

# **Gender-based Education Inequality in China and India**

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## ***Abstract***

*This article looks at gender-based education inequality in China and India. Over the last several decades, China and India have seen great improvement in the education sector. However, surveys and statistics suggest that there is still much to accomplish. This article analyzes the different ways gender-based education inequalities permeate their societies and their progression to a more equal education system. It reviews the historical context and views on female education, examines youth and adult literacy rates, years of schooling and school enrollments over time.*

## **I. Introduction**

Education inequality is an issue that plagues most of the developing world. In countries still dealing with severe sexism, girls are the first to be left out of educational opportunities when resources are sparse. With education is lacking from the very start, girls are more likely to not make it to the high school level. Early drop outs have devastating effects on these girls, who are subsequently more vulnerable to childhood marriage, teenage pregnancy and so on.

This article will discuss the factors that contribute to gender-based education inequality in India and China. Despite having fast-growing economies, both of these countries face drastic economic disparities that contribute to inadequate education. In addition to this, both countries are still fighting sexist values that have been engrained into their society for thousands of years. Despite improvements over the past few decades, girls in India and China still lack the education they deserve.

Throughout this article, we will discuss how girls are negatively impacted by education inequality. The literature review summarizes several of the most prominent writings on this topic, focusing on how gender-based education inequality affects each country individually. The empirical background provides socioeconomic information about both countries. After foundation is laid by the literature review and empirical background, the discussion section will address the key issues regarding the topic based on analyzing data specific to education. Finally, the conclusion will summarize the topics discussed and propose future measure that both countries can take to address this pressing issue.

## II. Brief Literature Review

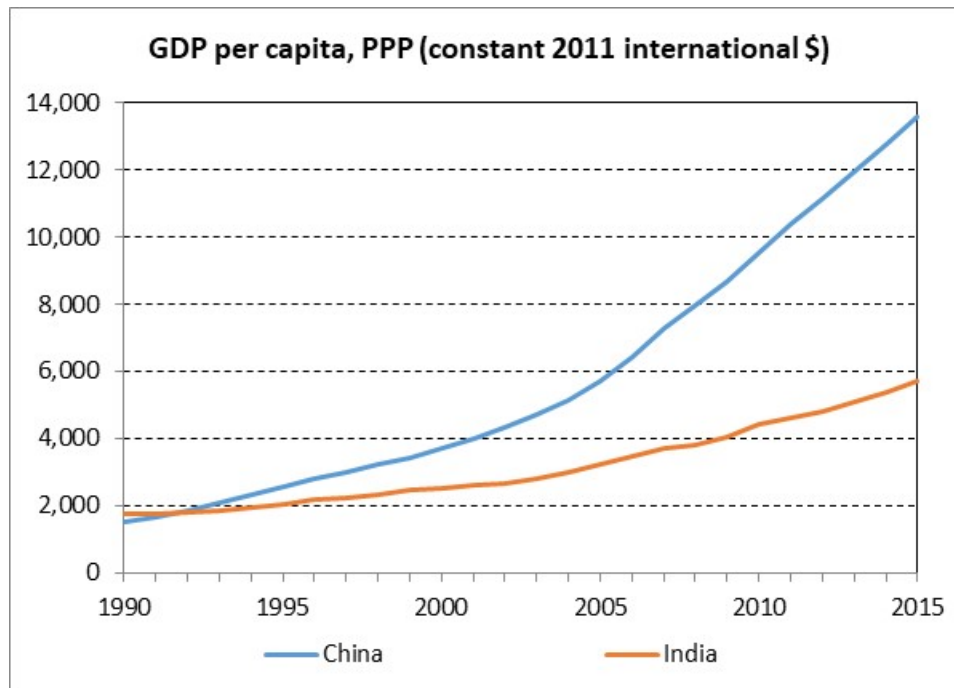
There is an extensive amount of literature on education inequality in China and India, especially with regards to gender-based education disparities. Hagedorn and Zhang (2010), Liu (2005), and Song, Appleton and Knight (2006) focus on China, while Fuke (2007), Mukhopadhyay (2008), and Sahni and Shankar (2012) focus on India. In each case, these authors look at the degree of gender-based education inequality in these countries and how it negatively impacts the country as a whole.

- Mukhopadhyay (2008) closely analyzes the role of education in the empowerment of women in West Bengal, India. The article proposes that women's education in India is falling behind despite the country's economic advancements. It suggests that this is because of the culture in India surrounding women. The article highlights how the importance of marriage and the dowry dramatically hinder a woman's educational advancement. Lastly, Mukhopadhyay suggests solutions to end the practice of intra-household and social discrimination of women.
- Fuke (2007) uses India as an example of gender disparities in education worldwide. The article looks at how the Education for All (EFA) framework lines up with India's national strategy for improving education inequality. The way in which negative ideologies about women in India factor into the national strategy towards combatting gender-based education inequality is also discussed in this article.
- Sahni and Shankar (2012) discusses how India's government on both the national and local levels as failed girls in giving them an equal and adequate education. The article notes that education inequality reform is drastically different based on geographic location. This is related specifically back to India and the extremely different communities in various regions of the country.
- Liu (2005) examines how gender inequality has plagued China for thousands of years. The article discusses how the Confucian ideology, whose have beliefs permeate every aspect of Chinese since the beginning of time, highly discriminates against women and limits their social status. Because of this, changes in education for Chinese women have faced strong resistance. Liu analyzes how cultural biases against women have led to women in the world's most populous country to fall behind.
- Hagedorn and Zhang (2010) discusses the immense ground China has covered when it comes to decreasing gender-based education inequality. The article discusses how cultural advancements for women in China played into their advancement in education. Some of these cultural advancements include the end to foot binding and the end to China's One Child policy. This article uses the cultural setbacks Chinese women have faced to explain why women's education in China is lacking in the modern day.
- Like Sahni and Shankar (2012) discuss for India, Song, Appleton and Knight (2006) examine how geographic location and socioeconomic status affect women's education. The article discusses how, when families are living in poverty and need more family's members to work, the girls are the first to be pulled from school. This is especially prevalent in China, where girls are considered to have less worth to a family than their brothers. Song, Appleton and Knight (2006) stress how female enrollment in school through the secondary level is key to any economic or social progress in China.

