

Title

Women's Education and Demographic Development: A Case Study of Guatemala and Costa Rica

Abstract

This study examines the relationship between women's education and demographic development. More specifically it will focus on the effect that women receiving basic education has on demographics in the countries of Guatemala and Costa Rica. Demographics for the purpose of this project will refer to two main aspects: fertility rates and child mortality rates. Although demographic development has yet to have a concrete definition, this project will use this terms as a simple phrase to define changes in fertility and child mortality as mention above. Throughout the entirety of the project measures of years of education and literacy rates within Costa Rica and Guatemala will be used to operationalize education of women. Previous literature suggests an already existing relationship between women's education in the developing world and the health of a child, along with a decline in fertility. Therefore to fully investigate the relationship of these four variables both empirical and qualitative analytical methods will be employed. Using the countries of Guatemala and Costa Rica will allow for further examination of this relationship and why these two countries, with such similar backgrounds, significantly differ in terms of fertility rates and child mortality rates. The conclusion and implication portion of this project thus examines why Guatemala remains behind in terms of demographic development and why Costa Rica has excelled since the 1970s. The project discovers current projects in Guatemala to change education for women and in turn cause a change in demographic development. The project then finally looks at what must occur through the government for a

significant change in child health and women's education in order to supplement organizations within Guatemala striving to make a change from the bottom up.

Introduction

There are many issues that the world faces today, from hunger to disease to nuclear disarmament. Each of these brings distinct consequences and solutions to current world leaders. Yet another main problem the world faces today is a human rights issue that spans the globe. Many nations currently struggle or have struggled with the role of women in their society. Women everywhere face various obstacles in life. This humanitarian problem is rarely seen throughout the developed world where women are commonly offered education, a job, a family, healthcare, but those nations currently developing tell a different story. From India to the Democratic Republic of Congo to Guatemala, women live a different life and it is one issue that must be addressed. The women of these developing nations compose roughly 40% of the population of the world.¹

With a new global economy forming and the global north dominating trade and monetary flow, it is becoming increasingly difficult for developing and underdeveloped nations to compete in these markets. Every variable within the development process thus becomes of vital importance to these developing nations. Simply stated, everything in the development process is somehow connected and it is the goal of this project to examine a specific relationship that could have serious implications for developing nations.

First it is important to note why women themselves are important to society and why they deserve attention when it comes to discussing the development process. In many developing nations women are forced to carry two or three times the burden of men. For example, a woman

¹ The developing world itself composes roughly 80% of the population; therefore women from the developing represent approximately 40% of the global population.

may be required to take care of the house, the children, and, in agricultural societies, work in the fields of their subsistence farm in order to provide food for the family. This naturally puts a much larger burden on women than men.² One simple burden of a woman that could be overlooked is the act of childbearing. Obviously this is a distinct difference between men and women but one that many do not realize has serious consequences. In many developing nations the process of reproduction is dangerous due to the lack of medical attention and could result in the death of the child and/or the mother. Women could also become infertile as a result of working in fields that use harmful pesticides, which, depending on the social importance of child bearing, could cause ostracism and neglect in turn creating further poverty and hardship.³ The burden women carry increases as gender equality decreases. As Janet Momsen states in *Gender and Development*, “There is a great deal of evidence drawn from comparisons at the national and subnational scale that societies that discriminate on the basis of gender pay a price more in poverty, slower growth and a lower quality of life, while gender equality enhances development.”⁴ Although the issue of gender discrimination has been brought into the open through various international conferences the fact still remains that gender inequality persists, therefore, hampering economic growth and modernization. To achieve a place in the global market, developing nations must gain a new perception of women. However, because gender roles are flexible and have been socially constructed over time, a new perception of women remains a possibility.⁵

For the purpose of this project it is also important to note the role of education within the development process. Sadly, a majority of the developing world remains without education

² Janet Momsen, “Introduction: gender is a development issue.” *Gender and Development* (New York: Routledge 2009), 2-19.

³ Ibid.

⁴ Momsen, *Gender*, 9

⁵ Momsen, *Gender*, 2-5

equal to that of elementary students in the United States. Moreover, an even wide gap exists between the education that a woman receives as opposed to a man. The distance continues to grow within the developing world as social and cultural norms impede the closing of this gap. It is important to examine the effects of this gap and investigate the outcomes that occur if women in developing nations receive education.

According to UNESCO, the United Nations Educational, Scientific, and Cultural Organization, on a global scale, “two-thirds of youth adults without literacy skills are females”.⁶ This figure shows the persisting gap between male and female education. Many scholars, organizations, and countries have already recognized this difference and, moreover, the importance of education in the developing process, specifically when applied to fertility. The United Nations has compiled a list of objectives, *The Millennium Development Goals*, that seek a leap in progress throughout the developing world. Within these goals is the goal to promote gender equality and empower women. Specifically the UN hopes to eliminate gender discrimination in primary and secondary education by 2015. The UN has also stated that there is a relationship between women’s education and a reduction of poverty. As stated by UNICEF:

There is a widespread agreement that the education of girls is one of the most important investments that any developing country can make in its own future. In the long term, almost every other aspect of progress, from nutrition to family planning, from child health to women’s rights, is profoundly affected by whether or not a nation educates its girls.⁷

⁶ Richmond, Robinson, and Sachs-Israel. “The Global Literacy Challenge.” UNESCO. 2008.

⁷ Kenneth Hadden and Bruce London, Educating girls in the Third World; the demographic, basic needs, and economic benefits. *International Journal of Comparative Sociology* 37, no. 1-2: 31-46.

