and Guinea may need to work with the EU to renegotiate the current EPAs to minimize the harm and unfairness. The EU may also want to consider increasing development aid to offset the harm resulting from its trade agreement with Benin and Guinea, which would help increase the competitiveness of African businesses. After implementing these improvements, the new trade situation will be better suited to promote economic development in Benin and Guinea without causing negative side effects of international trade, namely rising inequality and further marginalizing some of the least developed countries.

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# **Core-Periphery Conceptualizations: Examining Sanitation as a Representation of Urban-Rural Disparities in Malaysia and India**

Lyla Saxena

## Abstract

This article explores urban-rural disparities in water and sanitation in Malaysia and India. Water and sanitation-related practices covered in this article include open defecation and use of basic drinking water services. While both countries have made efforts to improve access to water and sanitation, urban-rural disparities persist. While India has implemented programs that specifically prioritize the provision of water and sanitation to rural communities, Malaysia continues to focus its efforts equally on its entire population. Recently, water and sanitation responses in India appear more organized and focused than in Malaysia, though Malaysia had started much earlier with prioritizing water and sanitation issues. Moving forward, the water and sanitation efforts of Malaysia and India should prioritize the needs of their marginalized communities, which at least in India, are disproportionately concentrated in rural areas.

## I. Introduction

Despite impressive improvements in the water and sanitation sector, including greater access to water and better hygiene practices over the past decade, there is much to be done in areas that have seen slower progress.<sup>1</sup> More than 2 billion people, representing over one-fourth of the world's population, do not have access to basic sanitation services, with nine out of ten of these people living in Sub-Sharan Africa, Southeast Asia, and Central and Southern Asia.<sup>2</sup> By 2030, 40 countries are expected to achieve "nearly universal" access to basic sanitation services, yet progress is slower in rural areas and among the poorest quintile of the population.<sup>3</sup> Many people still experience poor sanitation even though improving sanitation and access to basic sanitation services is central in efforts to end extreme poverty.<sup>4</sup>

<sup>&</sup>lt;sup>1</sup> United Nations Children's Fund (UNICEF) South Asia (2016).

<sup>&</sup>lt;sup>2</sup> United Nations Children's Fund (UNICEF) and World Health Organization (WHO), 2019, p. 32.

<sup>&</sup>lt;sup>3</sup> United Nations Children's Fund (UNICEF) and World Health Organization (WHO), 2019, p. 35.

<sup>&</sup>lt;sup>4</sup> United Nations Children's Fund (UNICEF) and World Health Organization (WHO), 2019, pp. 14, 24.

This article examines the state of water and sanitation in Malaysia and India, with focusing specifically on how sanitation is different between urban and rural areas. In this article, water and sanitation includes the use of basic sanitation services, practice of open defecation, and the use of basic drinking water services. In South and Southeast Asia, water and sanitation is considered of poorer quality than in Western countries, a characterization that falls under typical development discourse which uses "the West" as a gold-standard for development. For example, with over 600 million people practicing open defecation, South Asia houses the majority of the world's open defecators and in Southeast Asia, sanitation is rarely prioritized by national governments with tight budgets.<sup>5</sup> As this article will show, Malaysia has seen greater improvements in sanitation and water access than India. This article argues that water and sanitation represent urban-rural disparities in each Malaysia and India.

Following this introduction (Section I), Section II briefly reviews existing literature about water and sanitation in Malaysia and India. Section III then details the socioeconomic background of each country, in terms of their GDP per capita, life expectancy at birth, and adult literacy rate over time. Section IV analyzes the evolution of water and sanitation in each country using an urbanrural lens and also analyzes related dimensions of water and sanitation. Section V outlines current water and sanitation responses in each country and international agreements on sanitation and water. Additionally, Section V also introduces ethical concepts and frameworks on water and sanitation while applying them to the current efforts of Malaysia and India. Section VI highlights the findings of this article while offering possible next steps for continuing to improve access to water and sanitation.

# **II.** Literature Review

Literature on poor water and sanitation provision and usage in both Malaysia in India has increased over the past two decades following the adoption of the Millennium Development Goals in 2000 and the Sustainable Development Goals in 2015, both of which include basic sanitation and safe drinking water for all. Tiwari (2020), De (2018), and Nagla (2020) focus on India, while Aini, Fakhrul-Razi, Mumtazah and Chen (2007) and Ahmed, Siwar and Begum (2014) focus on Malaysia. In each article, the authors describe the general state of water and sanitation and explore specific dimensions of water sanitation in the country of focus, in addition to providing recommendations for how each country can move forward to solve issues such as open defecation and excessive water use, among others.

• Tiwari (2020) discusses how improved sanitation in India's urban areas has occurred simultaneously with efforts to promote sustainable development. More specifically, Tiwari (2020) highlights three dimensions of urban sanitation: open defecation, fecal sludge discharge, and wastewater. He argues that improved sanitation, in addition to social and economic development, leads to better health outcomes in developing countries such as India. Moving forward, efforts in urban sanitation by the Government of India's Ministry of Housing and Urban Affairs must focus on maintaining current sanitation progress through an enabling environment that includes capacity building, private sector participation, and data-driven monitoring.

<sup>&</sup>lt;sup>5</sup> United Nations Children's Fund (UNICEF) South Asia (2016) and Yu (2019).

- De (2018) explores the different economic and non-economic factors that influence sanitation coverage in India. He describes how sanitation coverage in India is notably lower than coverage in other developing countries, which increases India's global disease burden. Sanitation policy should be focused on improving education and infrastructure and changing social norms so that multiple sanitation types are available to the Indian community and the community begins to accept sanitation as a "normal" practice.
- Nagla (2020) focuses on the link between increased open defecation in rural India and cultural norms, arguing that practices and customs, not resource provision, influence the improvement of sanitation in India. Nagla (2020) uses two case studies to demonstrate cultural norms surrounding sanitation in both urban and rural India. A study by Coffey et al. (2015) which examines sanitation in rural India, reveals that rural Indians find open defecation to symbolize health, longevity, and strength, while viewing affordable latrines as both physically and ritually polluting. Even when latrines are available to rural Indians, they prefer to practice open defecation due to cultural norms around purity and pollution.
- Aini, Fakhrul-Razi, Mumtazah and Chen (2007) examine drinking water practices in Malaysia, exploring both poor water quality and excessive water use, in particular. Water consumption is high among Malaysians—nearly three to five times higher than the international standard for water usage recommended by the United Nations—revealing the issue of unsustainable and wasteful water use. Regarding water quality, Malaysians utilize one of five different technologies: tap water, bottled water, home purification systems, vending machines, and home wells. Because women are responsible for managing household water and hygiene in rural areas of Malaysia, they play an important role in water conservation.
- Ahmed, Siwar and Begum (2014) write about the limited availability of clean water in Malaysia, paying attention to the unequal distribution of water across Malaysia in the face of urbanization, industrialization, population growth, and increased irrigation. Rainwater serves as main source of water for Malaysia, yet over the past few years, rainwater in river basins and streams have become more polluted due to farming, land clearing, and domestic sewage. Further contributing to the unavailability of clean water are legal constraints at the federal and state levels. Water legislation is outdated, ambiguous, and repetitive, and does not account for the unequal distribution of water across the country or the issues that population growth and urbanization pose.

## III. Socioeconomic Background

Malaysia is located in Southeast Asia and had a population of 31.9 million in 2019.<sup>6</sup> Its agricultural sector accounted for 7.3 percent of its gross domestic product (GDP) in 2019. Following Malaysia's independence in 1954, the country has shifted from a mainly agriculture and commodity-based economy to one that prioritizes the manufacturing and service sectors.<sup>7</sup> Malaysia's high trade to GDP ratio makes it one of the most open economies in the world.<sup>8</sup> Currently, Malaysia is characterized as an upper-middle income economy, and if it continues its

<sup>&</sup>lt;sup>6</sup> World Bank (2021).

<sup>&</sup>lt;sup>7</sup> World Bank (2020).

<sup>&</sup>lt;sup>8</sup> World Bank (2020).

average yearly growth of 5.4 percent, which it has since 2010, Malaysia will achieve the status of a high-income country by 2024.<sup>9</sup>

India is the most populous country in South Asia with a population of 1.37 billion, more than 42 times of Malaysia's population.<sup>10</sup> India's agricultural sector accounted for 16.0 percent of its GDP in 2019,<sup>11</sup> more than twice that of Malaysia. With the election of Prime Minister Narendra Modi in 2014, whose campaign emphasized economic growth, India's GDP has risen steadily.<sup>12</sup> However, economic growth has not improved conditions for most of India's poorest, with only a one percent increase in employment accompanying a seven percent growth in GDP.<sup>13</sup>

As shown in Figure 1, Malaysia's PPP-adjusted GDP per capita (in constant 2017 international dollar) saw a drop between 1997-1998, representing the effects of the Asian financial crisis.<sup>14</sup> Since then, Malaysia has experienced a sharp increase in its PPP-adjusted GDP per capita, reaching \$28,364 in constant 2017 international dollar. India has had a slower but more steady increase in GDP per capita, relative to Malaysia, though its PPP-adjusted GDP per capita is far lower than that of Malaysia, reaching \$6,700 (in constant 2017 international dollars) in 2019.



Figure 1: GDP per capita, PPP (constant 2017 international \$), 1990-2019

Source: Created by author based on World Bank (2021).

Along with an increase in GDP per capita in both Malaysia and India since 1990, life expectancy has also increased since the 1970s, shown in Figure 2. In 1970, Malaysia's life expectancy was

<sup>&</sup>lt;sup>9</sup> World Bank (2020).

<sup>&</sup>lt;sup>10</sup> World Bank (2021).

<sup>&</sup>lt;sup>11</sup> World Bank (2021).

<sup>&</sup>lt;sup>12</sup> Marlow et al. (2019).

 $<sup>^{13}</sup>$  Marlow et al. (2019).

<sup>&</sup>lt;sup>14</sup> World Bank (2020 and 2021).

64.6 years and in 2018, it was 76.0 years, reflecting an about ten-year increase. In 1970, India's life expectancy was 47.7 years and in 2018, it was 69.4 years, reflecting an over twenty-year increase.



Figure 2: Life expectancy at birth (in years), 1970-2018

Source: Created by author based on World Bank (2021).



Figure 3: Adult literacy rates (all available years)

Source: Created by author based on World Bank (2021).

Further, as GDP per capita is far higher in Malaysia than in India, literacy rates are also higher in Malaysia than in India, shown in in Figure 3. While India's total adult literacy rate has increased since 1981, literacy rates stratified by gender reveal persisting inequality. In 2018, the adult male literacy rate in India was 82.4 percent while the adult female literacy rate was only 66.0 percent. Chandra (2019) writes that high illiteracy rates among Indian women, compared to Indian men, are the result of social economic, and cultural factors. The gap between literacy rates among female youth and male youth is much less stark than the gap between literacy rates among adults in India. As of 2018, male youth had a literacy rate of 93.0 percent and female youth had a literacy rate of 90.2 percent. This signals improved gender parity in the realm of literacy attainment and in education more broadly.<sup>15</sup> Malaysia experiences less gender inequality in terms of literacy rates. The adult female literacy rate in Malaysia was 93.5 percent as of 2018, and the adult male rate was 96.1 percent. Further, female youth had the same literacy rate at 97.0 percent as male youth in 2018 in Malaysia.

