IMPACT OF FERTILITY ON SOCIO-ECONOMIC FRAMEWORK OF INDIA

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Abstract

India, being a developing country, has had to face several economic and political challenges. One of the most important problems is the population explosion. According to Geography.com.sg, “India’s population hit 1 billion in May 2000, increasing the urgency for the country to moderate its population growth.” Some of the reasons for this population explosion are poverty, better medical facilities, and immigration from the neighboring countries of Bangladesh and Nepal. The population density of India in 1996 was about 287 persons per square kilometer (Encyclopedia Britannica, Internet). Several solutions to decrease the rate of population increase have been tried by the government, some successful, some unsuccessful. Although the rate of increase has decreased, the rate has not reached the satisfactory level yet. The population in India continues to increase at an alarming rate. The effects of this population increase are evident in the increasing poverty, unemployment, air and water pollution, and shortage of food, health resources and educational resources.

In the present paper efforts have been to understand various factors contributing in the growth of Indian population and their effects thereafter. This paper also provides a discussion on exploring the facts behind the trend in growth rate of population and to extract significant pattern in declination of fertility leading to a path of controlled birth rate. Attempts have also been made to briefly study the trends and possibilities of controlling these parameters as compared to China which can play important role in uplifting the socio-economic scenario in India.

INTRODUCTION

The crucial role played by socio-economic development in fertility decline is by now widely recognized in the demographic literature. However, when such development takes place at a slow pace, direct intervention in the form of family planning efforts can be, and often is, attempted. Thus, both socio-economic development and family planning programme efforts are expected to contribute to fertility decline. A number of studies have tried to assess the relative roles of development and programme in
bringing about a fertility change. Based on an analysis of 94 countries, Mauldin and Berelson (1978) observed that, although programme efforts are important, programmes in countries with a better social setting are more successful. Srikantan (1977) also highlighted the importance of the socio-economic context for the success of family planning programmes. A recent analysis by Bongaarts and others (1990: 303) confirms some of the earlier findings; it has been observed that declines in fertility are associated with both development and strength of programme effort, and that socio-economic development and family planning programmes “operate synergistically, with one reinforcing the other”.

In the context of China and India, both of these factors plausibly can play a role. While it is true that both countries are characterized by low income and are predominantly agrarian and thus belong to the less developed world, notable changes have occurred recently. India became independent in 1947 and China completed a socialist revolution not much later. Soon thereafter both countries undertook massive programmes for social and economic development. Moreover, both China and India introduced government-sponsored family planning programmes on a large scale, the Indian efforts beginning earlier than those of the Chinese. For India, recent estimates show that the CBR (crude birth rate) was near 45 per thousand and the TFR (total fertility rate) near 6 during the period 1941-1951 (Bhat, 1989: 96, 100).

The literal meaning of population is “the whole number of people or inhabitants in a country or region” (Webster’s dictionary), and the literal meaning of population explosion is “a pyramiding of numbers of a biological population” (Webster’s dictionary). As the number of people in a pyramid increases, so do the problems related to the increased population. The main factors affecting the population change are the birth rate, death rate and migration. The birth rate is the ratio between births and individuals in a specified population and time (Miller, 253). The death rate is the ratio between the number of deaths and individuals in a specified population and time (Miller, 253). Migration is the number of people moving in (immigration) or out (emigration) of a country, place or locality. The population change is calculated by the formula:

\[
\text{Population change} = (\text{Births} + \text{Immigration}) - (\text{Deaths} + \text{Emigration})
\]

The recent increase in the world population has been caused due to the following major reasons:

1. The increase in birth rates due to medical improvements
2. The decrease in death rates due to better medical facilities and advancements in the field of medicine.
3. Immigration to better developed countries due to several reasons like better job opportunities, war, and natural causes like hurricanes, earthquakes, and so forth.
CAUSES FOR INCREASE IN POPULATION