### III. Empirical Background

Figure 1 shows the purchasing power parity (PPP)-adjusted GDP per capita of China and India based on constant 2011 dollar from 1990 to 2015. In 1990, China's GDP per capita was \$1,526, while that of India was with \$1,773 slightly above China. Both countries have seen continuous increases in their GDP per capita. China's GDP per capita increased more than seven times from 1990 to 2015, reaching \$13,572 in 2015. India's GDP per capita increased more than three times from 1990 to 2015, reaching \$5,733 in 2015.

**Figure 1: GDP per capita, PPP (constant 2011 international dollar), 1990-2015**



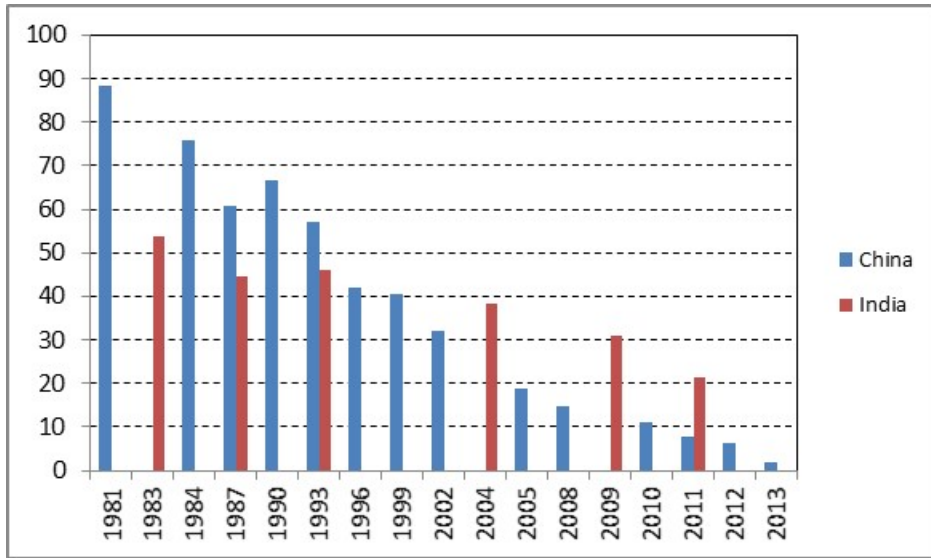
Source: Created by author based on World Bank (2017).

Though still impressive overall, India's progress has been much lower than China's, especially during the 1990s, which can be explained by differences in economic policies. Following its independence from the British Empire in 1947, India followed import substitution industrialization (ISI)<sup>1</sup> until it experienced a severe balance of payments (BoP) crisis in 1991. Following the BoP crisis, India started to open up its economy in the early 1990s. On the other hand, China started to move towards a market-based economy in 1978, which was followed by an economic boom ever since in China.<sup>2</sup>

<sup>1</sup> As detailed in Mukhopadhyay (2008), import substitution industrialization is a development strategy replacing imports with domestic production.

<sup>2</sup> Liu and Carpenter (2005).

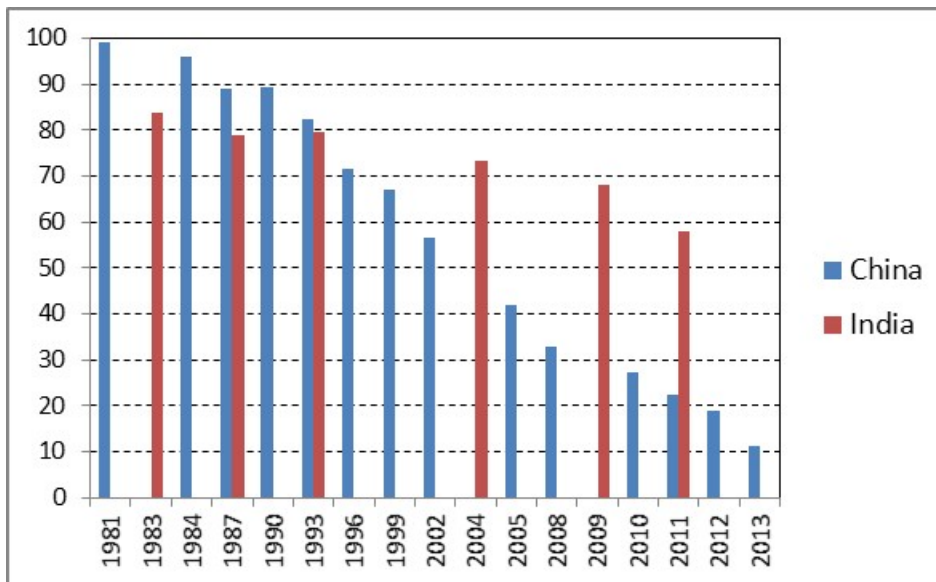
**Figure 2: Poverty Headcount Ratio at \$1.90 a day (2011 PPP, percent of population)**



Source: Created by author based on World Bank (2017).