## IV. Analysis of Facts

The first sub-section of this section focuses on the evolution of sanitation in both Malaysia and India, specifically highlighting this evolution with an urban-rural lens. The second-sub-section of this section reviews three sets of data related to water and sanitation: the practice of open defecation, the use of basic drinking water services, and the mortality rate caused by poor sanitation. Each of the three topics are analyzed using an urban-rural lens.

## IV.1. Evolution of Sanitation

#### IV.1.a. Rural versus Urban Analysis

Figure 4 shows the percentage of rural and urban populations that use at least basic sanitation services in Malaysia and India. The use of basic sanitation services is defined as the use of improved sanitation facilities, including flush/pour flush to piped sewer systems, septic tanks or pit latrines, ventilated improved pit latrines, composting toilets, or pit latrines with slabs.<sup>16</sup> This indicator also accounts for people using both basic sanitation services and safely managed sanitation services.<sup>17</sup>

Figure 4 shows that differences in the percentage of urban and rural populations who use at least basic sanitation services are much larger in India than in Malaysia. The percentage of Malaysia's rural population that used at least basic sanitation services (98.7 percent) in 2017 is closely approaching the percentage of Malaysia's urban population that used at least basic sanitation services (99.9 percent), represented by the near convergence of purple lines in 2017 in Figure 4. India's rural population who use at least basic sanitation services has increased rapidly over the past 17 years (a 49.4 percentage points increase overall) and is on its way toward meeting the percentage of India's urban population with only a 19.8 percentage points difference in 2017, compared to a difference of 45.5 percentage points in 2000. Additionally, in Malaysia, the percentage of either the rural or urban population who use at least basic sanitation services has increase for either rural or urban areas

<sup>&</sup>lt;sup>15</sup> Chandra (2019).

<sup>&</sup>lt;sup>16</sup> World Bank (2021).

<sup>&</sup>lt;sup>17</sup> World Bank (2021).

over the years being only 4.3 percentage points, compared to India's largest increase of 49.4 percentage points since 2000.



Figure 4: People using at least basic sanitation services (rural vs. urban population), 2000-2017

Source: Created by author based on World Bank (2021).

Figure 5: People using at least basic sanitation services (total population), 2000-2017



Source: Created by author based on World Bank (2021).

#### IV.1.b. Total Population Analysis

Figure 5 shows total use of at least basic sanitation services in Malaysia and India using the same indicator as in Figure 4 and defined previously. Overall, a far higher percentage of people in Malaysia use at least basic sanitation services than in India. Similar to Figure 4 and its analysis,

this section finds that the percentage of Malaysia's total population that uses at least basic sanitation services is relatively more constant than India's, with only a 2.6 percentage points increase since 2000 compared to India's 39.6 percentage points increase since 2000. Important to note is that in 2000, Malaysia started with nearly full usage of at least basic sanitation services among the total population, at 96.8 percent, while India started at only 16.4 percent in 2000; this is the reason for Malaysia's minimal increase in usage over the years compared to India's large increase.

## IV.2. Dimensions of Sanitation

## IV.2.a. Sanitation-Related Practices

Figure 6 shows the percentage of rural and urban populations that practice open defecation in Malaysia and India. The practice of open defecation is defined as defecating in open areas, such as in fields, forests, bushes, open bodies of water, on beaches, in other open spaces, or disposed of with solid waste. <sup>18</sup> Figure 6 uses two vertical axes because the percentage values for Malaysia are much lower than the percentage values for India. Overall, the percentages of rural and urban populations that practice open defecation in Malaysia and India have declined since 2000.



Figure 6: People practicing open defecation, 2000-2017

Source: Created by author based on World Bank (2021).

Malaysia's rural population saw a steep decline in its practice of open defecation from 2000 to 2012. Since 2012, the percentage has been stagnant at 1.12 percent. Malaysia's urban population saw a shallower decline in its practice of open defecation since 2011, since which the percentage has been zero. There is no value provided for the year 2016 for both Malaysia's rural and urban populations. India's decline in the practice of open defecation has been much greater in absolute terms than in Malaysia: the percentage of rural Indians who openly defecate decreased 53.9 percentage points since 2000 and the percentage of urban Indians who openly defecate decreased 22 percentage points since 2000. Unlike Malaysia, India has not seen a leveling off of values for

<sup>&</sup>lt;sup>18</sup> World Bank (2021).

the past nine to ten years for either rural or urban populations. Because India's values for both rural and urban populations have not leveled off, it might be predicted that the percentage of people practicing open defecation will continue to decrease in years to come until the values hit zero, like the value has for Malaysia's urban population and almost has for its rural population.

Figure 7 shows the percentage of people in rural and urban populations who use at least basic drinking water services in Malaysia and India. Basic drinking water services are defined as drinking water from an improved source, such as piped water, boreholes or tubewells, protected dug wells, protected springs, and packaged or delivered water, and collection time must not exceed 30 minutes for a round trip. <sup>19</sup> Contrary to expectations, the percentage of rural Malaysians who use at least basic drinking water services has decreased 4.8 percentage points since 2000. The percentage of urban Malaysians who use at least basic drinking water services has also slightly decreased (0.3 percentage points) since 2000.



Figure 7: People using at least basic drinking water services, 2000-2017

Source: Created by author based on World Bank (2021).

Contrastingly, the percentages of rural and urban Indians who use at least basic drinking water services have increased since 2000, with a 16.7 percentage points increase overall for rural Indians and a 5 percentage points increase for urban Indians. In 2017, the percentage of India's rural population (91.0 percent) and the percentage of India's urban population (96.0 percent) who use at least basic drinking water services were higher than the percentage of Malaysia's rural population that use at least basic drinking water services (89.3 percent). The percentage of Malaysia's urban population that use at least basic drinking water services in 2017 (99.1 percent) was higher than all other percentages in 2017, even though this percentage slightly decreased from its value in 2000.

<sup>&</sup>lt;sup>19</sup> World Bank (2021).

#### IV.2.b Impacts of Sanitation-Related Practices and Sanitation Itself

Figure 8 shows the mortality rate attributed to unsafe water, unsafe sanitation, and lack of hygiene in Malaysia and India in 2016. This indicator focuses on inadequate water, sanitation, and hygiene (WASH) services that cause death from diarrheal diseases, intestinal nematode infections, and protein-energy malnutrition.<sup>20</sup> Both Malaysia and India do not have a value for any other year besides 2016. Per 100,000 people, India had a mortality rate attributed to unsafe water, unsafe sanitation, and lack of hygiene of 18.6 in 2016, while Malaysia had a mortality rate of only 0.4 in 2016. India's far higher mortality rate reflects stark differences in sanitation maintenance, notably in the areas of water and hygiene, and in the ability of each country to help their population recover from deadly, sanitation-inflicted diseases and infections.

#### Figure 8: Mortality rate due to sanitation-related practices and sanitation itself, 2016



Source: Created by author based on World Bank (2021).

# V. Ethical Analysis

The first sub-section of this section introduces sanitation responses, at both the global and regional levels, examining responses in each Malaysia and India. In the second sub-section, Risse's (2014) ethical framework of the human right to water is reviewed, alongside the Markkula Center for Applied Ethics' sources of ethical standards. Additionally, the second sub-section critically analyzes the sanitation responses of Malaysia and India through an application of the previously introduced ethical framework and concepts.

## V.1. Global and Regional Sanitation Responses

## V.1.a. International Agreements on Sanitation and Water

Affecting both Malaysia and India, the first intergovernmental conference focused only on water, the Mar del Plata United Nations Conference on Water, which was held in 1977.<sup>21</sup> The objective of this Conference was "to promote a level of preparedness, nationally and internationally, which would help the world to avoid a water crisis of global dimensions by the end of the present

<sup>&</sup>lt;sup>20</sup> World Bank (2021).

<sup>&</sup>lt;sup>21</sup> Biswas (2004), p. 82.

century." <sup>22</sup> Many conferences on water followed the Mar del Plata Conference on Water, but on July 28, 2010, the United Nations General Assembly finally recognized that access to both clean drinking water and sanitation is "an integral component of the realization of all human rights."<sup>23</sup> Both Malaysia and India voted in favor of the draft resolution on the human right to water and sanitation adopted by the United Nations General Assembly (2010). Recognizing access to water and sanitation as a human right brought ethics into a conversation previously void of justice concerns, but rather focused on infrastructural matters.

#### V.1.b. Existing Ethical Structures: Sanitation Response in Malaysia

Immediately following the country's independence in 1957, Malaysia prioritized its sanitation sector.<sup>24</sup> Because Malaysia has been ruled by the same party since its independence, concentrating and wielding power in sanitation programming is relatively easy for the national government.<sup>25</sup> To obtain maximum sanitation coverage, the country adopted an approach of uniform strategy, regulation, and service delivery, what is also termed a "top-down strategy" by Kelkar (2018). This involved the management of centralized, community, and on-site sanitation systems. <sup>26</sup> Further, Malaysia utilized strong regulatory frameworks and included the private sector in its sanitation management. <sup>27</sup> While Malaysia's sanitation infrastructure was aging in the 1990s, particularly in the state of Penang, whose infrastructure experienced frequent collapses and overflows, the economic drivers of industrialization, urbanization, and the booming tourism industry catalyzed renovation of Malaysia's sanitation system and continue to support its maintenance. <sup>28</sup>

No single agency is responsible for water management in Malaysia and conflicts in such management are addressed through inter-agency coordination. Additionally, Malaysia lacks a comprehensive water law as sector-based water laws at both the federal and state levels are enforced by various water-related government agencies. Such laws are dated, redundant, vague, and focus on limited aspects of water management, making difficult the ability to enforce water law in Malaysia. The National Water Resources Council, however, exists at the federal level to promote effective water management through the implementation of interstate water transfers.<sup>29</sup>

#### V.1.c. Existing Ethical Structures: Sanitation Response in India

In October 2014, the Department of Drinking Water & Sanitation of India's Ministry of Jal Shakti (which translates to "water power") launched a clean water campaign, called "Swachh Bharat Mission" that focused on universal sanitation and hygiene. By adopting this campaign, India achieved the goal of becoming open-defecation-free in 2019 through the construction of over 109 million household and community toilets in 603,174 villages in 706 districts across the country. Concerning open defecation, this campaign induced behavioral transformation in India. While the Swachh Bharat Mission prioritizes the provision of toilets to all, the campaign focuses specifically on the construction of separate toilets for girls and women across the country, which has resulted

<sup>&</sup>lt;sup>22</sup> Biswas (2004), p. 82.

<sup>&</sup>lt;sup>23</sup> United Nations General Assembly (2010), p. 2.

<sup>&</sup>lt;sup>24</sup> Kelkar (2018).

<sup>&</sup>lt;sup>25</sup> Voice of America (2020).

<sup>&</sup>lt;sup>26</sup> Kelkar (2018).

<sup>&</sup>lt;sup>27</sup> Kelkar (2018).

<sup>&</sup>lt;sup>28</sup> Kelkar (2018).

<sup>&</sup>lt;sup>29</sup> This paragraph is based on Food and Agriculture Organization of the United Nations (FAO) United Nations Economic and Social Commission for Asia and the Pacific UNECAP (2001).

in increased school enrollment, higher retention of girls in primary school, and improved safety for women.  $^{30}$ 

As documented in NITI Aayog (2020, p. 65), the Government of India is "committed to providing safe and adequate drinking water in all habitations by 2022" and in May 2019, the Government created the Ministry of Jal Shakti to "ensure effective water governance and comprehensively address water management challenges". Under the recently launched Jal Jeevan Mission (which translates to Water as Life Mission), India intends to supply all rural households with piped water, specifically at a rate of 55 liters of drinking water per capita, by 2024. This mission will help address and mitigate rural-urban disparities in water access and will also significantly reduce the burden on women who travel long distances to get water.