I. Birth Rate

(a) Poverty

According to ABC News, India currently faces approximately “... 33 births a minute, 2,000 an hour, 48,000 a day, which calculates to nearly 12 million a year”. Unfortunately, the resources do not increase as the population increases. Instead the resources keep decreasing, leading to making survival for a human being more and more competitive even for the basic necessities of life like food, clothing and shelter. India currently faces a vicious cycle of population explosion and poverty. One of the most important reasons for this population increase in India is poverty. According to Geography.com, “More than 300 million Indians earn less than US $1 everyday and about 130 million people are jobless.” The people, who have to struggle to make two ends meet produce more children because more children mean more earning hands. Also, due to poverty, the infant mortality rate among such families is higher due to the lack of facilities like food and medical resources. Thus, they produce more children assuming that not all of them would be able to survive. The end result is a mounting increase in the population size of India. Due to the increase in population, the problems of scarce resources, jobs, and poverty increases. Thus the cycle continues leading to an ever-increasing population that we see today. This cycle in fact might be considered as a positive feedback, in that the increase in one result in the increase of the other factor. As the poverty and the population both increase, the development of the country and the society seems even more far-fetched.

(b) Religious beliefs, Traditions and Cultural Norms

India’s culture runs very deep and far back in history. Due to the increased population, the educational facilities are very scarce. As a result, most people still strictly follow ancient beliefs. According to ABC News, the famous Indian author, Shobha De said, “God said ‘Go forth and produce’ and we just went ahead and did exactly that.” In addition, a lot of families prefer having a son rather than a daughter. As a result, a lot of families have more children than they actually want or can afford, resulting in increased poverty, lack of resources, and most importantly, an increased population.

Another one of India’s cultural norms is for a girl to get married at an early age. In most of the rural areas and in some urban areas as well, families prefer to get their girls married at the age of 14 or 15. Although child marriage is illegal in India, the culture and the society surrounding the girls in India does not allow them to oppose such decisions taken by their family. For many, giving a girl child in marriage is done not by choice, but rather out of compulsion. The poor economic status of tribal villagers is attributed as one of the primary factors responsible for the prevalence of child marriages in India. An example of one such incident was reported in Indiainfo.com. According to an article written by Syed Zarir Hussain
on October 16th, 2000, “Forty-two-year-old Rojo Tok, a tribal peasant in Arunachal Pradesh, was all decked up in local finery to wed Mepong Taku, a girl who will turn 14 this winter.”

I was brought up in a very different environment and never had to worry about getting married at the age of 14 or 15. However, my parents turned their eyes away, when my maidservant’s daughter was being married off when she was only 13 years old. I was very young, but my parents simply said, “That’s just how things are with poor people” and I did not have a say in it. Due to the young age of these girls, they have more potential of bearing children, that is, since they start bearing children at a very early age, they can have more children throughout their lifetime. This results in the increase of the global fertility rate. Since these girls get married at a very early age, they do not have the opportunity to get educated. Therefore, they remain uneducated and teach the same norms to their own children, and the tradition goes on from one generation to the other.

II. Death Rate

Although poverty has increased and the development of the country continues to be hampered, the improvements in medical facilities have been tremendous. This improvement might be considered positive, but as far as population increase is considered, it has only been positive in terms of increasing the population further. The crude death rate in India in 1981 was approximately 12.5, and that decreased to approximately 8.7 in 1999. Also, the infant mortality rate in India decreased from 129 in 1981 to approximately 72 in 1999 (Mapsindia.com, Internet). These numbers are clear indications of the improvements in the medical field. This development is good for the economy and society of India, but strictly in terms of population, this advancement has further enhanced the increase in population.

The average life expectancy of people in India has increased from 52.9 in 1975-80 to 62.4 in 1995-00. Although our near and dear ones would live longer, due to the increase in the population, the resources available per person would be much less, leading to a decrease in the curvature of the slope of development instead of a higher gradient. In addition, abortion is not allowed by several religions that are followed in India. In fact, in Islam, one of the leading religions of India, children are considered to be gifts of God, and so the more children a woman has, the more she is respected in her family and society. As a result, although the measures to control birth are either not available or known to the public, the facilities to increase birth through medical facilities are available.