Through the transfer of knowledge and communication, many opportunities could arise that would allow women to increase their economic favor and reduce poverty. For example, a study in Kenya suggests that an increase in the accessibility of education to female farmers could increase food production by one-fifth. In general, mothers who are educated do not have to take their children out of schooling to assist with daily chores, food production, and childcare.⁸

Although education is a key factor in this process, it is also important to realize that education will not solve poverty by itself. There are many other factors that affect poverty, but for the purpose of this project, education will be the topic of discussions.⁹

A transition in fertility rates and child mortality rates are noted as key factors within the development process. This project will use these trends to note a demographic transition that must occur inside overall development processes. In total, the project will study education of women, fertility trends, and child mortality rates as indicators of development and demographic transitions.

These cross-cutting cleavages allow for multiple regions and nations to be thoroughly examined. Therefore, this project will focus on two rising developing nations in Central America, Guatemala and Costa Rica. Using a comparative case study analysis of these nations with the intent of discovering the effect of women receiving basic education, this project will investigate the importance of a demographic transition and what causes it. Guatemala and Costa Rica are appropriate countries to examine because of many similarities and distinct differences. These countries have similar geographic qualities which affect their economy and population. Both countries are also in a relative state of political stability which allows for less significance or effect of that variable on fertility and child mortality rates (opposed to a country experiencing

⁸ Jane Momsen. *Gender and Development*, (New York: Routledge, 2009), 61-64.

⁹ Momsen, *Gender*, 34.

civil war which would a profound effect upon overall fertility rates and child mortality rates).

While both nations are considered developing, it is significant that Costa Rica has grown notably wealthier than Guatemala and has already experienced a comparable decline in fertility rates and child mortality rates.¹⁰ As noted in an article by Kenneth Hadden and Bruce London, “While countries of East Asia and Latin America (excluding Bolivia, Guatemala, and Haiti) are approaching parity in the primary and secondary school enrollments of boys and girls, the gender gap counties to be substantial in Africa, the Middle East and South Asia.”¹¹ Thus, Costa Rica can be used as an example for the future of Guatemalan demography and the progress that Guatemala could experience. Another important aspect is the indigenous population of Guatemala and the impact these cultures have on the fertility and child mortality trends.¹² Implications from this project could therefore be applied to the indigenous population of Guatemala.

Within a case study comparison of Guatemala and Costa Rica the remainder of this project will be devoted to discussing exactly how the basic education of women affects fertility and child mortality rates. The two dependent variables that will be used are fertility rates and child mortality rates with the independent variables being years of education for a woman and overall literacy rates. A large portion of this project discusses past research and literature over the relationship between these four main variables. The remainder of the project seeks to examine and compare current values of literacy, fertility rates, and child mortality rates, the precise difference between these two countries and why exactly Guatemala falls behind Costa Rica in a true demographic transition. Discoveries from field research in Guatemala, mostly qualitative, will allow the analysis section of this project to justly examine what hinders

¹⁰ “Costa Rica.” *The World Factbook*. Central Intelligence Agency, 27 Nov. 2010.

¹¹ Kenneth Hadden and Bruce London, *Educating girls*.

¹² “Guatemala.” *The World Factbook*. Central Intelligence Agency, 27 Nov. 2010.

development of female education and child health and what is being done by organization and the government to change this situation. Lastly, the implication portion of this project looks toward the future of both Costa Rica and Guatemala in relation to development and demographic trends. Concerning specifically Guatemala, the project seeks an understanding of what scenarios need to occur in Guatemala for equal education and an increase in child health and a decrease in fertility rates.

Literature Review

There has been much discussion on the topic of educating women in order to further the development process. There is also a vast amount of literature available concerning the relationship between educating women and how it affects demography trends in the development process. In relation to this project there are also many current projects and articles that examine the relationship between women receiving education and a child's health and fertility rates among developing nations, and more specifically in Guatemala and Costa Rica.

Although this anthology will not be heavily discussed during this project, as a related work to the goals of this project, it will be included in the bibliography section of the project. *Development and Underdevelopment: The Political Economy of Global Inequality*, thoroughly examines several factors of the development process. The anthology studies the nature of developing countries, the specific problems they face and how they progress toward development. This work of literature also discusses the already existing gap between rich and poor within nations and between nations. It provides a specific study of Latin American countries that face issues of underdevelopment. The anthology further provides strong evidence for why developing nations are vastly different from developed nations and the various stages of growth that must occur within a developing nation. The book also examines the culture of poverty that continues to resound within many developing nations and how it will continue to exist without any purposeful and significant disruption. As a comprehensive guide to the issues of development and underdevelopment, it is a recommended source of related literature in conjunction with this project's discussion.¹³

¹³ *Development and Underdevelopment: The Political Economy of Global Inequality*, (Boulder, Colo: Lynne Rienner, 2003).

Also related to this topic of this project is the discussion of demographic development. As mentioned in the abstract, demographic development is not a concrete term recognized in the academic community, however is being used throughout this project as an easy reference for a significant change in fertility and child mortality rates. Material specifically discussing a change in demography however is available. One of the first mentions of demographic development can be found in Harvey Leibenstein's book, *A Theory of Economic-Demographic Development*. Published in the 1950s his work begins the analytical study of developing countries' progress toward resembling a developed nation's demographics.¹⁴ Another landmark study was Raid B. Tabbarah's book, *Toward a theory of Demographic Development*, from the 1970s concerning this terminology specifically. Tabbarah develops the concept of a demographic transition that takes place in developing nations. By using four variables Tabbarah hopes to examine the demographic development of any said region. The four variables used are: average effective span of female reproductions, the probability of survival of live birth, the average number of children desired by a married couple, and the average natural spacing of births. Although Tabbarah's work is quite outdated forty years later, as he is the grandfather of coining a demographic transition, he must be included in the reference list of this project.¹⁵ More recently however, is a work by Oded Galor which discusses the concept of a demographic transition by studying the previous mechanisms used by Tabbarah. Galor views these mechanisms not only as variables to examine but also as triggers of a demographic transition. Once a country experiences these said triggers then the developing nation can experience sustainable economic wealth and a balanced population.¹⁶

¹⁴ Harvey Leibenstein. *A Theory of Economic-Demographic Development*.