A second recently launched campaign, Jal Shakti Abhiyan, works to optimize India's water conservation, rainwater harvesting, watershed development, renovation of traditional and other water bodies, and reuse of water and recharging structures through community mobilization and participation. The goal of this campaign is to achieve a "water -secure future" for India. So far, this campaign has taken 350,000 water conservation steps in 256 districts of India, with community participation at 26.4 million people.<sup>31</sup>

#### V.2. Ethical Frameworks and Ethical Analysis of Sanitation Responses

#### V.2.a. Ethical Concepts and Frameworks in Sanitation

One ethical framework in water and sanitation discourse is Mathias Risse's (2014) human right to water framework. Risse (2014, pp. 178, 195-196) argues that there is a human right to water because water is essential to all life forms and because the existence of water is not the result of any human accomplishments. This right is discussed in two forms: a right to safe drinking water and a right to sanitation.<sup>32</sup> Both safe drinking water and sanitation are elaborated on because both involve the same water system, meaning both entities involve water as a medium. Water is essential for the metabolic cycles that involve both the drinking of water and the disposal of urine and feces. While sanitation might seem to be less important to be distinguished as a human right, sanitation concerns human's high vulnerability to water-borne diseases that stem from dirty water, insufficient water access, organisms living in water, and animals living near water.<sup>33</sup>

Common ownership, the idea that "each individual must have the opportunity to satisfy basic needs, to the extent that this turns on natural resources and spaces of the earth," is emphasized in this framework.<sup>34</sup> States, however, might use their power to deprive individuals of the ability to meet their basic needs, and conversely, other states can refuse entry to individuals who cannot satisfy basic needs. <sup>35</sup> Both instances deny individuals the opportunity to satisfy their basic needs at the expense of prioritizing state power and political and economic motives. <sup>36</sup> To mitigate this issue, not only is it argued that the power of states must be limited, but further, Risse (2014, p. 193) argued that states must give individuals the opportunity to "lead a life at subsistence level." Such a requirement acknowledges individuals' rights to food, clothing, and housing, however,

<sup>&</sup>lt;sup>30</sup> This paragraph is based on NITI Aayog (2020), p. 4 and p. 67.

<sup>&</sup>lt;sup>31</sup> This paragraph is based on NITI Aayog (2020), p. 65.

<sup>&</sup>lt;sup>32</sup> Risse (2014) p. 178.

<sup>&</sup>lt;sup>33</sup> Unless otherwise stated, this paragraph is based on Risse (2014) p. 180.

<sup>&</sup>lt;sup>34</sup> Risse (2014) p. 195.

<sup>&</sup>lt;sup>35</sup> Risse (2014) pp. 190-191.

<sup>&</sup>lt;sup>36</sup> Risse (2014) pp. 190-191.

because water is essential for human survival, a right to food must also include a right to safe drinking water. <sup>37</sup>

In other words, while a state system can only exist if it allows individuals to use earth's resources to satisfy their basic needs, the responsibility to ensure that all individuals have access to water "to which the co-owners of the earth are entitled" is global. <sup>38</sup> Under this human right to water framework, regional arrangements that regulate water resource use among certain countries are not necessary, as there is ultimately global, not regional, responsibility for ensuring access to safe drinking water and basic sanitation.<sup>39</sup>

Risse's (2014) human right to water framework combines elements of the fairness or justice approach and the rights approach, both outlined by the Markkula Center for Applied Ethics. The fairness or justice approach is visible in the human right to water framework as it centers the idea of common ownership wherein all co-owners have an equal opportunity to satisfy their basic needs "to the extent that this turns on obtaining collectively owned resources." <sup>40</sup> The provision of equal opportunity to satisfy basic needs echoes the ideas of Aristotle and other Greek philosophers who argued that "all equals should be treated equally" or if unequally, then fairly based on logical and defensible standards. <sup>41</sup>

Under the rights approach, humans have dignity based on being human or based on their ability to choose freely how to live.<sup>42</sup> Further, humans have a right to be treated as ends and not only as means to other ends, based on their dignity.<sup>43</sup> As discussed above, individuals have a right to water, and states must not use their power to hinder individuals from using resources to satisfy their basic needs. The human right to water framework argues similarly to the rights approach but reverses the order of conditions: the framework argues that because humans have value and dignity, they should be able to freely make decisions about their lives without state interference while the rights approach argues that because humans are able to freely make decisions about their life, they have value and dignity.<sup>44</sup>

#### V.2.b. Ethical Analysis of Sanitation Reponses in Malaysia and India

Risse (2014) argues that there is a global responsibility for ensuring access to safe drinking water and basic sanitation, denying the need for regional agreements on water resource use and management, yet Malaysia and India have implemented their own, regional-level sanitation responses. For example, Malaysia has prioritized its own water and sanitation since its independence and India has created many different initiatives such as the Swachh Bharat Mission, Ministry of Jal Shakti, and Jal Shakti Abhiyan. Of note, however, is that Malaysia's regional-level sanitation response has not occurred through a formal program, as is the case in India through its Swachh Bharat Mission. Based on Risse's (2014) argument, there is no need for these regionallevel responses in Malaysia and India, and both countries could simply follow global water and sanitation regulations, yet the absence of a global governing body makes the implementation and assessment of such regulations difficult.

<sup>&</sup>lt;sup>37</sup> Risse (2014) p. 193.

<sup>&</sup>lt;sup>38</sup> Risse (2014) p. 195.

<sup>&</sup>lt;sup>39</sup> Risse (2014) p. 196.

<sup>&</sup>lt;sup>40</sup> Risse (2014) p. 189.

<sup>&</sup>lt;sup>41</sup> The Markkula Center for Applied Ethics (2009).

<sup>&</sup>lt;sup>42</sup> The Markkula Center for Applied Ethics (2009).

<sup>&</sup>lt;sup>43</sup> The Markkula Center for Applied Ethics (2009).

<sup>&</sup>lt;sup>44</sup> The Markkula Center for Applied Ethics (2009).

Though both Malaysia and India were actively participating in the previously mentioned Mar del Plata United Nations Conference on Water, there is limited information on the actions each country took after the global United Nations Conference on Water took place. Similarly, both Malaysia and India voted in favor of recognizing clean drinking water and basic sanitation as a human right in July of 2010, but there is limited information on the specific actions each country took after two major global conferences on water and sanitation, it is unclear whether the regional-level sanitation responses of Malaysia and India represent efforts to implement global goals on water and sanitation or if they rather represent only regional efforts at such.

Malaysia's uniform strategy, regulation, and service delivery approach echoes the fairness or justice approach as defined by the Markkula Center for Applied Ethics. By treating all equals, Malaysians in this case, equally by adopting a uniform, or equal, approach to sanitation response, Malaysia's actions are considered fair. The fairness or justice approach and a uniform strategy, regulation, and service delivery approach, however, do not consider questions of equity and how the equal provision of services to all equals ignores the heightened needs of marginalized and historically underserved communities. This point relates to recent debate within the fairness or justice approach regarding the influence of power imbalances in determining fairness and justice.<sup>45</sup>

India's Jal Jeevan Mission addresses the need of providing increased resources to marginalized communities that Malaysia's sanitation response fails to recognize. Because the Jal Jeevan Mission prioritizes the provision of piped water to rural households, who experience greater difficulty than their urban counterparts in accessing water, and to women, who experience a greater burden than men when traveling to access water, this program bolsters the idea of equity and acknowledges how historical power imbalances have caused unequal water access. In other words, the Jal Jeevan Mission prioritizes rural Indians and Indian women in order to level the playing field, or equalize, access to water that urban Indians and Indian men have long had access to.

# VI. Conclusion

Through examining the socioeconomic histories, evolution of sanitation, and sanitation responses in Malaysia and India, this article shows how Malaysia and India have improved their sanitation sectors, yet at different paces. While Malaysia has seen rapid improvement of its water and sanitation sector with the prioritization of sanitation immediately following its independence in 1954, India has seen slower progress and subsequently a greater urban-rural divide.

Moving forward, both Malaysia and India need to include the needs of marginalized communities, notably persons with disabilities, undocumented/stateless persons, gender non-conforming people, and members of low castes, in their sanitation improvement efforts. In a report for the United Nations General Assembly, the UN Special Rapporteur on the Human Rights to Safe Drinking Water and Sanitation, Leo Heller, found that in Malaysia, access to safe drinking water and sanitation is limited or nonexistent for indigenous communities, people living in informal settlements, refugees and asylum seekers (many of them Rohingya people from Myanmar), and LGBTQIA+ people.<sup>46</sup>

<sup>&</sup>lt;sup>45</sup> The Markkula Center for Applied Ethics (2009).

<sup>&</sup>lt;sup>46</sup> International Institute of Sustainable Development (IISD), SDG Knowledge Hub (2018).

Heller also shared his disappointment with Malaysia's decision to not ratify the International Convention on the Elimination of All Forms of Racial Discrimination, stating that discriminatory patterns cause limited access to water and sanitation services.<sup>47</sup> Inclusive efforts are less publicized in Malaysia than in India, yet Malaysia can follow the example set in the Orang Asli community in Kampung Binjal. In this case study, the Orang Asli community, who comprises 0.7 percent of the peninsular Malaysian population and 60 percent of the population in East Malaysia and who has long experienced poorer health than the rest of the Malaysian population, received a filtration system to reduce travel distance to water.<sup>48</sup>

In India, persons with disabilities are disproportionately concentrated in rural areas, further magnifying urban-rural disparities and the effects of existing suboptimal provision of basic services.<sup>49</sup> Further, members of the Dalit community, the lowest caste of India's former, yet still influential, caste system, are subjugated to the job of manually cleaning human excrement from private and public dry toilets in rural areas.<sup>50</sup> While India's new campaign, called Swachh Bharat Mission, provides a "Handbook on Accessible Household Sanitation for Persons with Disabilities (PwDs)," the campaign ignores manual scavenging and at times, has reinforced such caste-based discrimination.<sup>51</sup> India should continue the efforts of WaterAid India to build inclusive toilets for persons with disabilities and of the recently launched Safaimitra Suraksha Challenge, which aims to prevent hazardous cleaning of sewers and septic tanks.<sup>52</sup> These marginalized communities should have been prioritized like all other citizens were at the outset of these sanitation response programs.

Malaysia and more recently India have made progress with increasing access to safe water and sanitation, but they are not done yet. Malaysia and India must now proceed with more inclusive programming to give all people access to sanitation and water services—a human right, of which too many people have been denied.

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<sup>&</sup>lt;sup>47</sup> International Institute of Sustainable Development (IISD), SDG Knowledge Hub (2018).

<sup>&</sup>lt;sup>48</sup> Rhule and Thoo (2018).

<sup>&</sup>lt;sup>49</sup> NITI Aayog (2020) p. 145.

<sup>&</sup>lt;sup>50</sup> Bajora (2018).

<sup>&</sup>lt;sup>51</sup> Bajora (2018) and Ministry of Drinking Water and Sanitation (2015).

<sup>&</sup>lt;sup>52</sup> Bhanja (2017) and Press Information Bureau Delhi (2020).