Figure 2 shows the poverty head count ratio in percent at \$1.90-a-day (in 2011 international dollars, that is, purchasing power parity (PPP)-adjusted) for both India and China. The \$1.90-a-day measure is considered to measure extreme poverty. Over the last 30 years, both China and India have had a continuous decrease in the percent of people living below \$1.90-a-day. China's percentage, although higher than India's in 1981, decreased at a higher rate than India's. Somewhere in between 1993 and 2004, China's percentage of people living in poverty went below that of India

**Figure 3: Poverty Headcount Ratio at \$3.10 a day (2011 PPP, percent of population)**

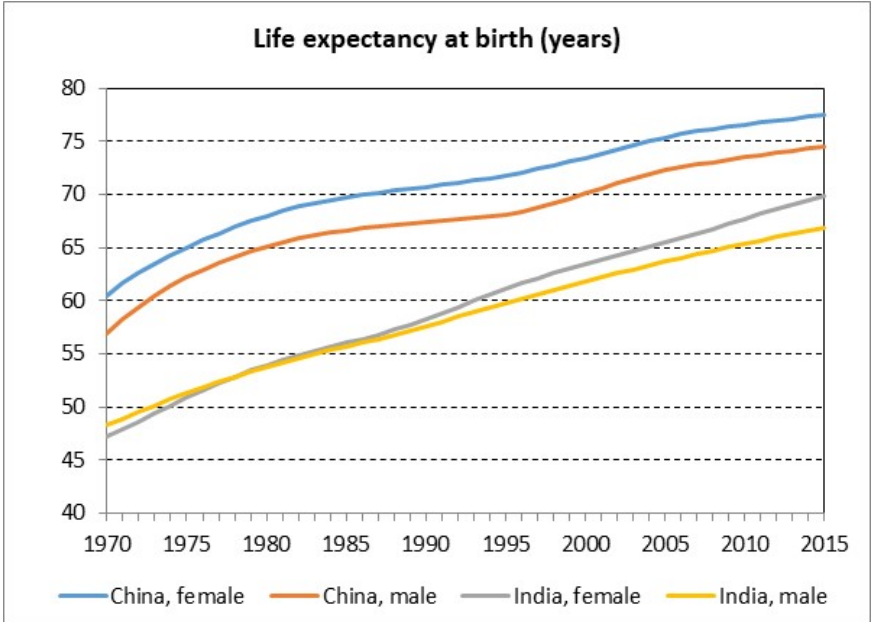


Source: Created by author based on World Bank (2017).

Figure 3 shows the poverty head count ratio in percent at \$3.10-a-day (in 2011 international dollars, that is, purchasing power parity (PPP)-adjusted) for both India and China. Between 1981 and 1993, both countries had over 75 percent of their populations living below \$3.10-a-day. However, similar to Figure 2, China’s percentage of people living below \$3.10-a-day has continuously dropped, while India’s poverty decreased at a much slower rate.

Figure 4 shows the life expectancy at birth for both genders in India and China from 1970 to 2015. Overall, females typically have the higher life expectancy than males in both countries, though males had a higher life expectancy than females in India from 1970 to 1983. In 1970, the life expectancy at birth in China for men and women was 57 and 60 years, respectively. In the same year, the life expectancy for men and women in India was 48 and 47 years, respectively. China’s overall higher life expectancy most likely stems from its overall higher quality of life. Poverty is a pressing issue in both countries, but less so in China. Over the course of time, China’s life expectancy increased by about 15 years, while it increased by about 20 years in India. Hence, in the present day, the gap between China’s and India’s life expectancy has been reduced slightly despite that the gap in income per person has become bigger.

**Figure 4: Female and Male Life Expectancy at Birth, 1970-2015**



Source: Created by author based on World Bank (2017).

**IV. Discussion**

There are many aspects of education that can be analyzed from a gender inequality standpoint. This section will first lay the foundation for understanding these disparities in by highlighting the countries’ opinions of female education. Next, it will look at youth and adult literacy rates, focusing specifically on gender disparities. Lastly, it will display the analyze the male and female school enrollment and mean years of schooling.