III. Migration

In countries like the United States (U.S.), immigration plays an important role in the population increase. However, in countries like India, immigration plays a very small role in the population change. Although people from neighboring countries like Bangladesh, Pakistan and Nepal, migrate to India; at the same time Indians migrate to other countries like the U.S., Australia, and the U.K. During the 1971
war between India and Pakistan over Bangladesh, the immigration rate increased
tremendously. However, currently the migration in India is –0.08 migrants per
1000 population (AskJeeves.com, Internet), and is decreasing further. This is
definitely good for India. This way, the population might eventually come close to
being under control and more people may get better job opportunities and further
education. For example, the students in my university from India, like myself, have
better chances for job opportunities and better education outside India than we
would have had in India.

EFFECTS OF POPULATION EXPLOSION

Overpopulation is a condition where an organism’s numbers exceed the carrying
capacity of its habitat. In common parlance, the term often refers to the relationship
between the human population and its environment, the Earth. According to Steve
Jones, head of the biology department at University College London, “Humans are
10,000 times more common than we should be, according to the rules of the animal
kingdom, and we have agriculture to thank for that. Without farming, the world
population would probably have reached half a million by now.”

The recent rapid increase in human population over the past two centuries has
raised concerns that humans are beginning to overpopulate the Earth, and that
the planet may not be able to sustain present or larger numbers of inhabitants.
The population has been growing continuously since the end of the Black Death,
around the year 1400; at the beginning of the 19th century, it had reached roughly
1,000,000,000 (1 billion). Increases in life expectancy and resource availability

during the industrial and green revolutions led to rapid population growth on a worldwide level. By 1960, the world population had reached 3 billion; it doubled to 6 billion over the next four decades. As of 2009, the estimated annual growth rate was 1.10%, down from a peak of 2.2% in 1963, and the world population stood at roughly 6.7 billion. Current projections show a steady decline in the population growth rate, with the population expected to reach between 8 and 10.5 billion between the year 2040 and 2050.

**Figure: United Nation’s Population Projections by Location**

![United Nation’s Population Projections by Location](source)


The scientific consensus is that the current population expansion and accompanying increase in usage of resources is linked to threats to the ecosystem. The InterAcademy Panel Statement on Population Growth, which was ratified by 58 member national academies in 1994, called the growth in human numbers “unprecedented”, and stated that many environmental problems, such as rising levels of atmospheric carbon dioxide, global warming, and pollution, were aggravated by the population expansion. At the time, the world population stood at 5.5 billion,
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and optimistic scenarios predicted a peak of 7.8 billion by 2050, a number that current estimates show will be reached around 2030.

The current rate of population growth in India is 1.58% and the total fertility rate is 3.11 (AskJeeves.com, Internet). Although the total fertility rate has decreased, due to the increase in the total number of women between the ages of 15 and 44 (reproductive ages), the total number of births has increased. This has lead to the current enormous population size of approximately 1 billion. This has greatly hampered the development of the Indian economy. The amount of resources that could have been available to one person a few years ago now need to be shared between two people, which is not sufficient for either of them. The population increase has lead to air and water pollution, unemployment, poverty, lack of educational resources, and even malnourished women and children.

EFFECTS OF HUMAN OVERPOPULATION

Some problems associated with or exacerbated by human overpopulation:

- **Inadequate fresh water** for drinking water use as well as sewage treatment and effluent discharge. Some countries, like Saudi Arabia, use energy-expensive desalination to solve the problem of water shortages.

- **Depletion of natural resources**, especially fossil fuels.

- Increased levels of **air pollution, water pollution, soil contamination and noise pollution**. Once a country has industrialized and become wealthy, a combination of government regulation and technological innovation causes pollution to decline substantially, even as the population continues to grow.

- **Deforestation and loss of ecosystems** that sustain global atmospheric oxygen and carbon dioxide balance; about eight million hectares of forest are lost each year.
• **Changes in atmospheric composition and consequent** global warming
• Irreversible **loss of arable land** and increases in **desertification**. Deforestation and desertification can be reversed by adopting property rights, and this policy is successful even while the human population continues to grow.

• **Mass species extinctions**. From reduced habitat in tropical forests due to slash-and-burn techniques that sometimes are practiced by shifting cultivators, especially in countries with rapidly expanding rural populations; present extinction rates may be as high as 140,000 species lost per year. As of 2008, the IUCN Red List lists a total of 717 animal species having gone extinct during recorded human history.

• High **infant and child mortality**. High rates of infant mortality are caused by poverty. Rich countries with high population densities have low rates of infant mortality.