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# **Invisible Children in Cambodia and Senegal: Contributing Factors and Ethical Implications**

Olivia Weeden

## Abstract

This article focuses on invisible children – like those who are not registered at birth and do not exist in the eyes of their countries. It examines the underlying causes of invisibility in Senegal and Cambodia. Each of these causes implies different levels of severity in terms of invisibility. Beyond examining the various causes of invisibility, this article also explores the ethical issues surrounding childhood invisibility, the ethical frameworks that can be applied to address the issue of invisible children, and the steps that these countries have taken and are currently taking to reduce childhood invisibility.

## I. Introduction

The issue of childhood invisibility remains prevalent on the global scale, primarily in some of the least developed countries. Even in modern times after many advances in human rights declarations and international regulations surrounding children's issues, and even with the ratification of various human rights conventions and UN initiatives, countless children remain invisible. When children are invisible, it typically means that they are denied access to crucial resources including health care, education, and financial assistance. Children are often considered invisible, when forced to adopt adult roles due to involuntary involvement in the workforce or marriage. Child labor and child marriage are large contributors to childhood invisibility that are often independent of the issue of birth registration, though missing birth registrations continue to increase the risk of children becoming invisible.

This article examines the prevalence of childhood invisibility in Cambodia and Senegal by examining fertility rates, birth registration, childhood employment, children living with HIV, and child marriage. Both countries continue to struggle with invisible children for different reasons, though there are also some similarities evident between the two countries. Following the examination of the key factors related to invisible children, this article then analyzes the ethical issues and frameworks that are currently surrounding the issue of childhood invisibility, which exhibit once again similarities and differences between Cambodia and Senegal.

Following this introduction (Section I) there is a brief literature review (Section II) that briefly summarizes six publications that focus on the experiences of invisible children in Cambodia and

Senegal. Section III reviews the socio-economic background of the two countries by looking at the evolution of GDP per capita, life expectancy, and literacy rates. It is critical that the socio-economic background of each country is understood in order to provide further insight into how they continue to struggle with and attempt to solve the issue of childhood invisibility. Section IV analyzes specific factors in Cambodia and Senegal that directly influence childhood invisibility. These factors are examined in two subsections, with Section IV.1. analyzing fertility rates and birth registry, and Section IV.2. analyzing children in employment, children living with HIV, and girls married before adulthood. Section V is an ethical analysis of the issue with a focus on the school systems in Cambodia and Senegal. Section VI serves as a conclusion.

## **II.** Literature Review

There is a great deal written about invisible children as a whole, however only a small portion of that literature is specific to Cambodia and Senegal. Xinhau (2005), Rubenstein and Stark (2016), and Baker-Munton (2019) focus on what it looks like to be an invisible child in Cambodia, as well as the implications of that lifestyle and the disabilities that often come with it. Berfini (2018), Rodriguez (2020) and Ryan (2012) focus more on sub-Saharan Africa and the immense number of invisible children in that region. They each look at how poverty rates and education levels in parents really affect whether or not a child is registered or becomes invisible, all while emphasizing the importance of being registered as a child in the first place.

- Xinhau (2005) wrote about how there is an epidemic of invisible children in Cambodia. In the capitol alone, there are more than 1,000 children living in the streets while between 10,000 and 20,000 more children work those streets. Because most of these children are not formally registered, these children are ignored by local and national governments, and they are therefore ineligible to receive government benefits of any variety, including education to health care. On top of that, invisible children in Cambodia are much more likely to become victims of sex trafficking as the government is not looking out for them. More than 30 percent of sex workers in Cambodia are between the ages of 12 and 17, and they regularly face extreme sexual violence.
- Rubenstein and Stark (2016) talk about the fact that while there have been a lot of improvements in poverty reduction programs in low- and middle-income countries, these programs fail to acknowledge invisible children in their outreach. The situation is particularly challenging for Cambodia where there are an incredible number of invisible children living outside of traditional households due to disability and lack of resources. Rubenstein and Stark (2016) then go on to discuss the various implications that this life can have for these children, as well as some of the action taken by the Cambodian government in an effort to aid the situation.
- Baker-Munton (2019) detail how countless invisible children are constantly shut out of Cambodia's education system. In Cambodia, there is another layer to depriving these children of an education and government resources. The invisible children in Cambodia are, unfortunately, often in that position because an overwhelming number of them are disabled. The country already has a high disability rate, and parents often think that their disabled children are not suited to education and normal social activity; thus, incredibly high numbers of disabled children face invisibility. They are the population that needs

government benefits more than most, yet they have no access to these resources as they remain unregistered.

- Berfini (2018) states that there are over 600,000 children in Senegal under the age of 5 years, who are technically invisible. Often times this is because parents either do not understand the importance of registering their child or economic hardship is preventing it. These invisible children then become much more likely to be sex trafficked or in forced labor, in addition to missing out on schooling, healthcare, and other government benefits. Societal abuse and disadvantage are inherent for many of these children who struggle with their invisible status, according to Berfini (2018) primarily because of registration issues that must be resolved.
- Rodriguez (2020) examines the epidemic of invisible children in sub-Saharan Africa. Government representatives from Senegal touch on the importance of being registered in the eyes of your country to help ward against child labor and early marriage, while also helping to make sure that one is given any of the government benefits, they need or qualify for. In Senegal, the problem of invisibility is centered around the fact that parents do not register their newborns. This is primarily due to a lack of accessibility. Rural areas have registration rates of 35 percent compared to the 65 percent rate of their urban counterparts, and poor household have much lower registration rates than rich ones.
- Ryan (2012) focuses on why so many invisible children remain that way in Senegal due to an extremely flawed school system. When parents send their children to urban areas so that they can become educated, often times families lack the money they need to actually get an education for their child. Many times, students are beaten horribly when they fail to pay their teachers prior to each lesson in the Koranic school system. This essentially forces children, which were sent away to receive an education, to sleep on the streets and beg for money until they either have enough to afford reentry into an abusive system or give up entirely on getting an education. Therefore, the problem of invisible children continues to perpetuate itself as children are not able to get an education in order to begin breaking the cycle.

# III. Socio-Economic Background

Cambodia has undergone a notable socioeconomic transition over the last few decades, which should be noted on the global scale. It has become one of the fastest growing countries in the world, with an average gross domestic product (GDP) growth rate of 8 percent over the 20-year period from 1998-2018. GDP growth has remained strong in the last few years, coming in a bit lower at approximately 7.1 percent-7.4 percent. Because of this growth, the country reached lower middle-income status as of 2015 and is aiming to progress to the upper middle-income bracket by 2030. Cambodia's poverty rate has also plummeted from 47.8 percent (2007) to 13.5 percent (2014). This is a notable accomplishment as the country met the MGD of halving poverty, but the majority of people who escaped poverty barely did so, falling back into it with very little exposure to economic shocks.<sup>1</sup>

Senegal, on the other hand, has not experienced growth rates as rapid as those seen in Cambodia. It does, however, possess some of the highest growth rates in Sub-Saharan Africa due to its relative

<sup>&</sup>lt;sup>1</sup> The data in this paragraph is based on World Bank (2020a).

political stability, with major power transitions being peaceful since the country gained its independence in 1960. The average growth rate in Senegal has been between approximately 5.3 percent and 6.3 percent in the last decade, while it was slower than that over the last 20-30 years.<sup>2</sup> With this growth and help from the international community via various aid programs, the poverty headcount ratio for extreme poverty (measured as the percent of people living below \$1.90-a-day) has been slowly but steadily decreasing in Senegal from 68.4 percent in 1991, to 57.4 percent in 1994, to 49.1 percent in 2001, to 38.3 percent 2005. It then increased marginally to 38.5 percent in 2011, which is unfortunately the latest year for which such data is available for Senegal.<sup>3</sup>

Figure 1 illustrates the evolution of gross domestic product (GDP) per capita, purchasing power parity (PPP)-adjusted, in constant 2017 international dollars, in Cambodia and Senegal. The growth rates mentioned above are directly visible in the slopes of the lines. Even though the slope of Cambodia's line is notably steeper than Senegal's, both countries still saw increases in their GDP per capita over time. Cambodia's GDP per capita increased from \$1,764 in 1993 to \$4,389 in 2019, while Senegal's GDP per capita increased from \$2,296 in 1990 to \$3,395 in 2019. Hence, even though Cambodia's GDP per capita was below that of Senegal in 1993, Cambodia caught up with Senegal in 2010, and surpassed Senegal subsequently, with Cambodia continuing to grow faster than Senegal, even though Senegal's growth rates have increased in the last decade.



Figure 1: GDP per capita, PPP (constant 2017 international \$), 1990-2019

Source: Created by author based on World Bank (2021).

Figure 2 shows how life expectancy has evolved in each country with data for both men and women separately, as well as the total populations. In general, the life expectancies in Cambodia and Senegal evolved very similarly from 1970–2018, with both countries reaching a life expectancy of about 70 years by 2018. Despite the overall similarity in the trends, there was a big difference between the respective countries' life expectancies from 1975–1985. Cambodia's life

<sup>&</sup>lt;sup>2</sup> World Bank (2020b).

<sup>&</sup>lt;sup>3</sup> World Bank (2021).

expectancy experienced a severe decline due to an incredibly brutal regime ruling the country, ultimately trying to create a new master race and resulting in the deaths of over 2 million people.<sup>4</sup> Senegal's life expectancy continued to increase during this period.



Figure 2: Life Expectancy at Birth (years), 1970-2018

Source: Created by author based on World Bank (2021).



## Figure 3: Literacy Rates (percent of population), available years

Source: Created by author based on World Bank (2021).

Figure 3 compares the recorded literacy rates in each country for both the youth and adult populations. The collection of reliable literacy rates has been limited in both countries, with various data gaps present for Senegal and Cambodia. The data does show, however, that youth literacy rates remain higher than adult literacy rates in each nation, and literacy rates have overall increasing trends in each country regardless of age group. The adult literacy rate in Senegal increased from approximately 26.9 percent (1988) to 51.9 percent (2017), and its youth literacy

<sup>&</sup>lt;sup>4</sup> History.com (2018).

rate increased from 37.9 percent (1988) to 69.5 percent (2017). In Cambodia, the adult literacy rate increased from 67.3 percent (1998) to 80.5 percent (2015), while the youth literacy rate increased from 76.3 percent (1998) to 92.2 percent (2015). While Cambodia's overall literacy rates are much higher than Senegal's, it is important to note the significant increase seen in the rates of each country.

# IV. Analysis of Facts

This section analyzes five key factors that impact the visibility of children in Cambodia and Senegal. The first subsection will focus on the fertility rate and the completeness of birth registration in each country. The second subsection will focus more specifically on children in employment, children living with HIV, and girls who were married before reaching adulthood.

## IV.1. Fertility Rates and Birth Registry

Figure 4 compares the evolution of fertility rates in Cambodia and Senegal. Each country started with high fertility rates in 1970: Cambodia's was 6.5 births per woman and Senegal's was approximately 7.3 births per woman. In the period of time between 1970 and 2018, both countries experienced success in decreasing those fertility rates. Cambodia was able to bring it down to 2.5 births per woman in 2018, which is also the current average global total fertility rate.<sup>5</sup> Senegal was able to reduce its fertility rate to 4.6 births per woman: a number still notably higher than the global average.



Figure 4: Fertility Rates in Cambodia and Senegal, 1970-2018

Source: Created by author based on World Bank (2021).