¹⁵ Raid B. Tabbarah. *Toward a Theory of Demographic Development*.

¹⁶ Oded Galor. "The Demographic Transition and the Emergence of Sustained Economic Growth."

More pertinent to the subject of this project is a book titled, *Gender and Development*, authored by Janet Momsen, which discusses the significant role of gender in the process of development. There are several chapters of her book that are applicable to this study that examine the very relationship that this project is based upon. In the introduction she first and foremost explains how gender is and will always be a development issue and how it is necessary to examine women and their for they can be adversely affected by underdevelopment. Momsen also discusses the vital roles that females play in society and in the developing world ranging from fertility issues to obtaining jobs in the labor force.¹⁷ Another chapter discusses the role of reproduction in the development process. Momsen argues that reproduction has continually been a problem in the developing world and that most countries have yet to find a balance in fertility and child mortality. Momsen argues that developing nations are notorious for a lack of sufficient health care which can lead to deaths of mothers and children during the reproduction process. As men cannot naturally give birth, this creates an extra burden for women in these areas of the world.¹⁸ Another pertinent chapter relating to this project concerns the issue of health and violence that occur in developing nations, ranging from child health care to spousal abuse. These are issues that have a hold on underdevelopment and that must be changed in order for a nation to prosper. Momsen examines several outside factors that inhibit women from progressing within the home and in the local economy. For a country to experience development Momsen believes these factors must be changed from the ground up.¹⁹

Several peer reviewed articles also discuss the relationship between female education and demographic development. An article by Kenneth Hadden and Bruce London uses a quantitative panel regression analysis to examine the effects of a girl's level of education along with gender

¹⁷ Janet Momsen. "Introduction; gender is a development issue." *Gender and Development*.

¹⁸ Janet Momsen. "Reproduction." *Gender and Development*.

¹⁹ Janet Momsen. "Gender, Health, and Violence." *Gender and Development*.

inequality in education on a range of demographic, social, and economic outcomes. Using variables from previous models of analysis they also incorporate birth rates, life expectancy, death rates, child death rates, infant mortality rate, and per capita GNP growth rate. With each set of variables Hadden and London compare the impact of educating boys versus education girls for both primary and secondary education. Their first set of findings indicate that the larger portion of girls in primary school causes a reduction in birth rate, this reduction in birth rate increases as schooling increases. A second set of findings shows that educating girls has the strongest correlation to child mortality. In the conclusion of Hadden and London's study they state that, "education in general, and the education of girls in particular, have, as suggested by the extensive literature cited above, wide ranging beneficial effects of the demographic, social, and economic development patterns of nations."²⁰

Another journal article conducted by Anrudh K. Jain further examines the relationship between female education and specifically fertility. Jain uses eleven countries for quantitative analysis: Costa Rica, Colombia, Dominican Republic, Panama, Fiji, Korea, Malaysia, Pakistan, Sri Lanka, Thailand, and Indonesia. Jain examines overall fertility in each of these countries by comparing it to the number of years of education the women receive. Jain uses an adjusted fertility rate by also examining the duration of a woman's marriage and their place of residence, either rural or urban. Jain develops a diagram showing the overall decline in fertility as shown below according to the observed fertility rate and the adjusted fertility rate as mentioned above:²¹

²⁰ Hadden and London. "Educating Girls in the Third World."

²¹ Anrudh K. Jain. "The Effect of Female Education on Fertility: A Simple Explanation."