#### IV.1. Historical Context and Views on Female Education

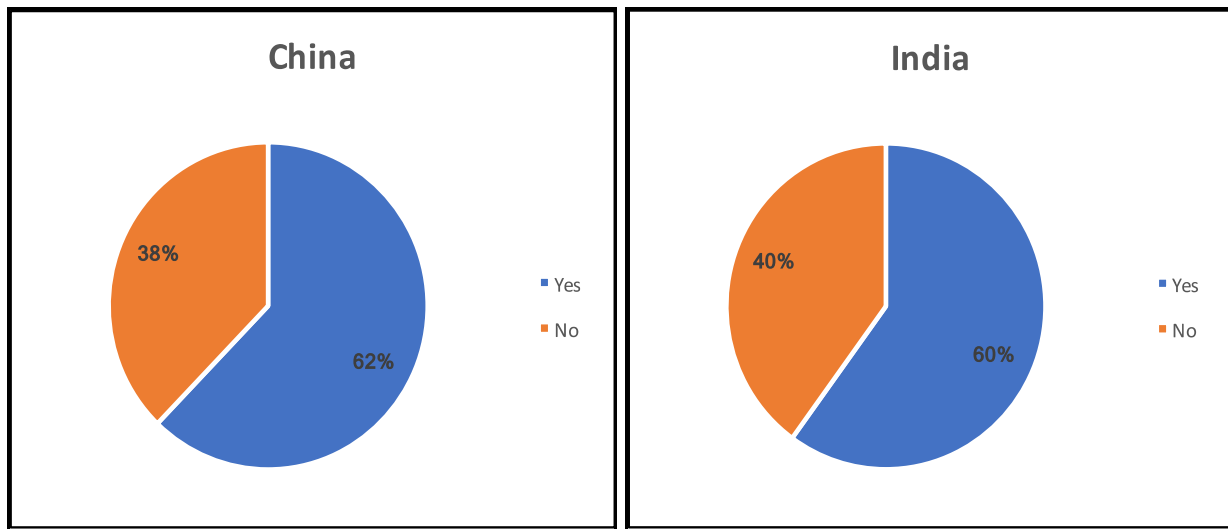
Before analyzing specific data on education, it is necessary to have an understanding on both the historical and current educational climate in China and India. There are two subjects that provide brief insight into views on female education: Confucianism in China and the dowry in India.

Confucianism is an ancient Chinese ideology that still has traces in modern China, despite originating thousands of years ago.<sup>3</sup> This ideology emphasized family and social order and rationality. Liu and Carpenter (2005, p. 277) described early women’s education as “severe gender discrimination over five thousand years of civilization. (...) They were excluded from receiving a comparable education to men; Confucian ideology initiated that patriarchal practice.” Many aspects of a woman’s life were considered in comparison to that of a man. This carried over into the importance of male over female education. Despite the fact that education equality improved drastically under the rule of Mao Zedong, this did not change the opinions of female education.

Dowry is a unique factor to problems that stem from deep sexist views in Indian society. A dowry is a transfer of funds to the groom by the bride’s family in return from her hand in marriage. Despite having been outlawed for many decades, dowries are still frequently used in India. As pointed out by Fuke (2007), because it is expected that the male will have the highest level of education, a woman with a substantial amount of education may lead to a costlier dowry. This leads to the family to have to choose between a costly dowry or a girl’s education.

Figure 5 represents data from a survey conducted by the global market and research organization Ipsos. The original survey contained 17,551 responses from people between the ages of 16 and 64 across 24 different countries. The question asked was as follows: “Are men more capable than women in working, earning money, being educated and teaching?” Out of all countries in the survey, China had the highest number of yes answers and India had the third highest number of yes answers.

**Figure 5: Are men more capable than women in working, earning money, being educated and teaching?**



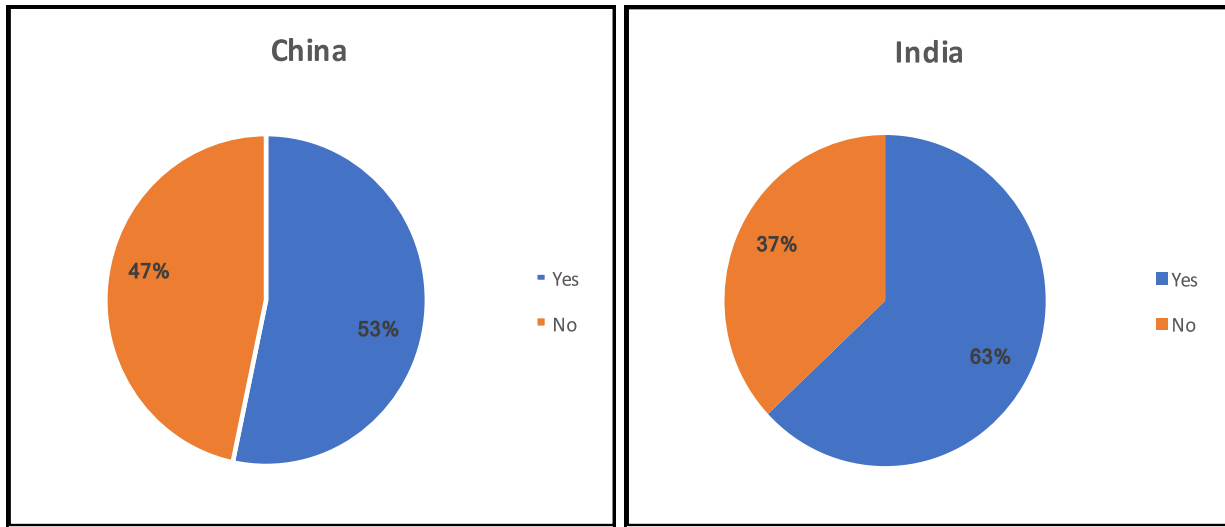
Source: Created by author based on Ipsos Survey (2017).

<sup>3</sup> Liu and Carpenter (2005).

The results from China showed that 62 percent of respondents believed that men were more capable in these areas. In India, the results were not far off with 60 percent responding yes. For context, the United States only had 20 percent of respondents answered yes. 60 percent of respondents answering yes may not seem like a significant statistic, however, this means that the majority of the population in both of these countries believe that men are overall more capable than women. This depicts the societal sexism previously mentioned.