These fertility rates and their overall decline in each country are important as fewer children per woman means fewer unwanted or invisible children in the workforce, on the street, or in impoverished households that are not capable of adequately caring for them. In Cambodia, this

<sup>&</sup>lt;sup>5</sup> World Bank (2021).

overall decline in births per woman can be attributed to women gaining more access to family planning resources and various birth control methods including the pill, injectables, intrauterine devices, condoms, and female sterilization.<sup>6</sup>

Figure 5 shows the completeness of birth registration in each country in total as well as specifically in rural and urban areas. There is less data recorded for Cambodia than for Senegal, with percentages of birth registration only being reported by the World Bank (2021) three times since 1970. In comparison, Senegal has records for seven years since 1970. It is difficult to set up proper registration systems to begin with, especially in developing countries. Despite the many challenges that comes with the registration process, whether there is a lack of knowledge or accessibility, there have been improvements in both Cambodia and Senegal's birth registration percentages over time. Cambodia's total birth registration increased from 66.4 percent (2005) to 73.3 percent (2014), and Senegal's increased from 54.9 percent (2005) to 77.4 percent (2017). It remains one of the most important objectives to end registration incompleteness, even just as a practical, statistical matter, in order to add onto the improvements that have already occurred in reducing childhood invisibility.<sup>7</sup>



Figure 5: Completeness of Birth Registration in Cambodia and Senegal, 2005-2017

Source: Created by author based on World Bank (2021).

When children are not registered, they technically grow up invisible. They many times do not have access to various government benefits including critical education, health, and vaccination resources. When children grow up invisible to their governments, they are not going to have their human rights protected and upheld by the state.<sup>8</sup> In addition to this, unregistered children are more likely to become victims of sex trafficking, kidnapping, and illegal child labor because they are not identifiable on a state level.<sup>9</sup>

<sup>&</sup>lt;sup>6</sup> Population Reference Bureau (2003).

<sup>&</sup>lt;sup>7</sup> Shapiro (1950).

<sup>&</sup>lt;sup>8</sup> Selim (2019).

<sup>&</sup>lt;sup>9</sup> Berfini (2018).

#### IV.2. Child Work, Children Living with HIV, and Girls Married Before Adulthood

Figure 6 shows that relative to Senegal, Cambodia had a larger percentage of its children in the labor force but also experienced a greater decline in the percentage of children in the labor force. The percentage of children in the labor force in Cambodia declined from an average of 52.3 percent (2001) to 11.5 percent (2012).<sup>10</sup> While there is still work that needs to be done in reducing this even further, this slightly more than 40 percentage points decrease is significant. The Cambodian government has worked to implement more laws regarding the regulation of child labor – despite still failing to implement features such as a minimum working age or a compulsory education age – and this legislation is likely the key in these visibly decreasing numbers.<sup>11</sup> Changing child labor percentages look different in Senegal, however, with the previously low average of 13.1 percent (2011) spiking to a high of 25.13 percent (2015).



Figure 6: Childhood Employment (percent) in Cambodia and Senegal, Ages 7-14

Source: Created by author based on World Bank (2021).

When a child goes into the workforce at a young age rather than being educated, they become invisible as they are no longer treated as children on a societal level. From mining gold in dangerous conditions to participating in sex work and forced begging, child laborers undergo some of the most difficult, harmful jobs one can be subject to.<sup>12</sup> On top of the danger, the act of child labor in itself - whether forced by familial pressures, need, human trafficking, or lack of options - directly competes with a child's ability to get an education. It impedes a child's ability to be a child. When children disappear into the work force, they are effectively acknowledged as adults, if by no one else, at least by their employers. Work conditions are rarely "good" either, and risk of injury, disease, or death are prevalent in many child labor sectors in both Cambodia and Senegal.<sup>13</sup>

Figure 7 shows the number of children living with HIV (human immunodeficiency virus), a virus that attacks cells that help the body fight infection, making a person more vulnerable to other infections and diseases. The number peaks just above 6,000 in Cambodia and just below 6,000 in

<sup>&</sup>lt;sup>10</sup> World Bank (2021).

<sup>&</sup>lt;sup>11</sup> Bureau of International Labor Affairs (2017).

<sup>&</sup>lt;sup>12</sup> Department of Justice

<sup>&</sup>lt;sup>13</sup> Bureau of International Labor Affairs (2017).

Senegal. These high numbers were reached after a steady incline from 1990 to 2006, and subsequent declines. It is not only crucial to look at total numbers of children living with HIV, but also the number of newly contracted cases in that age group. In Cambodia, the number of children with newly contracted HIV increased from approximately 100 in 1990 to its height at approximately 1,400 in 1997, before decreasing back down to an average of 100 newly contracted HIV rose from around 500 in 1990 to a peak at 1,200 in 2004, and then decreased back to an average of about 500 children in 2019.<sup>15</sup>



Figure 7: Children (0-14) Living with HIV in Cambodia and Senegal, 1990-2019

Source: Created by author based on World Bank (2021).

Looking at children who are living with HIV is actually a better indicator of childhood invisibility than one may initially think. While it is possible that some children may be born with it or contract it from their mothers, hence the case count starting from age zero, the majority of newly contracted cases come from sex work, human trafficking, and an overall lack of sanitation and basic hygiene. All these factors that contribute to cases of HIV in children are directly related to the conditions in which children often find themselves when they are invisible. HIV in children also causes delayed physical and developmental growth with poor weight gain and bone growth; these are only more ways a child's societal status is lessened and the need for resources they cannot obtain due to invisibility increases.<sup>16</sup>

The final figure of this section, figure 8, examines the percentage of women married prior to reaching adulthood. There are higher percentages of girls marrying before age 15 in Senegal than in Cambodia, with a peak of 15.4 percent in 1986 in Senegal compared to a recorded peak of 3.3 percent in 2000 in Cambodia, which is unfortunately the first year such data is available for Cambodia. The relationship is similar when it comes to women being married prior to 18, with Senegal having higher overall percentages. In Senegal, the high was 58.8 percent in 1986, but has since declined to 25.6 percent in 2018, while the very limited data available for Cambodia shows a high of 24.8 percent in 2000, which then decreased to 18.5 percent in 2014.

<sup>&</sup>lt;sup>14</sup> World Bank (2021).

<sup>&</sup>lt;sup>15</sup> World Bank (2021).

<sup>&</sup>lt;sup>16</sup> Stanford Children's Health (undated).



Figure 8: Women First Married Before Adulthood in Cambodia and Senegal, 1986-2018

Source: Created by author based on World Bank (2021).

If one is married this early on, before turning 18, she is technically still a child. Once married however, certain state benefits that come from being a child – a public education, for example – are taken away from these girls. They are no longer seen as children and they have to assume the role of an adult. Children are then having children before they are adults themselves. Child marriage directly causes girls to become invisible simply because it no longer allows them their childhood. They become invisible children because they are no longer seen as children.

# V. Ethical Origins and Existing Ethical Structures

## V.1. Failing School Systems and Mass Disabling Events

In Cambodia between 1975 and 1979, there was significant conflict caused by the rise of the Khmer Rouge (KR), which ultimately led to a mass-disabling event that has crossed generational barriers. Not only have those alive during the KR regime suffered the consequences, but also their children and grandchildren after them. It is due to this unusually high disability rate in Cambodia that the school system there fails so many children and leaves so many others invisible.<sup>17</sup> In Senegal, the failed school system has not been caused by a mass disabling event but is instead caused by rampant corruption amongst teachers and school administration.<sup>18</sup> The historic and continued failure of these countries' school systems is a primary factor that feeds into the epidemic of invisible children.

<sup>&</sup>lt;sup>17</sup> Sonis et al. (2009).

<sup>&</sup>lt;sup>18</sup> Ryan (2012).

#### V.1.a. Disability and Failed School Systems in Cambodia

For the duration of the KR regime, Cambodians experienced genocide and had an onslaught of both physical and mental disabilities forced upon them by circumstance. With the KR in power, approximately 20 percent of the population was killed and millions more were forced into slave labor. As a result, this was a time period that inspired incredibly high levels of mental and physical disability throughout the population – no age group was excluded. Presently, the general likelihood for people to develop debilitating PTSD is at an overall rate of approximately 11.2 percent, with a rate of around 8 percent for young people (below age of 35 years) and 14 percent for older people (above age of 35 years). In addition to this, the population percentage of those afflicted with other mental disabilities is approximately 40.2 percent in Cambodia, and the percentage of those with physical disabilities is around 36.9 percent. These are much higher rates when compared to the global averages of 7.9 percent and 20.1 percent respectively.<sup>19</sup>

The high disability rates shown above are not exclusive to adults, either. They impact children on a much wider scale in Cambodia than they do globally, and that is why it is so important for the country to have a school system that accounts for said disability levels. Thus, the overall lack of adequate schooling systems is magnified. The regular classroom setting in Cambodia usually falls short when it comes to serving its disabled students, and they are often just left physically present in the classroom, unable to truly access the curriculum due to a lack of support.<sup>20</sup>

Many parents do not even register their disabled children for school in the first place because they know that their disabled children will be ignored or even harmed. School registration numbers are relatively low regardless, with only 40 percent of children ages 3-5 years registered for PreK and kindergarten. Out of those 40 percent, though, none are disabled. Disabled children fade into invisibility at a disproportionate rate. Given the lack of birth registration, in many cases, school registration is how children in Cambodia become registered and recognizable to the government. But if they are not registered at all for school, we see these children become permanently invisible. Because their parents do not believe that they can succeed in the school system or even a social setting due to disabilities, they are not even given the chance to do so.<sup>21</sup>

## V.1.b. Failed School Systems in Senegal

In Senegal, the school systems do not only fail disabled students. Most of those who are let down by this system are children coming from rural areas or poor households, sent to seek out an education in order to better their own lives and their families' lives. Oftentimes, these children are sent in order to pull themselves out of invisibility and begin to break the cycle that is perpetuated by poverty, a lack of resources, a lack of acknowledgement, and a lack of education. Unfortunately, many of Senegal's schools do more harm than good in this process.

The relationship that teachers have with their students in Senegal is usually transactional. When students come into urban environments in order to acquire a more formal education than they would have been able to get elsewhere, they literally have to pay for it. Teachers demand fees from their students each day in exchange for an education, and if a student comes to class without enough money to pay, they are badly beaten. Most parents who send their children are often unable to pay these fees, so this practice forces children onto the streets to beg for money and food.<sup>22</sup>

<sup>&</sup>lt;sup>19</sup> The data in this paragraph is based on Sonis et al. (2009).

<sup>&</sup>lt;sup>20</sup> Baker-Munton (2019).

<sup>&</sup>lt;sup>21</sup> Baker-Munton (2019).

<sup>&</sup>lt;sup>22</sup> Ryan (2012).

According to Human Rights Watch, more than 100,000 boys face horrible abuse in Senegal's schools if they fail to fill the quota their teachers set for them when begging on the streets for money, food, rice, and sugar.<sup>23</sup>

Hundreds of thousands of Senegalese children are sent into towns and urban areas by their parents so that they can get an education. However, due to the abusiveness of the education system as it exists in Senegal, an education is not necessarily the bright light showing the way to a life out of invisibility and poverty. When one's options are either to be abused on the streets or in school, children often choose the streets. It is a path that they do not have to scrounge up money to get on in the first place. Young children who were sent by their parents to secure a better future become invisible street urchins forced to beg for the bare minimum they need to live. The boys who get enough money to go to school for a day are the lucky ones. It is a common view in Senegal that the way children will not remain invisible on the street is if they are able to attain a good education. Why, then, is that such an impossible task?<sup>24</sup>

#### V.2. Existing Ethical Structures

It is critical that we acknowledge the steps in the right direction that each country has taken from an ethical standpoint and look at the relative progress that has followed. In 1990, the United Nations' Conventions on the Rights of the Child officially entered into force after being ratified in 1989.<sup>25</sup> The Conventions on the Rights of the Child uses the rights approach as it is based off of the idea that the most ethical action is that which upholds, protects, and respects the inherent moral rights of those affected.<sup>26</sup> In this case, those affected are children. The Conventions on the Rights of the Child protects their right to an education, national registration, and protection by the state from "all forms of physical or mental violence, [and] injury or abuse."<sup>27</sup> These are just some of the many rights protected by the Conventions on the Rights of the Child. These UN conventions have been ratified in both Cambodia and Senegal in 1992 and 1990, respectively.<sup>28</sup> Even with ratification, however, each of the rights laid out in the Conventions on the Rights of the Child are not always upheld and the conventions are not always implemented by the state.