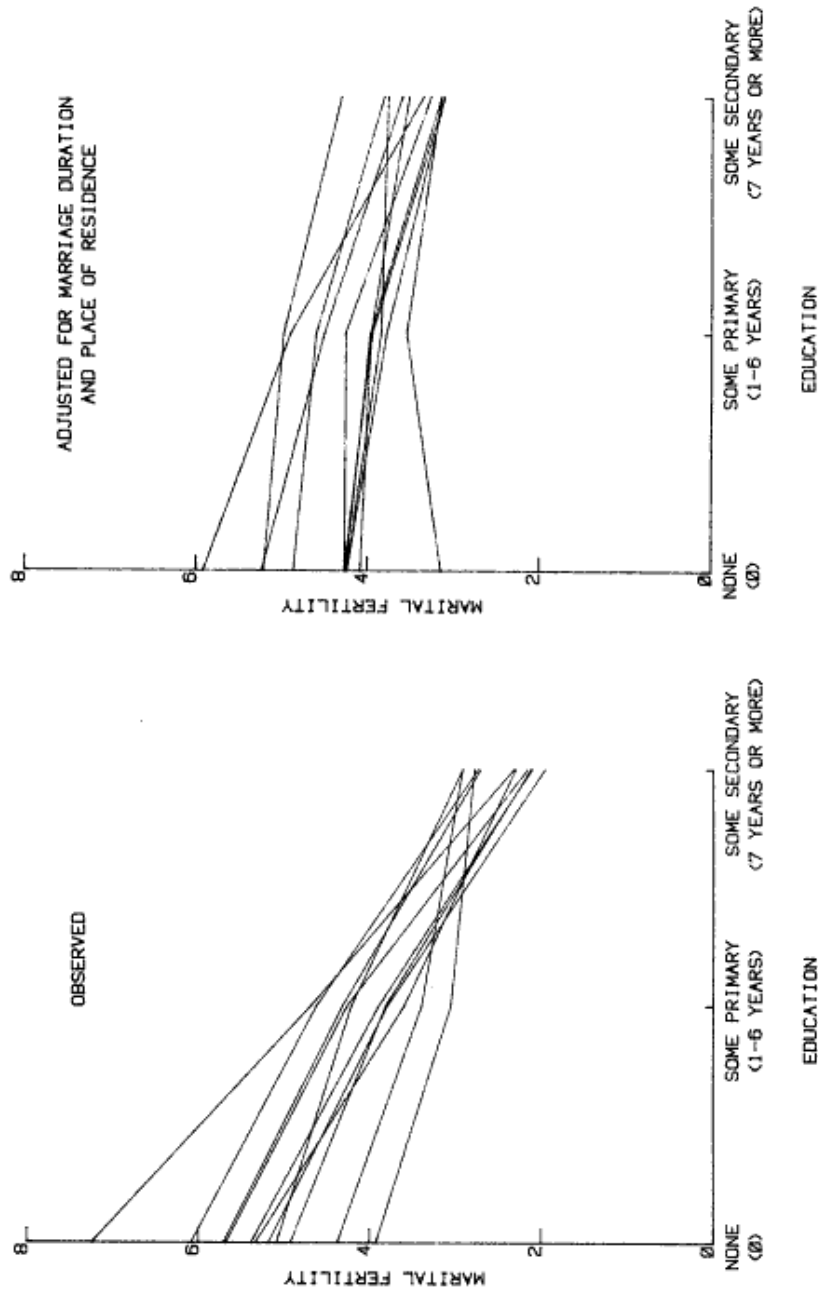


Figure 2.—Average Number of Children Born by Women's Education in Eleven Countries

Jain concludes that although it is important to examine other factors such as marriage duration and place of residence a similar decline in fertility is seen through both diagrams, thus showing the main factor in a declining fertility is that of female education. Jain explains this theory in that by providing a basic literacy for women it is possible for women to change their status within their society by being aware of various types of media, especially written media.

This new awareness could lead to these women communicating more with the world outside their community and broadening their ability to participate in an economy outside their home.²²

As Jain's article specifically looked female education in relation to overall fertility rates, another publication through the scholarly journal *Demography* examines maternal education and its specific effects on child health. Following up on previous research in the field of demographics and specifically child health changes, Sonalde Desai and Soumya Alva examine data from twenty-two countries in which a Demographic and Health Survey (DHS) took place. The initial goal of their project was to evaluate the validity behind public policies developed due to an assumed relationship between maternal education and child health. Desai and Soumya use three measures of child health in order to conduct the study: infant mortality within the first year of life, height-for-age, and the amount of vaccinations received by the child over twelve months of age. Concerning infant mortality Desai and Soumya discover that "children of mothers who attended primary school are less likely to die than are children of mothers with no education."²³ However, mothers who attended secondary school had a larger effect on infant mortality. Although not as closely related to this project's goals, Desai and Soumya also discover that a child's height-for-age ratio and immunization record also increase as a mother obtains more education. Desai and Soumya do note that their results were not nearly as drastic as public policies would indicate. However, the conductors of this study do realize that the statistics are heading toward the correct direction of a declining infant mortality rate, an average height-for-age ratio, and increased immunizations. Overall Desai and Soumya indicate that mothers who

²² Jain. "The Effect of Female Education on Fertility: A Simple Explanation."

²³ Desai "Maternal Education and Child Health." 75.

have at least primary education, if not secondary education, are more likely to be involved in health practices concerning their children.²⁴

Another pertinent study concerning this project was completed by John Bongaarts in 2003 published by the *Population Council*. Bongaarts' main objectives of the study are to examine the pattern of fertility from levels of education throughout the various stages of transition, as mentioned previously in this literature review, to examine the wanted and unwanted fertility trends, and finally to look at the end stage of the transition and the status of birth rates. For the purpose of his study Bongaarts divides stages of the transition into the following diagram:²⁵

Table 1 Ranges of total fertility assigned to stages of the fertility transition

| Transition stage | Total fertility range | Number of DHS surveys |
|------------------|-----------------------|-----------------------|
| Pre | 7+ | 4 |
| Early | 6–6.9 | 19 |
| Early/mid | 5–5.9 | 16 |
| Mid | 4–4.9 | 21 |
| Mid/late | 3–3.9 | 12 |
| Late | 2.1–2.9 | 7 |
| Post | 0–2.0 | 0 |

Note: Countries with multiple surveys contribute only one observation per stage.

Bongaarts collected data from DHS surveys from 57 developing nations, one of which being Guatemala. In the first section of his analysis Bongaarts examined fertility and education, concluding that the more education a woman received the lower her fertility. Bongaarts further illustrates the average findings for all 57 countries in comparing average number of births per woman, average amount of education and the stages of development at highlighted in an earlier table.

²⁴ Desai. "Maternal Education and Child Health."

²⁵ John Bongaarts. "Completing the Fertility Transition in the Developing World." Pg 5.