• **Intensive factory farming** to support large populations. It results in human threats including the evolution and spread of antibiotic resistant bacteria diseases, excessive air and water pollution, and new virus that infect humans.

*Source: Wikipedia*
Increased chance of the emergence of **new epidemics and pandemics** For many environmental and social reasons, including overcrowded living conditions, malnutrition and inadequate, inaccessible, or non-existent health care, the poor are more likely to be exposed to infectious diseases.

**Starvation, malnutrition** or poor diet with ill health and diet-deficiency diseases (e.g. rickets). However, rich countries with high population densities do not have famine.

Poverty coupled with **inflation** in some regions and a resulting low level of capital formation. Poverty and inflation are aggravated by bad government and bad economic policies. Many countries with high population densities have eliminated absolute poverty and keep their inflation rates very low.

**Low life expectancy** in countries with fastest growing populations

**Unhygienic living conditions** for many based upon water resource depletion, discharge of raw sewage and solid waste disposal. However, this problem can be reduced with the adoption of sewers.

**Elevated crime rate** due to drug cartels and increased theft by people stealing resources to survive.

Conflict over scarce resources and crowding, leading to **increased levels of warfare**

**Less Personal Freedom / More Restrictive Laws.** Laws regulate interactions between humans. Law “serves as a primary social mediator of relations between people.” The higher the population density, the more frequent such interactions become, and thus there develops a need for more laws and/or more restrictive laws to regulate these interactions. It is even speculated that democracy is threatened due to overpopulation, and could give rise to totalitarian style governments.

Some economists, such as Thomas Sowell and Walter E. Williams argue that third world poverty and famine are caused in part by bad government and bad economic policies. Most biologists and sociologists see overpopulation as a serious threat to the quality of human life.

**AVAILABLE MEASURES TO CONTROL POPULATION**

The government of India has been organizing several programs for limiting the population increase and has been spending millions of dollars on controlling the birth rate. Some of the programs have been successful, and the rate of increase has also reduced, but has still to reach the sustainable rate. The major factors affecting the population increase of India are the rapidly increasing birth rate and decreasing death rates. We can follow strict birth control measures like China to decrease the birth rate, but we cannot go and decrease our technological advancements to decrease the death rate. Thus, our main emphasis falls on decreasing the birth rate. Several government-funded agencies like the Family Planning Association of India spend
hundreds of thousands of dollars on promoting family planning. These organizations aim to promote family planning as a basic human right and the norm of a two-child family on a voluntary basis, to achieve a balance between the population size and resources, to prepare young people for responsible attitudes in human sexuality, and to provide education and services to all. The family planning methods provided by the family planning program are vasectomy, tubectomy, IUD, conventional contraceptives (that is condoms, diaphragms, jelly/cream tubes, foam tablets) and oral pills. In addition, induced abortion is available, free of charge, in institutions recognized by the government for this purpose. However, the success of the family planning program in India depends on several factors like literacy, religion and the region where the couple live.

**CURRENT STATE OF AFFAIR**

In India, the coverage of the vital registration system is not yet good enough to provide reliable estimates of fertility measures. However, indirect estimates obtained from the census data or from special surveys are available (Preston and Bhat, 1984; Rele, 1987; Srikantan and Balasubramanian, 1989; Bhat, 1993). There is close correspondence among these (table 2). According to estimates by Preston and Bhat (1984), CBR (Crude Birth Rate) fell from 40.2 per thousand in the period 1966-1971 to 34.0 per thousand in the period 1976-1981 and the TFR (Total Fertility Rate) declined from 5.67 to 4.69 over the same period; most of the decline probably occurred in the late 1970s. Rele’s estimates show that the CBR was around 45 per thousand until the mid-1960s, but declined to 34.4 per thousand by the period 1976-1981, and the TFR, which was close to 6 up to the middle of the 1960s, also fell to 4.65 by the period 1976-1981 (Rele, 1987). Srikantan and Balasubramanian (1989) estimated the CBR to be 43.4 per thousand in 1961, declining to 34.9 per thousand by 1981; the implied decline in the TFR over the same period was from 5.82 to 4.78. Thus, regardless of the set of estimates used, the fertility decline from the 1950s to about 1981 was 6-11 points in CBR and about 1 point in TFR.