In Cambodia, we see an effort to better uphold the rights and conventions laid out in the Conventions on the Rights of the Child with the addition of more schools dedicated specifically to children with disabilities and special education needs, thus making the path out of invisibility for these children much more accessible alongside the education itself. The first such school to open was the Centre for Adaptive and Response Education, and it works to provide children who were previously unable to succeed in the average classroom with the tools and accommodations that they need in order to get a successful education.<sup>29</sup> With this increase in accessibility, it could be argued that both the fairness approach to ethics and the common good approach are being employed by Cambodians.

<sup>&</sup>lt;sup>23</sup> Human Rights Watch (2020).

<sup>&</sup>lt;sup>24</sup> Ryan (2012).

<sup>&</sup>lt;sup>25</sup> United Nations, Human Rights, Office of the High Commissioner (OHCHR) (1989).

<sup>&</sup>lt;sup>26</sup> Santa Clara University (2009).

<sup>&</sup>lt;sup>27</sup> United Nations, Human Rights, Office of the High Commissioner (OHCHR) (1989).

<sup>&</sup>lt;sup>28</sup> United Nations, Human Rights, Office of the High Commissioner (OHCHR) (1989).

<sup>&</sup>lt;sup>29</sup> Baker-Munton (2019).

The fairness approach applies focuses on treating all human beings equally, and if unequally, then fairly based on a defensible standard.<sup>30</sup> What is seen with this accessibility to schools is precisely that – unequal treatment on the defensible standard of an equally sufficient quality of education, regardless of a child's disabilities. The common good approach implies that life in a community is good when individual actions and collective conditions are also good.<sup>31</sup> Thus, when Cambodians improve upon their education system in order to benefit the disabled members of their society in order to make them more productive and less invisible, they improve their society and its total function as a whole.

In general, there is a lack of action from the Senegalese government in fixing their corrupt, abusive school system. This is primarily because most of the teachers are also Islamic religious leaders with whom government leaders have very complicated relations.<sup>32</sup> Despite this, there are various efforts in Senegal to improve their school system as independent organizations try to make it more accessible and less abusive. The Maison de la Gare, for example, is an organization that provides around 250 children with food, healthcare, and education as they try to get themselves out of the street and out of the abusive schools.<sup>33</sup> It can be argued that this action calls upon the utilitarian approach to ethics. This approach focuses on causing the least amount of harm relative to good, and that is what The Maison de la Gare accomplishes.<sup>34</sup> It does not directly contribute to stopping the abuse that continues to harm countless children in the Senegal school system, but it does provide a better, safer alternative for some. It is an organization that truly does good for many children while still failing to fully condemn and commit to dismantling systematic harm.

## VI. Conclusion

This article has sought to give a thorough examination of the factors that influence childhood invisibility in Cambodia and Senegal, as well as the ethical issues behind said factors. Looking at each country, one is able to see some commonality in how they have each evolved over time from a socio-economic standpoint. Both Cambodia and Senegal have seen notable increases in GDP per capita, despite the fact that Cambodia is experiencing a higher growth rate in GDP per capita. In addition to that, both countries have also experienced increasing life expectancies and literacy rates, showing that Cambodia and Senegal are reaching higher levels of success on the international scale.

On top of that, the way that each country has continued to respond to the factors that cause child invisibility (as analyzed in Section IV) is shown by the overall improvements that have been seen in many areas, though they may not initially be evident. This is additional proof of how Cambodia and Senegal are increasing the ways in which they are actively upholding and respond to the Convention on the Rights of the Child, which they officially ratified in the 1990s.<sup>35</sup> This therefore adds both relevance and agency in the ethical structures and the frameworks they uphold. As improvements are made by citizens and governments in each country with regards to invisible children, these ethical structures and frameworks are also applied to further aid these issues.

<sup>&</sup>lt;sup>30</sup> Santa Clara University (2009).

<sup>&</sup>lt;sup>31</sup> Santa Clara University (2009).

<sup>&</sup>lt;sup>32</sup> Ryan (2012).

<sup>&</sup>lt;sup>33</sup> Ryan (2012).

<sup>&</sup>lt;sup>34</sup> Santa Clara University (2009).

<sup>&</sup>lt;sup>35</sup> United Nations, Human Rights, Office of the High Commissioner (OHCHR) (1989).

The Cambodian government has taken more direct action than the Senegalese government, however that action still falls short. While the addition of schools that specifically cater to disabled children has been a very important threshold for the Cambodian government to cross in order to decrease overall childhood invisibility, the number of such schools is still very low. In addition to that, there need to be more resources publicly made available to invisible, disabled children who do not have access to these schools. In Senegal, the government simply must take more action. Yes, non-governmental organizations can do a lot of good in providing safe spaces for invisible children, but they cannot do nearly enough when it comes to fixing the inherent abuse and corruption that are engrained in the Senegalese public school system that leave so many children invisible. Action must be taken at a higher level. In each country it cannot be denied that nonprofits, human rights initiatives, and independent organizations have been helpful; but the problem of invisible children, the abuse they face, and the resources they are denied cannot yet be adequately solved without the addition of greater government intervention.

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# Two is Enough: The Efficacy of Family Planning in Egypt and Nigeria

# William Purvis

## Abstract

Both Egypt and Nigeria are countries that possess large populations, with Egypt having an estimated population of 102 million, making it the fourteenth most populous, and Nigeria having an estimated population of 206 million, making it the seventh most populous nation in the world. These numbers are only projected to skyrocket in the upcoming decades as both nations exceed the global average population growth rate of 1.05 percent per year at 2.0 percent and 2.6 percent, respectively.<sup>1</sup> In response to growing concerns over economic sustainability, urbanization, and water security, both the Egyptian and Nigerian governments have attempted to slow population growth through the implementation of family planning initiatives. This article evaluates the efficacy of these institutions through an examination of demographic trends and shifts in the ethical frameworks present in both countries.

## I. Introduction

Over the last six decades we have observed a negative relationship between living standards and population growth. As living standards rise, population growth falls. In addition to some cultural factors, this is reflected in the fact that most families in richer countries prefer small families and have access to modern contraceptives, while women in the poorest countries of the world face limits on access to modern contraceptives. Rapid population growth is widely considered to be one of the major contributing factors to the poverty and difficulties experienced by many developing countries.<sup>2</sup>

Rapid population growth is also associated with waves of extreme urbanization, the expansion of slums, political turmoil, higher crime rates, rampant pollution, overuse of arable land, the straining of food supply lines, the retardation of economic development, and massive unemployment. It is clear from many of these effects of rapid population growth that, were it to be left unchecked, the quality of life for many in these countries would suffer greatly. This is especially true for many African countries. As the continent with both some of the highest population growth rates in the world and some of the poorest nations, Africa is particularly vulnerable to the dangers of

<sup>&</sup>lt;sup>1</sup> The data provided in this abstract is based on World Bank (2021).

<sup>&</sup>lt;sup>2</sup> Osoro (1991).

unsustainable population growth. According to Osoro (1991), this trend is projected to continue into the future as mortality rates fall and cultural preferences for high fertility rates persist.<sup>3</sup> Fortunately, fertility rates have been declining for the last three decades in many African countries, including in Egypt and Nigeria.<sup>4</sup>

This article aims to examine the extent to which the Egyptian and Nigerian governments have been able to respond to the rapid growth of their populations. Furthermore, this article reviews the cultural shifts that are necessary in Egypt and Nigeria to reduce population growth rates further. It discusses how the governments of Egypt and Nigeria can best balance the need for both interventionist and culturally sensitive approaches.

This article is divided into six sections. Following this introduction, Section II summarizes some of the important literature related to population growth in Egypt and Nigeria. Section III presents some socio-economic background through examining the trends in GDP per capita, life expectancy and literacy. Section IV examines the key facts related to the efficacy of family planning initiatives through the evolution of population growth rates, total fertility rates, and adolescent fertility rates, as well as, the prevalence of contraceptives, wanted fertility rates, and the level of unmet need for contraception. Section V analyzes some of the ethical frameworks that contribute to the need for family planning initiatives in Egypt and Nigeria, such as female gender roles and female empowerment before the conclusion lays out some of the possible next steps towards reducing rapid population growth.

# II. Literature Review

There exists a wide array of literature evaluating the efficacy of family planning and population control efforts in Egypt and Nigeria as initiatives implemented at the turn of the century move into their next phases. Mandara (2012), Ouedraogo et al. (2021), and Speizer et al. (2019) evaluate family planning programs in Nigeria, while Ali (1996) and Abdelghany, Naguib and Abdelmauty (1990) evaluate family planning programs in Egypt. Each of these publications examines the effects that these initiatives have had on population growth and identifies areas where these programs must improve.

- Mandara (2012) illustrates the demographic challenges that Nigeria will face in the coming decades and describes the family planning initiatives undertaken by the Nigerian government in response. Nigeria is projected to rise to the third most populous country by 2050, largely due to a lack of access to modern contraception. Mandara (2012) finds that while knowledge of contraception may be widespread, only 15 percent of Nigerian women reported using any form of contraception. Mandara reasons that effective implementation of these plans requires stronger governmental leadership and broader education focused on the benefits of contraception.
- Ouedraogo et al. (2021) examine the role that task-sharing institutions and a shortage of trained healthcare providers have played in the lack of contraception in Nigeria. They did this through an examination of policy documents, reproductive health program reports, and World Health Organization (WHO) regional reports on family planning. They found that community health workers, midwives, and nurses contribute to an increase in family

<sup>&</sup>lt;sup>3</sup> This paragraph is based on information provided in Osoro (1991).

<sup>&</sup>lt;sup>4</sup> World Bank (2021).
planning indicators. As a result, Nigeria saw an increase in the use of long-acting reversable contraception. However, they also identified poor data systems and inadequate documentation.

- Speizer et al. (2019) evaluate the sustainability of family planning programs in the postprogram period by using data collected in 2015 and 2017 to compare contraceptive ideation and family planning use in two Nigerian cities. One city (Ilorin) ended the program in 2015, while the other (Kaduna) maintained it. They found that both cities saw contraceptive use increase significantly in the post-program period and continued to see a steady increase in modern contraceptive use. This informs the Nigerian government as to how they can best disperse these benefits to rural areas without the need to maintain extensive programs.
- Abdelghany, Naguib and Abdelmauty (1990) evaluate the effects of Egypt's family planning programs by measuring the impact of contraception on population growth through births averted and reduction of the crude birth rate. They found that the prevalence of contraception averted 870,000 births in 1980 and that the crude birth rate was slightly reduced due to a decrease in fertility, a decrease in the proportion of married women, and a shift in the age structure of women of reproductive ages. However, they also found that the delivery system for contraceptives is greatly lacking and must be improved.
- Ali (1996) utilizes ethnographic field work in rural and urban Egypt to evaluate the politics of family planning policies. She explores the ways in which the Egyptian government has constructed notions of citizenship through its population planning program. She found that the family planning commission restricted government subsidies in an attempt to increase the economic costs of having many children. This resulted in an increase in rural-urban migration due to high levels of urban unemployment and housing shortages. Additionally, the initiatives focused their efforts primarily on women, while men were sidelined. This resulted in the promotion of traditional feminine traits and values. Ali (1996) concluded that the government is able to use family planning programs as a tool for modernization.