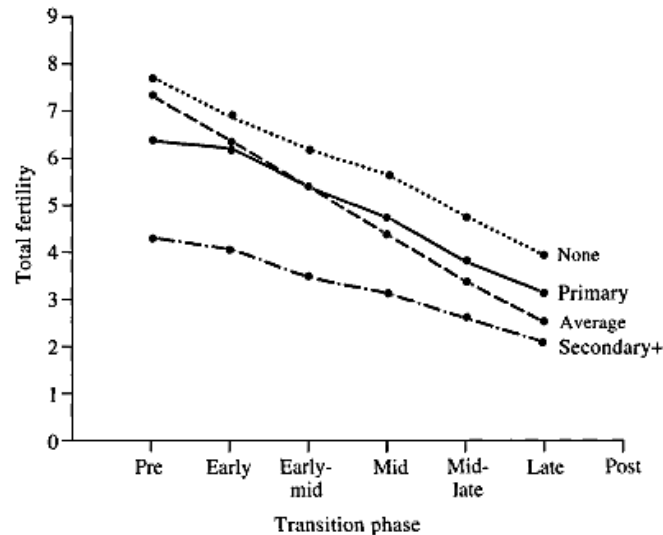


Figure 3 Total fertility by level of education: averages for 57 countries in different transition phases
Source: DHS data files

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Bongaarts notes that even without any amount of education, as development increases within each country so does a decline in fertility. However, Bongaarts also realizes that an increase in female education hastens the reduction of fertility rates throughout the 57 countries under examination. In conclusion Bongaarts states that the effect of women's education on total fertility rates has a more significant effect when countries are in earlier stages of development. He notes that women with secondary education or higher have less children than women with primary education while women with primary education have fewer children than women with no education. Bongaarts explains that the education of women remains, "a key determinant of a country's overall level of fertility."²⁷

Several other related peer reviewed articles exist concerning these relationships, some examine a broader relationship between education and development. For the purpose of conciseness, this project will include these articles in the bibliography.

²⁶ Bongaarts. "Completing the Fertility Transition in the Developing World "Figure 3"

²⁷ Bongaarts. "Completing the Fertility Transition in the Developing World Pg. 23

Research Methodology

The purpose of the next sections, the analysis and implication, is to examine more closely why Costa Rica surpasses Guatemala in factors of education, female education, child health, and fertility rates. Common variables used, both in the literature review and the analysis are years of education for a woman, overall literacy rates, child mortality rates, and total fertility rates. Past literature over Costa Rica's rise in demographic development will be used in the analysis section to explain recent trends within that country. The main bulk of research for Guatemala however, comes from on the field interviews with several people involved in different organizations throughout the country. Seven interviews in total led to the majority of analysis concerning what currently is happening in Guatemala and why its people remain undereducated and in poverty. Through a combination of quantitative analysis from the literature review and a qualitative analysis from personal interviews, a clearer analysis and solutions can be drawn.

Analysis

It is apparent from the literature review that a relationship between female education and demographic development does exist. However strong this relationship may be is debatable, but for the purpose of this project, the simple fact that this relationship does exist is pertinent. The extensive studies of Bongaarts, Jain, and Desai show that the larger number of years a woman is education the more likely she is to have less children, and be involved in medical practices concerning her children. Bongaarts specifically shows that the increased number of years of education for a woman directly affects the amount of children she chooses to bare. Jain also shows a decrease in fertility rates as the number of years of education for a woman increases. Desai concludes that the larger number a years a woman is educated, the healthier her children are and are more likely to survive. Jain also shows how Costa Rica has already experienced these changes in demographic development through the last thirty years. Costa Rica has a much lower fertility rate, child mortality rate, and a higher literacy rate than most Central American countries. That chart below gives a brief comparison of Guatemala and Costa Rica concerning these main variables:²⁸

| Guatemala | Costa Rica |
|-------------------------------------------------------------|------------------------------------------------------------|
| Fertility Rate: 3.27 | Fertility Rate: 1.93 |
| Child Mortality Rate: 26.02 Deaths/1,000 Live Births | Child Mortality Rate: 9.45 Deaths/1,000 Live Births |
| Literacy Rate: 69.1% Men: 75.4% Women: 63.3% | Literacy Rate: 94.9% Men: 94.7% Women: 95.1% |

²⁸ All statistics in chart taken from the CIA World Factbook. Last updated 28 November 2011.

| | |
|-----------------------------------------|-----------------------------------------|
| School Life Expectancy: 10 years | School Life Expectancy: 12 years |
|-----------------------------------------|-----------------------------------------|

From this chart Guatemala obviously falls behind Costa Rica in several ways. The analysis portion of this project seeks to examine what Guatemala is currently experiencing and why these numbers remain much lower than Costa Rica.

There are several possibilities for Costa Rica's women attend more years of school and have a higher literacy rate, even higher than the men of their country. There could also be several explanations for a large decrease in child mortality rates within the country. One article by Luis Rosero-Bixby explains these changes in demographics in part by examining the role of the government in public policies within Costa Rica over the last 30 years. Rosero-Bixby notices a stark decline in marital fertility between 1960 and 1980 from 7.6 births to 3.4 births, an almost unheard of decline in children over a short period of time. Rosero-Bixby associates this decline with a zealous family planning program sponsored by the government. During this period Costa Rica also introduced health care programs throughout rural areas, starting in 1973. These programs included covered insurance by the government, government facilities, and family planning education. Overall Rosero-Bixby concludes that because of strong government policies beginning in the 1970s, Costa Rica saw a distinct decline in fertility and child mortality rates.²⁹ There are several factors going into why Costa Rica has specifically seen a decline in both fertility rates and child mortality rates, but the literature suggests a strong relationship between maternal education and the demographic changes. The Costa Rican government over the last 30 years has put effort into not only education policies but also health care policies; both have which show a change in demographics, a change that Guatemala has yet to see.