Figure 6 represents data from a survey undertaken by the Pew Research Center (2010). The original survey contained 22,990 responses from people above the age of 18 across 22 different countries. The question asked was as follows: “Do you agree that a university education is more important for a man than a woman?” India had the highest number of yes answers and China had the fourth highest number of yes answers.

**Figure 6: Do you agree that a university education is more important for a man than a woman?**



Source: Pew Research Center (2010).

The results from India were multiple points higher than that of any other country. 63 percent of respondents in India responded yes and 53 percent of respondents in China responded yes. Although having the results right around 50 percent may not seem like a significant figure, these numbers are significantly higher than those of other leading countries in America and Europe. This figure is significant because it shows that when impoverished families are forced to choose between sending a boy and a girl to school, they will continuously choose the boy.<sup>4</sup>

#### IV.2. Youth and Adult Literacy Rates

Literacy rate is one of the figures most frequently used to understand the overall education level in a given country. Low literacy rates do not only indicate weak education; they may also be seen as instruments leading to further inequality in income, work, and status, especially for women.<sup>5</sup> It

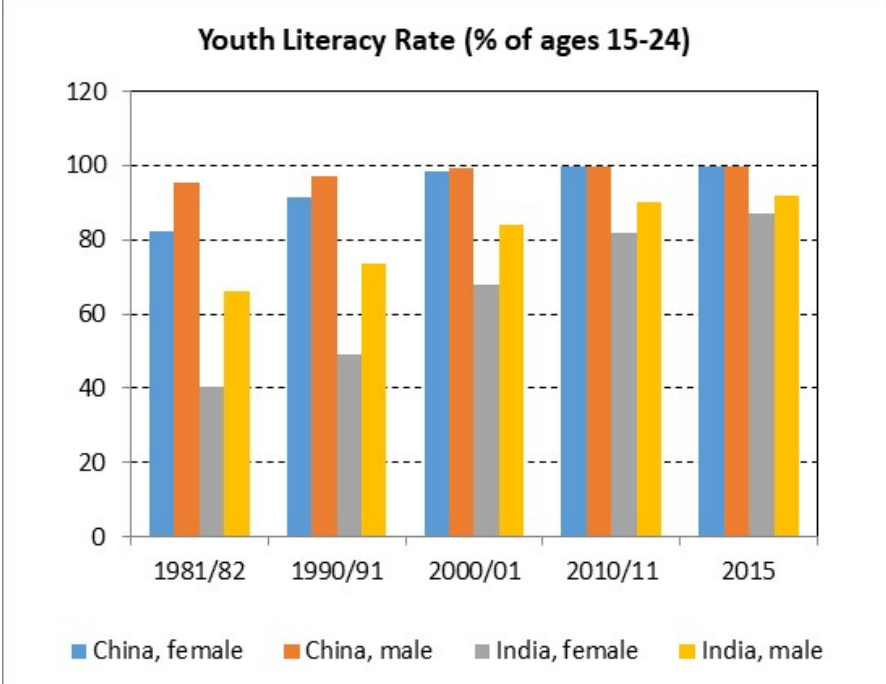
<sup>4</sup> Liu and Carpenter (2005).

<sup>5</sup> Song, Appleton and Knight (2006).

is important to consider not only the literacy rate of the school-age population, but also the adult population as a whole. By looking at both of these statistics, it is easier to see the differences in the past and present state of education.

Figure 7 shows the overall youth literacy rates for China and India. Youth literacy rates are a critical factor in analyzing education in a given country because it shows what percent of the school-age population has received a basic level of education. The data is sparse for the last three decades; however, it is still useful to understand the overall trends in literacy rate. From 1982 to 2015, youth literacy rates for men and women in China rose from 95 percent to 99 percent and from 82 percent to 99 percent respectively. In India, youth literacy rates for men and women rose from 66 percent to 91 percent and from 40 percent to 87 percent respectively. India had the largest overall increase in literacy rates but China had much higher literacy rates to begin with.

**Figure 7: Female and Male Youth Literacy Rate (between the ages of 15-24)**



Source: Created by author based on World Bank (2017).