# III. Socio-Economic Background

Nigeria is the most populous country in Africa and the largest economy on the continent. It is a key regional player in West Africa and possesses an abundance of natural resources, with oil accounting for 80 percent of its total exports.<sup>5</sup> However, extreme poverty and malnourishment have been steadily increasing since the 2015 recession that resulted from a drop in the global price of oil, with 39.1 percent of the population living on less than \$1.90-a-day in 2018 and 12.6 percent being undernourished in the same year. This compares to prevalence of undernourishment of 7.3 percent and 8.8 percent in 2010 and 2003, respectively.<sup>6</sup>

Egypt is the second largest economy on the African continent and is comparatively more diversified, with 23.3 percent of employees working in the agricultural sector, 48.6 percent in the service sector, and 28.2 percent in the industrial sector in 2020. However, Egypt has recently also seen a worsening of extreme poverty and undernourishment with 3.8 percent of the population earning less than \$1.90-a-day in 2017, compared to 1.6 percent in 2015. However, undernourishment has nearly stayed the same, with 4.7 percent of the population being

<sup>&</sup>lt;sup>5</sup> Central Intelligence Agency (CIA) (2019b).

<sup>&</sup>lt;sup>6</sup> Unless otherwise stated, the data of this paragraph is based on World Bank (2021).

undernourished in 2017, compared to 4.6 percent in 2015.<sup>7</sup>



Figure 1: GDP per capita, PPP (constant 2017 international \$), 1990-2019

Source: Created by author based on World Bank (2021).

Figure 1 depicts PPP-adjusted GDP per capita in 2017 constant international dollars for Nigeria and Egypt from 1990 to 2019. Over this period, both countries experienced overall growth, with Nigeria's GDP per capita growing from \$3,259 in 1990 to \$5,135 in 2019; and Egypt's GDP per capita growing from \$6,086 in 1990 to \$11,763 in 2019. Nigeria experienced a slow decline in GDP per capita between 1992 and 2002, dipping as low as \$2,902 before steadily growing from 2002 to 2014. However, sharp decreases in global oil prices led to a recession in 2015, causing a decrease in GDP per capita.<sup>8</sup> Egypt has experienced steady growth over the past 29 years with the strongest growth occurring between 2004 and 2011, despite two periods of mild stagnation between 2000 and 2004 as well as between 2010 and 2014.<sup>9</sup>

Figure 2 illustrates the life expectancy trajectories of Egypt and Nigeria over the past 48 years. Nigeria's life expectancy increased from 41 years in 1970 to 54.3 years in 2018, while Egypt's increased from 52.1 years in 1970 to 71.8 years in 2018. Over this period, Nigeria's life expectancy increased by 25 percent, while Egypt's increased by 28.7 percent. Egypt experienced a steady increase in life expectancy, with the strongest increase taking place between 1975 to 2000 and has continued to see slight increases over the past two decades. Nigeria's life expectancy was negatively affected by the HIV/AIDS pandemic during the 1990s. Consistent with Egypt's much higher GDP per capita, Egypt's life expectancy has always been higher than Nigeria's life expectancy during the whole 1970-2018 period.

<sup>&</sup>lt;sup>7</sup> The data in this paragraph is taken from World Bank (2021).

<sup>&</sup>lt;sup>8</sup> Central Intelligence Agency (CIA) (2019b).

<sup>&</sup>lt;sup>9</sup> World Bank (2021).



Figure 2: Life Expectancy at Birth, total (years), 1970-2018

Source: Created by author based on World Bank (2021).

Figure 3 shows adult literacy rates, which were sparse and unevenly collected, particularly for Nigeria with decade-long-gaps between 1991 and 2003 and again between 2008 and 2018. However, we are still able to see that Egypt and Nigeria have overall comparable literacy rates, with nearly identical percentages recorded in 1991 for Nigeria and 1996 for Egypt, as well as an only slightly higher rate in Nigeria in 2006 (the only year when data was collected for both countries). However, more recently it seems as though Egypt has surpassed Nigeria following a sharp decline in Nigeria in 2008, with literacy rates failing to return to Nigeria's previous level of 70 percent recorded in 2006. Meanwhile Egypt has generally seen steady increases, apart from slight declines from 2012 onward. These relatively similar literacy rates between Egypt and Nigeria are highly inconsistent with Egypt's higher GDP per capita and higher life expectancy.

Figure 3: Adult Literacy Rates (percent of over 15 years old), all available years



Source: Created by author based on World Bank (2021).

# IV. Analysis of Facts

The first sub-section of this fourth section evaluates some key facts related to the efficacy of family planning initiatives implemented by the Egyptian and Nigerian governments, focusing on the evolution of population growth rates, total fertility rates, and adolescent fertility rates. The second sub-section compares specific aspects of family planning initiatives through the prevalence of contraceptives, wanted fertility rates, and the level of unmet need for contraception.

## IV.1. Status and Trends of Population Growth and Fertility in Egypt and Nigeria

Both Egypt and Nigeria have experienced rapid population growth over the past 49 years, with annual increases consistently remaining above the global average of 1.05 percent.<sup>10</sup> However, as Figure 4 shows, these increases have not been uniform, with both countries experiencing several intervals of extreme population growth followed by longer intervals of stagnation or decline in population growth rates. Over this period, Egypt experienced more dramatic fluctuations than Nigeria, beginning with a population boom from 1973 to 1987 when the annual growth rate increased from 2.18 percent to its all-time high of 2.71 percent. This was then followed by a period of decline that lasted from 1987 to 2007, when Egypt experienced its lowest population growth rate shoot to 2.27 percent in 2013, before declining to its most recent growth rate of 1.98 percent in 2019.



Figure 4: Population Growth (annual percent), 1970-2019

Source: Created by author based on World Bank (2021).

In comparison, over this same period Nigeria experienced consistently higher population growth rates than Egypt, apart from a brief interval between 1983 and 1989. Nigeria also saw far less dramatic population booms. Nigeria experienced its largest population boom between 1973 and 1978, when the population growth rate reached its highest level at 3.03 percent. Since then, Nigeria's annual growth rate has remained relatively steady, hovering around 2.5 percent. It experienced two relatively minor population booms, one from 1984 to 1988 and one from 2003 to

<sup>&</sup>lt;sup>10</sup> World Bank (2021).

2012, when annual growth rates reached as high as 2.63 percent and 2.68 percent, respectively. The minor nature of these population booms roughly correlates with the implementation of Nigeria's first population control initiative, which began in 1988.<sup>11</sup> Since then, population growth rates have continued to decline, reaching 2.54 percent in 2019.

The total fertility rate (TFR), or average number of children born to women throughout their childbearing years, is closely related to the long-term population growth rate. In fact, fertility is the most important determinant of population growth, far exceeding the contributions of both migration and mortality.<sup>12</sup> As a result, lowering fertility levels is the most effective way to reduce population growth.

Figure 5 illustrates a far larger gap between fertility rates in Egypt and Nigeria than between the population growth rates of the two countries, with Nigeria experiencing consistently higher fertility rates than Egypt. Nigeria experienced its highest TFR in 1980, at 6.78 children per woman, before beginning a period of gradual decline that has remained remarkably consistent, aside from a brief period of stagnation from 1998 to 2009 and a period of rapid decline from 2012 onward. Nigeria experienced its lowest TFR in 2018 at 5.39 children per woman. Over this same period, Egypt saw a steady decline in its TFR, dropping from 6.23 children per woman in 1970 to its lowest rate of 3.01 children per woman in 2006. However, this remained well over the average global fertility rate of 2.5 children per woman and was followed by a sharp increase in fertility that lasted until 2014 when the TFR reached 3.44 children per woman before declining to 3.33 children per woman by 2018.





Source: Created by author based on World Bank (2021).

Figure 6 shows the adolescent fertility rates of Egypt and Nigeria, an important indicator of effective access to reproductive healthcare that greatly contributes to the TFR and population growth rate. Both countries experienced significant declines in the adolescent fertility rate over this 48-year period, however, there exists an even wider gap between the two countries than

<sup>&</sup>lt;sup>11</sup> Mazzocco (1988).

<sup>&</sup>lt;sup>12</sup> Lutz and Qiang (2002).

observed in Figure 5. Egypt saw the most dramatic decline in adolescent fertility rates from 139 births per 1000 women (ages 15-19) in 1970 to 49 births per 1000 women (ages 15-19) in 2007. This was then followed by a period of increase that lasted until 2012, when adolescent fertility rates reached 56 births per 1000 women (ages 15-19), before decreasing to 53 births per 1000 women (ages 15-19) in 2018. Throughout this same period, fertility rates in Nigeria remained higher than in Egypt, experiencing a period of increase from 1970 to 1977, when adolescent fertility reached its highest level of 172 births per 1000 women (ages 15-19). This was followed by a 41-year period of decline, reaching 105 births per 1000 women (ages 15-19) in 2018.



Figure 6: Adolescent Fertility Rate (births per 1,000 women ages 15-19), 1970-2018

Source: Created by author based on World Bank (2021).

#### IV.2. Current Prevalence and Unmet Demand for Contraception in Egypt and Nigeria

In evaluating the efficacy of family planning initiatives in reducing fertility rates and the annual population growth rates in Egypt and Nigeria, it is important to examine other dimensions of population control initiatives. This section explores indicators that demonstrate the availability of healthcare and family planning resources in Egypt and Nigeria, beginning with the prevalence of contraception. Figures 7 and 8 depict the percent of women of childbearing ages that utilized any contraceptive method and modern contraceptive methods, respectively.

Despite unevenly collected data, Figure 7 still illustrates the large divide between contraceptive prevalence in Egypt and Nigeria, with Egypt maintaining significantly higher contraceptive use. Egypt saw a rapid rise in the use of contraception from 1975, when 24.9 percent of women used contraception, to 2003, when 60 percent of women used contraception. However, usage seems to have stagnated around this level measuring 59.2 percent and 60.3 percent in 2005 and 2008, respectively. In comparison, Nigeria experienced only mild proliferation of contraception, growing from 6.8 percent in 1982 to 20.4 percent in 2016, before declining to 13.4 percent and 16.6 percent in 2017 and 2018, respectively. Additionally, while a vast majority of Egyptians utilize modern contraceptive methods, which include oral contraceptive pills, female and male condoms, injectables, and intrauterine devices, a large portion of Nigerians continue to use

traditional methods, such as periodic abstinence or withdrawal, which can be less effective.





Source: Created by author based on World Bank (2021).

The wanted fertility rate (WTFR) is a hypothetical measurement of the TFR, where all unwanted births are removed, so that women's fertility preferences are perfectly realized. This allows for a comparison between the stated fertility desires of women in Egypt and Nigeria and the actual fertility rates, determining the demand for family planning services and potential future declines in fertility rates. Despite uneven data collection, Figure 9 facilitates the analysis of trends in the WTFR, revealing a wide gap between the desired fertility outcomes of Egyptians and Nigerians.

Figure 9: Wanted Fertility Rate (births per woman), all available years



Source: Created by author based on World Bank (2021).