²⁹ Luis Rosero-Bixby, Infant Mortality in Costa Rica: Explaining the Recent Decline." *Studies in Family Planning*, (1986).

The question remains, what does education look like in Guatemala? Who receives education? What public policies is the government introducing to support the education system within Guatemala? Why are women not attending school? To answer these questions a qualitative analysis was conducted via seven interviews throughout the country. Each of these people was either involved with a non-governmental organization or had been a teacher for the education system. The remainder of this analysis will be broken into sections concerning the public education system, the private education system, Telesecundaria policies in rural Guatemala, women's education, and education and health care. In order to more fully examine the problems that exist surrounding education it is necessary to look at these five main areas, although there are more that could be examined upon further research.

Public Education

In 2009, former President Colom mandated that public education through the sixth grade be free for all Guatemalans. Two years later, what does the public education system look like? According Kristen Otsby and Lucas Pinzon, staff members of "Esperanza Juvenil" of Boys Hope Girls Hope," there are many issues with public education. Boys Hope Girls Hope is a not-for-profit organization based in Guatemala City, the capital and most populous city in Guatemala. This organization continually strives to reverse the education of boys and girls in the city in the hopes that they will lead a new generation of an educated populous in Guatemala.

In Guatemala currently, a school day is only half a day. Students either attend class from 7am-Noon or from 1pm-6pm. Teachers normally do not have their own classroom as they often do in the states; they rotate twice a day since classes are only half a day. Otsby and Pinzon noted that although this is an efficient way to educate the most kids in one day, it makes it difficult for teachers to create their own environment for the children to learn in. Another challenge for

teachers is the amount of students they must direct during the day. Classes within urban centers normally contain 50-70 children, while class sizes in the United States have around 20-30. Otsby and Pinzon noted that classes are possibly this big because there is a severe lack of teachers in Guatemala. Even though they only need a high school diploma to begin teaching in the public school system, only 33% of all Guatemalans attend high school, making it difficult to create smaller class sizes.³⁰ Managing classrooms of this proportion proves quite difficult for many of the teachers, especially considering the amount of training they experience. Concerning the education of teachers in Guatemala, Pinzon stated that teachers need only a high school diploma to become a teacher for primary or secondary education. However, high school in Guatemala nearly resembles a trade school in that three out of the four years are spent studying and training for a specific degree program such as secretary, teacher, draftsman or accountant.³¹ The combination of giant class sizes, undertrained teachers, and short class days leads to a difficult task that is educating the public.

Pinzon and Otsby also discussed the curriculum that teachers use within these classrooms. The Ministry of Education, under the Guatemalan government, has mandated a nation-wide curriculum for all public schools that teachers must abide by. However, few officials monitor teachers throughout the country to evaluate whether or not they use this curriculum. When teachers do incorporate this curriculum the main method of teaching this is rote learning. Rote learning is a form mechanical learning, teaching by requiring the students to memorize and regurgitate. Pinzon's wife currently works in a public school in Guatemala City and he stated that she would write information on the chalkboard and the students would copy

³⁰ Kristen Otsby, interview by author, Guatemala City, Guatemala, June 5, 2011.

³¹ Renato Westby, interview by author, Antigua, Guatemala, June 12, 2011.

onto their notes. Pinzon and Otsby both agreed that there is a severe lack of classroom discussion and little teaching on critical thinking or problem solving.

As mentioned earlier former President Colom mandated that public education be free for all Guatemalans in primary school. Before 2009 students' families had to pay an inscription fee and buy a uniform. The government did notice the burden that this put upon many poorer families in Guatemala and thus the mandate, however, teachers have found ways around this mandate as the inscription fee once provided for the years school supplies and other necessities. Pinzon and Otsby explained that although parents no longer have to pay an inscription fee, many teachers now require that students buy certain school supplies, sometimes on a weekly basis. These school supplies, once funded by the fee, were now funded by the parents, thus perpetuating the burden on parents. Otsby stated that many teachers have students, especially in primary schools, create craft projects which have nothing to do with the lesson of the day.³²

Another major issue within the public education system that has not been properly address by the Guatemalan government is that of teacher's salaries. According to Renato Westby, Program Development Director of Common Hope (a not-for-profit located in Antigua), the Ministry of Education is supposed to provide teachers with their salaries. However, Westby noted that sometimes the ministry does not follow through. In April of 2011, teachers in Antigua went on strike for the entire month because the Ministry of Education failed to pay their salaries. Westby stated that this is not an uncommon occurrence and it perpetuates the cycle of an undereducated class in Guatemala.³³ In another interview with Andrea Branchaud, Director of Development, Monitoring and Evaluation of Thirteen Threads, she stated in some cases students are forced to sell craft projects that they make in class in order to support the salary of their

³² Lucas Pinzon, interview by author, Guatemala City, Guatemala, June 5, 2011.

³³ Renato Westby, interview by author, Antigua, Guatemala, June 12, 2011.

teacher. It is the responsibility of the Ministry of Education to pay their teachers adequately and because they do not do so the public education system continues to fall short.³⁴

There are several factors involved in the entire public education system and these are merely a few discoveries made by conducting interviews with local Guatemalans and Americans working in Guatemala to create a change in this system. There is much that needs to change for the public education to see a real change and for families to be able to support their children's education.