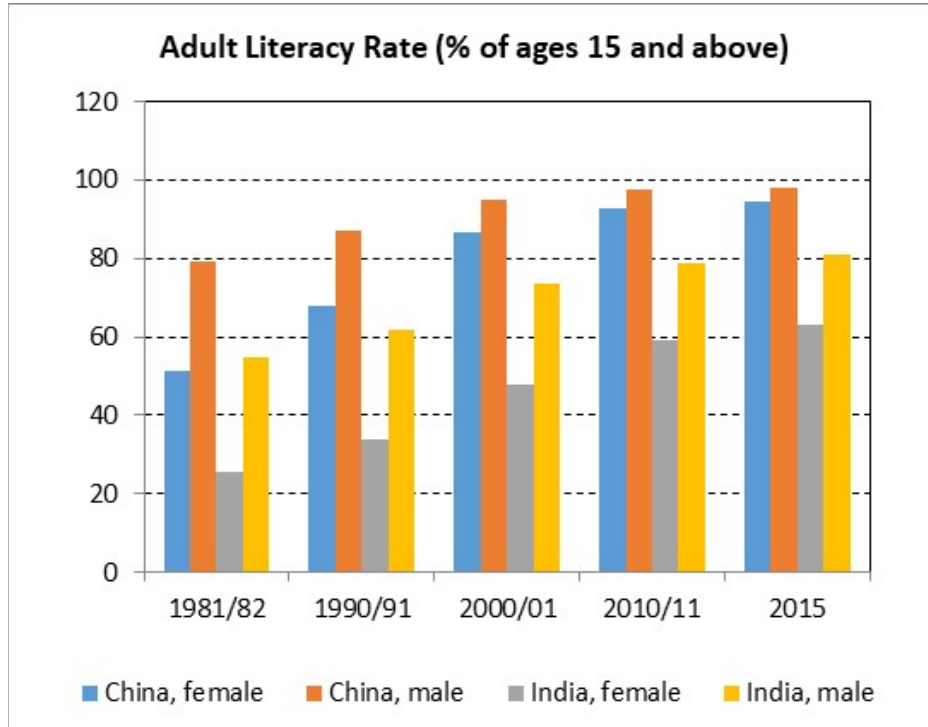
In addition to looking at this data generally, it is also important to analyze literacy rate discrepancies based on gender. From 1981 to 2015, India had much larger differences in literacy rates between males and females than China. Over this time span, the literacy rate gap dropped from 26 percent to 4 percent in 2015. For China, the literacy rate gap went from 13 percent to nonexistent in 2015. It is important to note that female literacy in China in 1981 was double that of India at the time. This shows that, overall, China’s youth population is more educated than that of India.

Figure 8 depicts the adult literacy rates for both countries. This figure differs from figure 7 because it includes information not only about the 15 to 24-year-old demographic, but rather the entire adult population. Like the youth literacy data, the information available between 1981 and 2015 is sparse; however, it is still useful to understand the overall trend. From 1982 to 2015, adult literacy



rates for men and women in China rose from 79 percent to 98 percent and from 51 percent to 94 percent, respectively. In India, adult literacy rates for men and women rose from 54 percent to 80 percent and from 25 percent to 62 percent, respectively.

**Figure 8: Adult Literacy Rate (percent of ages 15 and above)**



Source: Created by author based on World Bank (2017).

Overall, adult literacy rates in China and India have grown over the past three decades. The adult literacy rate for women in China increased by 43 percent from 1981 to 2015; the largest of any other group in this figure. Every group saw an overall increase in literacy over the timespan. Up until 2006, over 50 percent of the adult female population in India were illiterate. Of these women who are literate and attending school, only a few of them will end up reaching the pay level that is required to reach economic independence.<sup>6</sup>

Figures 7 and 8 show the past and present state of education in China and India. The differences in literacy rates, especially in India, between the two figures show how specifically women's education has improved between 1981 and 2015. Youth literacy rates being higher for women in China and India leads to a positive outlook on the future of education in these countries.

### IV.3. Evolution of Years of Schooling and School Enrollment

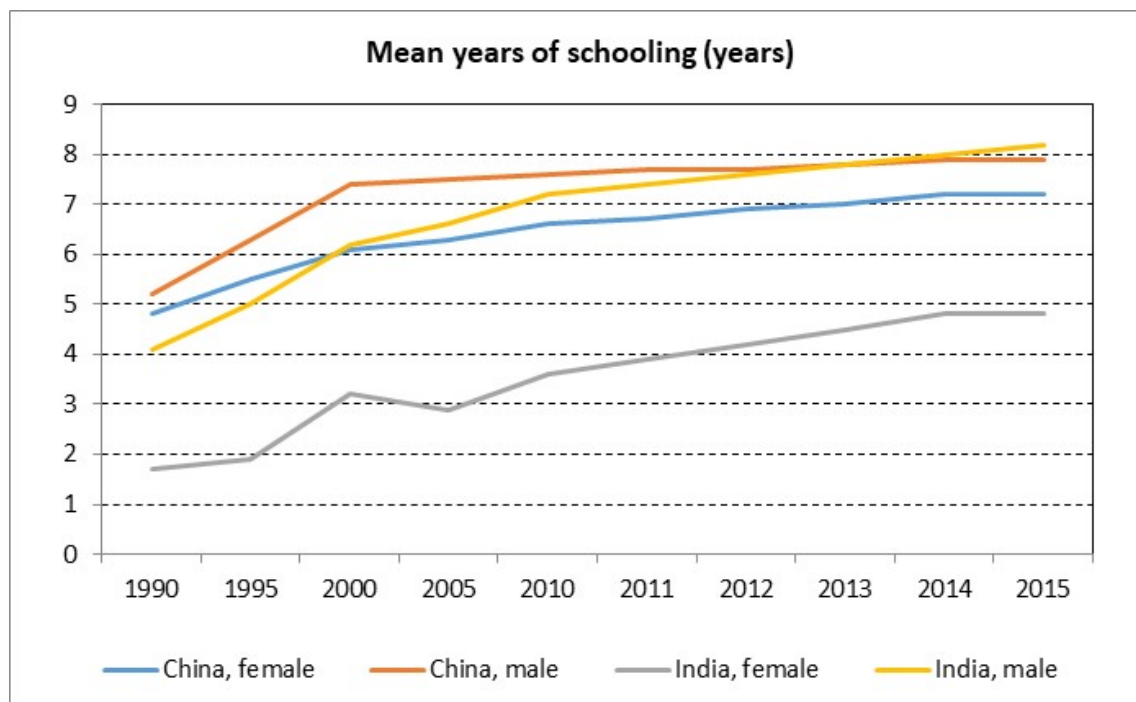
Education is more than just being literate; there is much more for students to learn before they can adequately contribute to society. A formal education can change every aspect of a child's life. It is