The detailed age distributions as well as the data on current and cumulative fertility obtained in India’s last census are not yet available. However, Bhat (1993) provided reverse survival estimates of the crude birth rate from the 1991 census data. These indicate that the CBR in India was 32.0 per thousand during the period 1984-1990, indicating a further decline in the 1980s. In recent years, the Sample Registration System (SRS) in India has been providing annual estimates of vital rates. Although in the early phase of the implementation of this system there were some interruptions, the more recent data appear to be of good quality. It is still possible that the SRS estimates slightly underestimate the vital rates and hence should not be used in conjunction with the census-based indirect estimates for the earlier dates to ascertain trends. However, for the recent period, the SRS series by itself can be used to examine the trends; hence, SRS estimates are also given in table 2 for the period 1981-1991. These show that declines of about 4 points in the CBR and 1 point in TFR appear to have taken place during the 1980s. Added to the
A decomposition of the fertility decline into the contribution of changes in proportions married and marital fertility provides a better picture of the nature of the decline. Rani (1990) obtained such decomposition for the fertility changes following table depicts the Fertility trends in India, 1951-1991.

<table>
<thead>
<tr>
<th>Source</th>
<th>Crude birth rate</th>
<th>Total fertility rate</th>
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<tr>
<td></td>
<td>1</td>
<td>2</td>
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<tr>
<td>Period/year</td>
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<tr>
<td>1951-1956</td>
<td>-</td>
<td>45.9</td>
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<td>1956-1961</td>
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<td>45.2</td>
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<tr>
<td>1961</td>
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<tr>
<td>1961-1966</td>
<td>-</td>
<td>44.0</td>
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<tr>
<td>1966-1971</td>
<td>40.2</td>
<td>41.9</td>
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<td>1971</td>
<td>-</td>
<td>-</td>
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<tr>
<td>1971-1976</td>
<td>37.9</td>
<td>39.3</td>
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<tr>
<td>1976-1981</td>
<td>34.0</td>
<td>34.4</td>
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<td>1981</td>
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<td>1986</td>
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<td>1991</td>
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</tbody>
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Source: 1. Preston and Bhat (1984:498);
2. Rele (1987, series A:516, 518);
3. Srikantan and Balasubramanian (1989:76-77);
4. India, Registrar General, various years: unadjusted series from the Sample Registration System.

PROBLEMS WITH IMPLEMENTING MEASURES TO CONTROL POPULATION

The success of family planning greatly depends on women and their status. Thus, it is imperative for the women to be educated so that they can decide on the number of children they want and be aware of the available birth control measures. Also, in a country like India, it is important for the women to have equal rights in the decision about the number of children to be produced. Women also need to get educated about the impacts of having so many children on their own bodies and the impacts on their children. In addition, not only the young ones, but also the older women need to be educated so that they can teach the right family planning to their own daughters. However, in India, almost no importance is given to the education of women because of the financial conditions in some families and the
religious and social norms in some. In such a case, educating women about family planning becomes an even more difficult task. India, being a diverse country, has people from all religions and of different family backgrounds. As mentioned earlier, in Islam, children are considered to be a gift of God, and thus Muslims do not believe in birth control measures. Also, among the Catholics, abortion is considered a sin. Thus, the people from such sects of the society do not follow family planning. In India, most of the population live in the rural areas. However, family planning is not widely advertised in rural areas. Also, in rural areas, social and religious norms are more strictly followed. As a result, all the above-mentioned problems are even more intense in rural areas with the addition of the lack of family planning facilities in those areas. In fact, from my own experience, family planning is considered a sin in most of the tribal and rural communities.

CONCLUSION

Considering the above factors, it is obvious that in India, the success of family planning programs depends on too many factors, making it a more complex operation than usual. However, this does not change the fact that birth control is extremely important in order to improve the life of the future generations in India in terms of better availability of resources and a better and clean world. Unless, we want our future generations to live the life of barbarians, it is imperative that we control the population explosion and thus control the usage of the available resources. We can start by educating the women of India in the basics of family planning. This can simply be done if just one educated person takes it into her/his stride to teach one other person – “Each one, teach one.”

References