Private Education

Private education is another major sector of education in Guatemala. According to the GINI Index, Guatemala ranks 11th in the world near Sierra Leone and Central African Republic, thus indicating that there is a large disparity between the rich and poor. Those who attend private school in Guatemala are mainly the rich. However, even the richest of Guatemala may not receive the best education. According to Joe Frankie, a former private school teacher, "unless a private school is accredited in the U.S. or Europe, the education offered may be no better than what is offered in a public school."³⁵ Joe Frankie is a U.S. citizen currently living in Guatemala. By studying English literature and psychology in the United States, he was immediately qualified for a position at a local private school in Guatemala City. Frankie taught at possibly one of the most expensive schools in Guatemala, educating the children of government officials. These parents paid enormous fees for this school and class sizes were much smaller, normally just under 20 students, unheard of for most of Guatemala, yet Frankie stated the school more resembled a baby-sitting service more than a place of education. Frankie stated these students had, "no sense of responsibility or respect for authority at all. They [did]

³⁴ Andrea Branchaud, interview by author, Panajachel, Guatemala, June 21, 2011.

³⁵ Joe Frankie, interview by author, Guatemala City, Guatemala, June 28, 2011.

what they [wanted] to do because they [were] rich.”³⁶ Frankie noted the lack of discipline on part of the administration to the student’s lack of respect. In one scenario, Frankie sent a student to the principal’s office for setting fire to a trashcan and the student returned within five minutes with no disciplinary action taken. Frankie believed the administration feared repercussions by government officials in students received punishment for their misconduct. Frankie similarly noticed teachers refused to give out bad grades, most likely for similar reasons by the administration. Frankie stated that the students in this school system were most likely the future leaders of Guatemala, yet they were not receiving a true education. Frankie said the students could read and speak English well however, “they couldn’t think rationally or critically or compare and contrast.”³⁷ These were the same issues mentioned by Kristen Otsby and Lucas Pinzon of Boys Hope Girls Hope concerning the public education system. It is seen that the private education lacks discipline and true teaching for fear of negative repercussions by government officials. Without a change in the private education system there is no hope for the rich of Guatemala. A class of ignorance will continue to prevail and according to Frankie, change will not be seen by the poorest of Guatemala.

Telesecundaria Policies in Rural Guatemala

The Ministry of Education in Guatemala enacted policies for education in rural areas much different than public education in urban areas. Telesecundaria was created in Italy as a new method of teaching and learning. The program was then brought to the rural areas of Mexico and proved quite successful. The Ministry of Education seeing the success of this program in Mexico believed the same could hold true in rural areas of Guatemala.

³⁶ Joe Frankie, interview by author, Guatemala City, Guatemala, June 28, 2011.

³⁷ Ibid.

Telesecundaria is a DVD based curriculum using discussion of video material fostered by a trained educator. Secondary education is quite prevalent in urban centers in Guatemala yet hardly seen in rural areas. The Ministry of Education noting this need decided to endorse this program in villages wishing to start a secondary school. Paulo Monteiro, CasaSito Activity Coordinator, specifically works with rural villages that use this program. Monteiro knows of Telesecundaria's success in Mexico, but explains the near complete failure of it in Guatemala. According to Monteiro, a rural village must first acquire a school building as well as a TV and a DVD player before able to receive the program. Since most rural villagers make only a few dollars a day, this creates quite a financial burden among families. Once these tasks are completed, the Ministry of Education sends the Telesecundaria DVD set, a handful of textbooks, and a teacher.

One major problem exists with this program however, most rural villages in Guatemala lack electricity. To make up for this deficit, the villagers must raise additional funds to buy a generator. Students then must contribute weekly funds to pay for gas (this price ranges from 1 to 5 Quetzals or .12\$ to .60\$ USD). This continues the huge financial burden upon families that usually forces them to withdraw their children from school. Another issue with this program is the amount of supplies given by the government. Students usually must share textbooks, and the teacher usually lacks training materials concerning the program. According to Monteiro, the concept of the program is that students watch these DVDs and afterwards the teacher facilitates a discussion on the materials presented during the videos. In most cases though teachers merely read from the textbook and students copy down the notes.³⁸ Another major concern is that teachers are forced to teach close to 10 subjects as the government provides only one teacher per program.

³⁸ Paulo Monteiro, interview by Author, Antigua, Guatemala, June 14, 2011.

Monteiro also notes the type of population involved in Telesecundaria. Since this program is only endorsed in the rural villages of Guatemala, most of the time it is Maya students attending these schools. Currently there are over 22 Mayan languages spoken throughout Guatemala. Monteiro states that there may be as many as 10 of these languages spoken in one classroom, making it difficult for the teacher to do their job. To make matters worse, the DVD curriculum is in Spanish, a language unknown by many of the students.

Monteiro works through CasaSito, a not-for-profit organization, to try and better these programs in rural villages. He has seen Telesecundaria at its worst. One classroom he observed had 20 students sharing three textbooks and no electricity. Another classroom he observed had neither electricity nor books. Monteiro and CasaSito strive to fix these problems by supplying books, supplies, DVDs, teacher trainings, and salaries. The poorest of the poor reside in rural villages throughout Guatemala and although the Ministry of Education is trying to provide this area with proper education it is currently unsuccessful. Without proper management of this program, adequate supplies, and electricity, these rural villages will not see a change in education.³⁹

Women's Education

Overall, there isn't a large disparity between the amount of girls educated versus boys being educated. By examining the public, private, and rural education systems it can be seen that it is a matter of education in the whole. Both boys and girls in Guatemala are not receiving proper education. However, there is a small movement of Mayan women seeking to educate themselves in various ways besides traditional education. A not-for-profit group, Thirteen Threads or in Mayan *Oxlajuj B'atz*, believes in the empowerment of Mayan women in rural villages. Andrea Branchaud, Director of Development, Monitoring and Evaluation, spoke about