<sup>6</sup> Mukhopadhyay (2008).

crucially important women in developing countries to receive a formal education because educated women are more likely to send their children to school than educated men are.<sup>7</sup>

Figure 9 shows the mean years of schooling in China and India. This data is broken down by gender and country and represents the average amount of schooling for individuals over a 25-year timespan. All of the groups saw an increase in the amount of schooling; however, every group started at very different amounts. The mean years of schooling for women in China started at 4.8 and rose to 7.2 while the mean for women in India started at 1.7 and rose to 4.8. The mean years of schooling for men in China started out at 5.2 years and rose to 7.9 while the mean for men in India started at 4.1 and rose to 8.2.

**Figure 9: Mean Years of Schooling by Gender, 1990-2015**



Source: Created by author based on Human Development Report (2017).

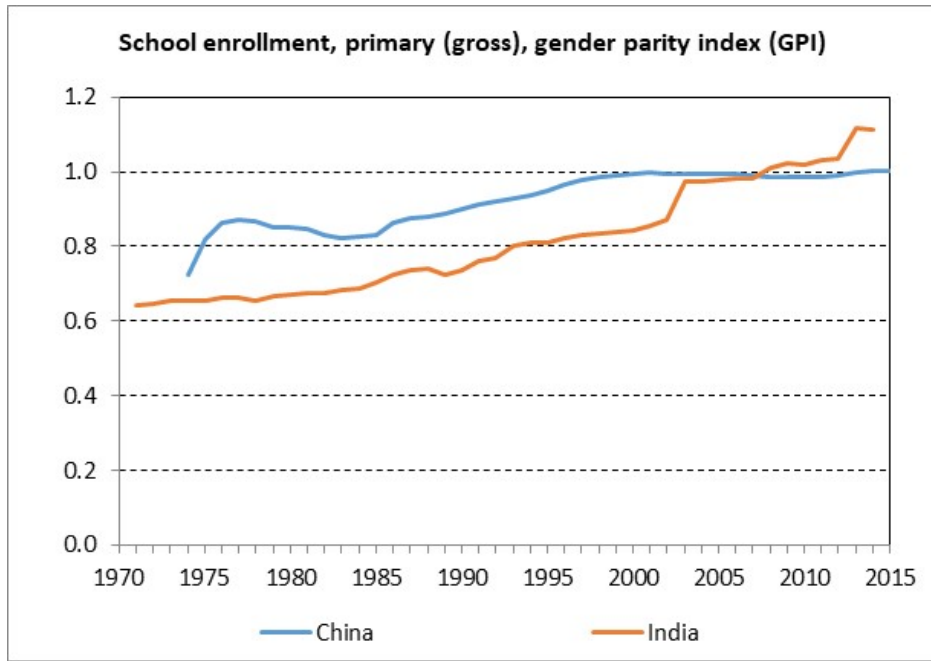
There are large discrepancies in mean years of schooling for women in China and India. In 1990, the mean numbers of years spent in school for women in China was 4.8 years. India had this exact same mean years of schooling, 4.8, 25 years later. Figure 9 shows the fact that women in India on average get two or more less years of schooling than the other groups displayed. The mean years of schooling for females in China is only one year less than that of men in China while the mean years of schooling for females in India is half that of men in India. Women in India not only have less years of schooling compared to women in China but also to the opposite gender in their country. Mean years of schooling for women in both countries was increasing until 2014 and has plateaued since.

Figure 10 shows the gender parity index (GPI) for gross primary school enrollment for both countries. The GPI is the ratio of girls to boys enrolled in primary school. A GPI less than one means that there are less girls than boys enrolled. A GPI higher than one means there are more

<sup>7</sup> Song, Appleton and Knight (2006).

girls than boys. Despite some data gaps (which have been filled by averaging the data for specific years), the figure is still useful to understand the overall trends. From 1971 to 2007, the primary school enrollment for boys and girls approached being equal for both China and India. In 2012, both countries had officially reached a GPI slightly above one. From 2012 to 2015, China maintained a GPI around one, while India's GPI continued to increase. This can be explained by India's gross primary school enrollment for girls being above 100 percent (which is due to some girls attending primary school beyond being primary age, like due to having started primary school late or repeating grades). In other words, India's higher GPI does not necessarily imply that India has a higher net primary school enrollment ratio for girls than China.