Nigerians expressed a desire for far more children, remaining above 4 children per woman, while

Egypt remained below 3 children per woman. Additionally, Egypt saw the largest difference between its TFR and WTFR in 1988 at 1.9 births. This has since been reduced to a difference of 0.64 births in 2014 as the TFR declined to nearly meet the WTFR. Similarly, Nigeria experienced the largest difference between its TFR and WTFR in 1999 at 1.79 births. This has also since been reduced to a difference of 0.59 births in 2018. While both countries have managed to significantly reduce the difference between their TFRs and WTFRs, a considerable share of their current TFRs remain unwanted and sufficient latent demand for family planning exists in both populations.

The unmet need for contraception measures the percentage of women who want to stop or delay childbearing but are not using any method of contraception. This allows for an examination of the gap between stated reproductive intentions and contraceptive behavior. Figure 10, once again despite unevenly collected data, illustrates a trend of declining unmet need for Egyptians and rising unmet need for Nigerians. Egypt saw the largest percentage of women with unmet need for contraception in 1992 at 22.9 percent, followed by a gradual decline that ended around 2014, when 12.6 percent of women had an unmet need for contraception. Inversely, Nigeria experienced relative stagnation in unmet need form 1990 to 2008. However, around 2016, there was a sharp spike in the unmet need for contraception, reaching 28.9 percent, before declining to 18.9 percent in 2018.





Source: Created by author based on World Bank (2021).

## V. Ethical Analysis

This section analyzes some of the ethical frameworks that contribute to the need for family planning initiatives in Egypt and Nigeria. The first sub-section discusses how female gender roles in both countries have impacted fertility rates, focusing on the age of marriage for women and girls. The second sub-section examines current attitudes towards female empowerment and evaluates the level of female agency in both countries through attitudes towards male entitlement to sexual intercourse.

### V.1. Ethical Perspectives on Female Gender Roles in Egypt and Nigeria

The approach of the Egyptian government towards population control has shifted over the course of the 20<sup>th</sup> century. In the 1920s, King Fuad I blocked any measures that might have reduced birth rates as he believed a growing peasant population would strengthen the Egyptian state. Additionally, throughout this period workers were in high demand as a result of large-scale cotton production. This resulted in sustained moderate growth that lasted until the early 1940s. However, as access to healthcare began to increase, lowering infant and child mortality, the high fertility rates previously encouraged by the Egyptian government resulted in an explosion of the average family size. This coupled with a continuance of the mindset that high fertility rates were linked to military strength led to a population boom that lasted until 1958, when the population reached 25 million.<sup>13</sup>

By this point, national development could not keep pace with population growth and President Nasser shifted gears, implementing the Charter of 1962 in an attempt to address the issues of rapid population growth and diminishing resources. This approach addressed birth rates in a variety of ways including economic development, female education, and family planning programs. However, these family planning programs largely focused on developing technologies and stressing the medical dimension of birth control. This is contrasted by the approaches that many Egyptian women activists pushed through this period, which sought to implement a community-based approach that would cultivate social relations and take cultural attitudes into account.

Egypt's Family Planning Program saw the establishment of private clinics that began offering birth control through the Ministry of Health's Population/Family Planning Sector and the National Population Council, which primarily targeted the nine governates of Upper Egypt and eleven ghetto zones in Cairo and Alexandria, as the unmet need for contraception was highest in these regions.<sup>14</sup> This medical approach towards encouraging widespread use of modern contraceptives has largely been successful in Egypt, as shown in Figures 7 and 8. However, there remains considerable unmet need for contraception, as demonstrated by Figure 10. This can largely be understood as the result of a lack of attention to certain cultural and ethical frameworks that have direct effects on the acceptance of modern contraceptive methods and fertility rates in Egypt.

A similar situation can be observed in Nigeria. Although the government provides contraceptives and other family planning services to their population free of charge, they task state and local governments with procuring products for clinics, pharmacies, and other health facilities.<sup>15</sup> This means that many states, unable to dedicate funds to transport contraceptives to local health facilities, experience breaks in contraceptive protection for millions of Nigerians.<sup>16</sup> Failure to access family planning results in an inability to space out pregnancies, properly provide for children, and mitigate rapid population growth. This insufficient funding for contraceptives can be linked to certain cultural and social institutions that dictate the priority of female oriented healthcare. It is this cultural component that must also be addressed in attempting to mitigate Nigeria's rapid population growth and high fertility rates.

Figures 11 and 12 illustrate the percent of women that were first married at ages 15 and 18 in Egypt and Nigeria, as percent of women ages 20-24. This is an important indicator of the frameworks

<sup>&</sup>lt;sup>13</sup> This paragraph and the next paragraph are based on information provided in Baron (2008), p. 33 and p. 35.

<sup>&</sup>lt;sup>14</sup> Baron (2008), p. 34.

<sup>&</sup>lt;sup>15</sup> Speizer et al. (2019), p. 12.

<sup>&</sup>lt;sup>16</sup> Speizer et al. (2019), p. 12.

that contribute to high fertility rates, as the sooner women get married, the sooner they begin to have children and the more children they tend to have over the course of their lives. One important part of any effective family planning program is addressing cultural understandings surrounding the role of women in society. If there no alternative opportunities for women to support themselves outside of marriage, then this will contribute to more marriages at younger ages and result in the birth of many more children. If, instead, female education was prioritized, this would incentivize women to marry at later ages in order to first complete public education or attain college degrees. Additionally, this greater emphasis on female academic achievement coupled with higher marriage ages allows for families to establish more stable financial foundations before taking on the responsibilities of childcare. This raises standards of living further and contributes to the reduction of population growth rates.

# Figures 11 and 12: Women Who Were First Married by Age 15 (left figure) and by Age 18 (right figure) (both as percent of women ages 20-24), all available years



Source: Created by author based on World Bank (2021).

Comparing Figure 11 with Figure 12, we can see that fewer women are first married by the age of 15 than at age 18, especially in Egypt. Furthermore, we can see a steady decline in these percentages in Egypt, indicating that over time, women in Egypt are getting married at older ages. This points to the fact that, despite the medicalization of Egyptian family planning programs, there has still been some progress made in addressing cultural indicators of fertility rates. However, this trend may not be directly related to family planning initiatives and could simply be a product of the rapid industrialization and modernization that Egypt has experienced over the past few decades.<sup>17</sup>

Figures 11 and 12 also show that Nigeria experienced consistently higher percentages of women marrying young compared to Egypt. Additionally, unlike Egypt, these percentages have remained relatively steady at 15.7 percent of women married by age 15 and 43.4 percent of women married by age 18 in 2018. This indicates that Nigeria has had far less cultural success in affecting change that might reduce fertility rates and allow for children to be better cared for, though again it should be mentioned that Nigeria has undergone far less modernization and industrialization as compared

<sup>&</sup>lt;sup>17</sup> The data in this paragraph is taken from World Bank (2021).

to Egypt and this may have a significant effect on marriage ages.

### IV.2. Ethical Perspectives on Female Empowerment in Egypt and Nigeria

In addition to addressing many of the cultural expectations and understandings of women's roles in society that might contribute to high fertility rates, it is also important to address the ethical perspectives present surrounding female empowerment in society. While access to contraceptives is one very important step towards the reduction of fertility rates, it does very little if women do not have the power to make decisions over their own body or within the family.

If it is left to the men to decide how many children each woman has, then how can women be expected to take the initiative in utilizing proper birth control? Additionally, if cultural attitudes surrounding the family unit grant men all of the decision-making power, it will be far more difficult to reduce fertility rates without first dismantling these social stigmas. This means that men must not feel as though they are entitled to women's bodies and cannot exercise complete control over the family unit. If men are entitled to sex whenever they wish, then we would expect to see high fertility rate as women are unable to make independent decisions about the size of the family unit.

### Figure 13: Women Who Believe a Husband is Justified in Beating His Wife When She Refuses Sex with Him (percent), all available years



Source: Created by author based on World Bank (2021).

Figure 13 shows the percent of women in Egypt and Nigeria who believe that a husband is justified in beating his wife if she refuses sex with him. This demonstrates the attitudes towards male entitlement to female bodies and illustrates how domestic social power is distributed across the genders. Although there are only three years where data was collected for Egypt, we can still see that opinions on this issue have been slowly changing, with 33.5 percent of women agreeing that a man has the right to beat his wife if she denies him sex in 2005 and 19.9 percent of women holding the same opinion in 2014. Despite this large decrease, this is still a high percentage of women who agree with this statement and goes a long way to depict some of the challenges that women face when attempting to take control over their own reproductive capabilities.

In comparison, Nigeria has followed a very similar path with 37.5 percent of women in 2003

agreeing that men have the right to beat their wives should they be refused sex. This opinion declined to 18.8 percent in 2013, before rising to 20.1 percent in 2018. Th recent rise in the percentage is startling, indicating that cultural attitudes towards women's influence over sexual and reproductive decisions have been diminished. These cultural attitudes and power structures must shift if family planning programs in Egypt and Nigeria are to achieve maximum effectiveness.

# VI. Conclusion

This article sought to provide an in-depth examination of the efficacy of family planning programs in Egypt and Nigeria. Both countries have rapidly growing populations and face the possibility of severe consequences were they to fail to develop adequate infrastructure to address these challenges. While it is clear through an examination of a variety of indicators, including population growth rate, fertility rate, prevalence of contraception, and marriage age, that Egypt has been more successful in implementing family planning in a way that effectively reduces the level of unsustainable population growth, it is also important to point out that Nigeria has made some progress, particularly in reducing total fertility and with regards to attitudes towards male entitlement to sex, though only from 2003 to 2013.

However, the often-drastic differences observed between these two nations are noteworthy. A look at statistics for both countries' GDP per capita, life expectancy, and literacy rates, indicate that Egypt is much more developed than Nigeria and the large gap in GDP per capita between the two countries may suggest that there is a certain degree of correlation between the effectiveness of family planning initiatives and the level of industrialization and modernization within a country. This is made clearer when evaluating Nigeria, as the primary problem facing many family planning clinics around the country is a lack of local government funding and an inability to resupply birth control due to government mismanagement.<sup>18</sup>

Additionally, the enormous gap between the prevalence of modern contraceptives in Egypt vs. Nigeria indicates that Nigeria should look towards Egypt as a model for making modern contraceptives to those who want to use them. However, this would also require a significant local initiative that could address cultural understandings that may hinder such programs. The fact that Nigeria has seen its level of unmet need for contraception rise over the past few years demonstrates the importance of such initiatives.

The existing ethical frameworks of population growth center around the role of women within the household and female empowerment in order for women to take control over family planning decisions. While both countries share an emphasis on large families born to young women as an economic resource and social safety net, these attitudes are slowly changing with industrialization. The modernization of these countries brings with it an emphasis on education and the ability for women to earn a living outside of the influence of male guardianship.

Therefore, in order to gain acceptance, population programs need to be integrated with ongoing community development programs. Even though it often engenders opposition, family planning is more crucial than ever, as the rapid population growth continues to create a turbulent environment. The integration of modern medical approaches with culturally sensitive approaches as observed in Egypt presents a promising avenue for both the increased prevalence of effective modern

<sup>&</sup>lt;sup>18</sup> Speizer et al. (2019), p. 12.

contraceptives and the cultural incentive to provide women with the ability to voluntarily reduce the fertility rate. It is only through the combination of these methods that the governments of Egypt and Nigeria will be able to maximize the effectiveness of their family planning initiatives and avoid the harmful effects of unsustainable rapid population growth.

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