³⁹ Paulo Monteiro, interview by author, Antigua, Guatemala, June 14, 2011.

the importance of encouraging women and giving them a means to support themselves even though they have not received much education. Branchaud focuses on areas of health and well-being, small business, democracy, and artisan and product development. Many Mayan women create tapestries, jewelry, and other crafts that they sell to tourists to support their families. Thirteen Threads provides workshops to these women concerning not only the selling of their crafts but in areas mentioned previously such as team building and democracy.⁴⁰ Lucia Chavez, a field supervisor and native Maya, spoke about her dreams of seeing women being empowered through organization like this. She believes in an attitude of questioning, something she thinks many Guatemalans lack. She stated it was this type of questioning that led her to Thirteen Threads, a place where she could learn to stand on her own and take care of herself and her family. Chavez stated how she encourages her daughters to have an attitude of questioning, both of which are currently enrolled in school. Both Branchaud and Chavez noted the lack of proper education for all in Guatemala and how women must start taking control over their own lives, not relying on others to support them.⁴¹

Education and Health Care

Currently in Guatemala there is a close correlation between health care and education. Health care remains an under supported entity as the government spends a mere 5.7% of its GDP on this sector of public policy, compared to the 10.5% that Costa Rica spends on its health care programs.⁴² Many children, especially in rural areas face specific health issues that prevent them from attending school. Many houses in rural villages have a simple dirt floor instead of tiled flooring. This causes several diseases usually contracted through parasites that live in these dirt floors. As the children become ill from parasites they do not attend school, sometimes to the

⁴⁰ Andrea Branchaud, interview by author, Panajachel, Guatemala, June 21 2011.

⁴¹ Lucia Chavez, interview by author, Panajachel, Guatemala, June 21 2011.

⁴² "Guatemala" and "Costa Rica," CIA World Factbook. 27 November 2010.

point at which it is too late for them to return. Another main issue faced by rural villages is the lack of primary care facilities. Without proper treatment facilities for basic illnesses caused by parasites, children have no means to heal themselves. The highest average grade reached a Guatemalan of non-Maya descent is typically sixth, with the highest average grade reached by a Mayan student being only third grade.⁴³ Although health care is not the main reason for this occurrence it can be attributed to the lack of children staying in school. Without proper facilities and education on health provided by the government, these students have little hope to remain in school past primary education. It is organizations, such as Pueblo a Pueblo that are currently trying to reverse this cycle by not only providing school supplies to children in rural areas but also providing health care cards to students that provide each student and family with free primary health care at the local clinic. The government too must adopt such policies in order to see a new educated generation in Guatemala.

Conclusion

There is an apparent reason why Guatemala falls behind Costa Rica in terms of demographic development and it is closely related to the structure of the education system in Guatemala. The public system currently lacks appropriate support of the government in terms of salaries for teachers, school supplies, and a reinforced curriculum by the Ministry of Education. Teachers lack experience and higher education and are forced to manage class sizes well beyond any person's capability. The private education system too contains many flaws. Until the administration and teachers in the private school system are willing to discipline the rich population and provide them with a sound education, the rich class will remain ignorant and uneducated. The rural area of Guatemala possibly faces the largest obstacles in terms of changing education and demographics. The Ministry of Education, although trying to use a

⁴³ Kristen Otsby, interview by author, Guatemala City, Guatemala, June 5, 2011.

successful program, has turned Telesecundaria into a nightmare for the rural population.

Without proper resources such as electricity, textbooks, and teachers, these areas of Guatemala will not see a clear change in education. The Maya in these areas too face a great challenge, trying to learn in a language that is completely foreign. Until the government recognizes the large amount of languages spoken in these areas of Guatemala and provides a proper means of people learning in their native tongue, the Maya will continue to receive little education and remain the poorest of the poor. Although the government has failed to provide education in several ways, there are many legitimate organizations in Guatemala trying to support a demographic transition. Many organizations mentioned earlier are working with teachers to provide them with adequate training, to give them a monetary allowance that makes up for missing salary payments, providing school supplies to students, providing proper health care facilities and free health care for families, giving families the opportunity to have tiled flooring instead of dirt floors, working specifically with Telesecundaria in rural, and the list continues. The basis for a lack of demographic development in Guatemala lies at the lack of education for all Guatemalans.

Implications

There are two major questions that remain at the end of this project. The first being: What will it take for Guatemala to see a real change in demographics? From the literature review and analysis, the conclusion remains that the government must become more aware of the standards of education and act upon these shortcomings. There are several organizations in Guatemala dedicated to helping children and women receive education and it is the burden of the Guatemalan government to do the same. These organizations are trying to make changes from a grassroots level, from the ground, and now the government must support these organizations and meet them is the supposed 'half way.' Without the intervention of the government in a manner that resembles the needs of the Guatemalan people, no demographic development will be seen in this country. The Guatemalan government must make education and health care a priority of its budget and dedicate its services to supplying teachers and students with adequate tools for success. Costa Rica has made a significant change in the last 30 years of existence toward creating an educated populous and a healthy populous. Not only is it seen that female education has a strong effect on child health and fertility rates, but it is also noted that the government too must provide public policies that support this relationship. Without the help of the Guatemalan government to provide adequate education to all, this country will not see a change in demographic development.

The second question remaining at the end of this project being: How long will this process take? This is one question that remains unanswered. There are many variables involved in a demographic change and this project has no answer for the latter question, time will have to tell.

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