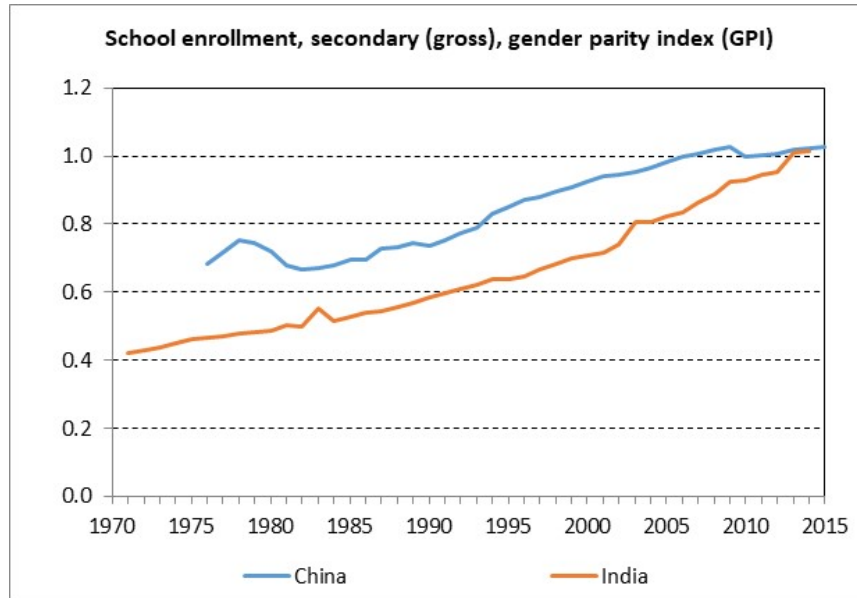
**Figure 10: Gross Primary School Enrollment (Gender Parity Index)**



Source: Created by author based on World Bank (2017).

Figure 11, which shows the gender parity index (GPI) based on gross secondary school enrollments, also shows an overall steady increase for both countries. In 1974 (which is the first year with data available for both countries), the GPI for primary school enrollment in China and India were 0.72 and 0.65, respectively. In 1976, the GPI for secondary school enrollment were 0.68 and 0.46, respectively. These lower GPIs for secondary school enrollment than for primary school enrollment indicate that there were less woman continuing onto secondary education than there were men. Fortunately, the secondary school enrollment GPIs for both countries have continued to increase and reached one in 2013 in both countries.

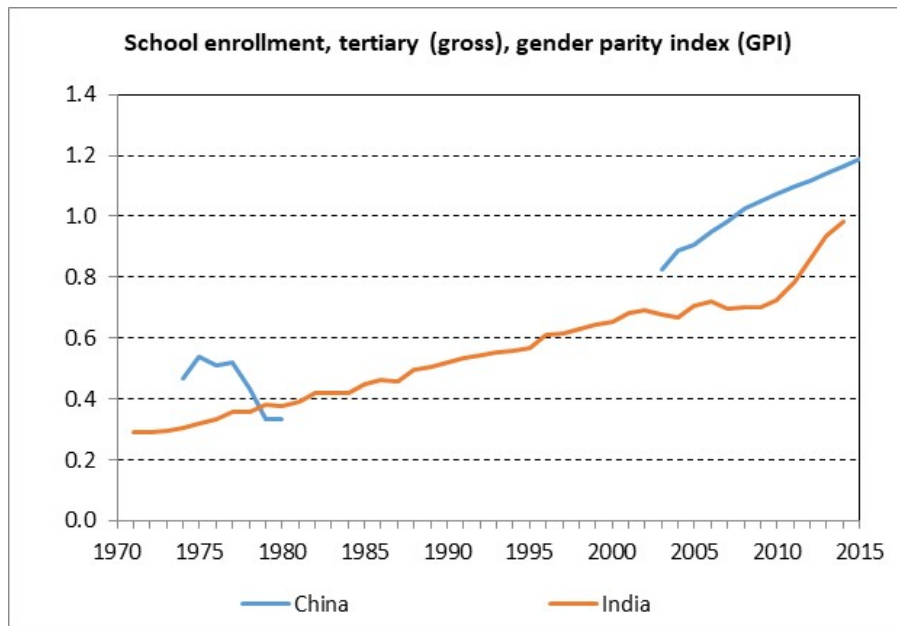
**Figure 11: Gross Secondary School Enrollment (Gender Parity Index)**



Source: Created by author based on World Bank (2017).

Figure 12 shows the GPI for gross tertiary school enrollment for both countries from the early 1970s to 2015. It shows that India's GPI is improving more or less continuously. Even though there is a large data gap for China between 1981 and 2002, we can assume that the GPI was increasing for most of this time period. For tertiary school enrollment, China reached a GPI of one in 2008, while India reached a GPI of one in 2015.

**Figure 12: Gross Tertiary School Enrollment (Gender Parity Index)**



Source: Created by author based on World Bank (2017).

Figures 10 to 12 show that decades ago, less and less women were enrolled relative to men the higher the education level. However, the gender parity gap is getting smaller and smaller (that is, the gender parity index is increasing) over time, and has been mostly eliminated or even reversed during the last few years. This is promising for work and social equality.

## V. Conclusion

When it comes to education reform, policy makers often work from the top down; implementing policy to reform the educational system in the hopes of improving standardized testing scores and statistics. However, this is not an effective way to reform. For many countries, there are other factors that contribute to unequal education for men and women. China and India both face different problems regarding gender-based education inequality. However, by closely analyzing data from both countries, it is possible to create custom strategies to curb gender-based education inequality.

China has had great success in equalizing the number of males and females in the classroom and assuring them basic education. The most important action for China to take is to work to maintain this great progress. As previously mentioned, sexist views surrounding education still exist in China today. Because of this, there must be a conscientious effort to maintain female success in education and carry it into the work place and society in general.

Education in India has improved greatly over the past 40 years; however, there is still much work to do before they will reach adequate equality. Like China, India must work to combat indoctrinated sexist views about female education. They must focus on improving literacy rates as a first step in improving education overall. As the two most populated countries with 2.5 billion people combined, the fight for education equality is even more pertinent.

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