

UGC NET - SOCIOLOGY SAMPLE THEORY

Paper - III

- Malthusial Theory of Population
- Demographic Transition
- Determinants of Population Growth
- Mortality
- Determinants of Fertility & Mortality
- Morbidity Rate
- Constraints on Development
- Population Policy
- Population Education

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MALTHUSIAN THEORY OF POPULATION

Thomas Robert Malthus was the first economist to propose a systematic theory of population. He articulated his views regarding population in his famous book, *Essay on the Principle of Population* (1798), for which he collected empirical data to support his thesis. Malthus had the second edition of his book published in 1803, in which he modified some of his views from the first edition, but essentially his original thesis did not change.

In *Essay on the Principle of Population*, Malthus proposes the principle that human populations grow exponentially (i.e., doubling with each cycle) while food production grows at an arithmetic rate (i.e. by the repeated addition of a uniform increment in each uniform interval of time). Thus, while food output was likely to increase in a series of twenty-five year intervals in the arithmetic progression 1, 2, 3, 4, 5, 6, 7, 8, 9, and so on, population was capable of increasing in the geometric progression 1, 2, 4, 8, 16, 32, 64, 128, 256, and so forth. This scenario of arithmetic food growth with simultaneous geometric human population growth predicted a future when humans would have no resources to survive on. To avoid such a catastrophe, Malthus urged controls on population growth.

On the basis of a hypothetical world population of one billion in the early nineteenth century and an adequate means of subsistence at that time, Malthus suggested that there was a potential for a population increase to 256 billion within 200 years but that the means of subsistence were only capable of being increased enough for nine billion to be fed at the level prevailing at the beginning of the period. He therefore considered that the population increase should be kept down to the level at which it could be supported by the operation of various checks on population growth, which he categorized as "preventive" and "positive" checks.

The chief preventive check envisaged by Malthus was that of "moral restraint", which was seen as a deliberate decision by men to refrain "from pursuing the dictate of nature in an early attachment to one woman", i.e. to marry later in life than had been usual and only at a

stage when fully capable of supporting a family. This, it was anticipated, would give rise to smaller families and probably to fewer families, but Malthus was strongly opposed to birth control within marriage and did not suggest that parents should try to restrict the number of children born to them after their marriage. Malthus was clearly aware that problems might arise from the postponement of marriage to a later date, such as an increase in the number of illegitimate births, but considered that these problems were likely to be less serious than those caused by a continuation of rapid population increase.

He saw positive checks to population growth as being any causes that contributed to the shortening of human lifespan. He included in this category poor living and working conditions which might give rise to low resistance to disease, as well as more obvious factors such as disease itself, war, and famine. Some of the conclusions that can be drawn from Malthus's ideas thus have obvious political connotations and this partly accounts for the interest in his writings and possibly also the misrepresentation of some of his ideas by authors such as Cobbett, the famous early English radical. Some later writers modified his ideas, suggesting, for example, strong government action to ensure later marriages. Others did not accept the view that birth control should be forbidden after marriage, and one group in particular, called the Malthusian League, strongly argued the case for birth control, though this was contrary to the principles of conduct which Malthus himself advocated.

DEMOGRAPHIC TRANSITION

The theory of demographic transition or population cycle is based on the actual population trends of the advanced countries of the world. According to this theory, every country passes through five different stages of population development. According to C.P. Blacker, they are: (i) the high stationary phase marked by high fertility and mortality rates; (ii) The early expanding phase marked by high fertility and high but declining mortality, (iii) the late expanding phase with declining fertility but with mortality declining more rapidly; (iv) the low stationary phase with low fertility balanced by equally low mortality; and (v) the declining

phase with low mortality, lower fertility and an excess of deaths over births. These stages are explained below first stage.

First Stage. In this stage the country is backward and is characterized by high birth and death rates with the result that the growth rate of population is low.

There are a few simple, light and small consumer goods industries. The tertiary sector consisting of transport, commerce, banking and insurance is underdeveloped. All these factors are responsible for low incomes and poverty of the masses. Large family is regarded as a necessity to augment the low family income.

People being illiterate, ignorant, superstitious and fatalists are averse to any methods of birth control. Children are regarded as God-given and pre-ordained. All these economic and social factors are responsible for a high birth rate in the country. Along with high birth rate, the death rate is also high due to non-nutritional food with a low caloric value, lack of medical facilities and the lack of any sense of cleanliness. The mortality rate is the highest among the children and the next among women of child-bearing age. Thus high birth rates and death rates remain approximately equal over time so that a static equilibrium with zero population growth prevails.

Second Stage. In the second stage, the economy enters the phase of economic growth, Agricultural and industrial productivity increases, means of transport develop. There is greater mobility of labour. Education expands. Incomes increase. People get more and better quality food products. Medical and health facilities are expanded.

All these factors bring down the death rate. But the rate is almost stable.

With improvements in the standard of living and the dietary habits of the people, the life expectancy also increases. People do not make any efforts to control the size of family because of the presence of religious dogmas and social taboos towards family planning.

As a result of these factors, the birth rate remains at the previous high level. With the decline in the death rate and no change in the birth rate, population increases at a rapid

rate. This leads to population explosion. This is an "Early Expanding" (EE) stage in population development when population grows at an increasing rate.

Third Stage. This is the "Late Expanding" (LE) stage of population development. In this stage, declining birth rates accompanied by death rates decline more rapidly. As a result, population grows at a diminishing rate.

Fourth Stage. In this stage, the fertility rate declines and tends to equal the death rate so that the growth rate of population declines. As growth gains momentum and people cross the subsistence level of income, their standard of living rises.

Education expands and permeates the entire society. People discard old customs, dogmas and beliefs, develop individualistic spirit and break with the joint family. Men and women prefer to marry late. The desire to have more children to supplement parental income declines.

All this tends to reduce the birth rate which along with an already low death rate brings a decline in the growth rate of population. The advanced countries of the world are passing through this "Lower Stationary" (LS) stage of population development.

Fifth Stage. A continuing decline in birth rates when it is not possible to lower death rates further, in the advanced countries leads to a "declining" (D) stage of population. The existence of this stage in any developed country is a matter of speculation.

The theory of demographic transition is the most acceptable theory of population growth. It does not lay emphasis on food supply like the Malthusian theory, nor does it develop a pessimistic outlook towards population growth.

Determinants of Population Growth

High fertility rates have historically been strongly correlated with poverty, high childhood mortality rates, low status and educational levels of women, deficiencies in reproductive health services, and inadequate availability and acceptance of contraceptives. Falling fertility rates and the demographic transition are generally associated with improved standards of living, such as increased per capita

incomes, increased life expectancy, lowered infant mortality, increased adult literacy, and higher rates of female education and employment.

Even with improved economic conditions, nations, regions, and societies will experience different demographic patterns due to varying cultural influences. The value placed upon large families (especially among under-privileged rural populations in less developed countries who benefit least from the process of development), the assurance of security for the elderly, the ability of women to control reproduction, and the status and rights of women within families and within societies are significant cultural factors affecting family size and the demand for family planning services.

Even with a demand for family planning services, the adequate availability of and access to family planning and other reproductive health services are essential in facilitating slowing of the population growth rate. Also, access to education and the ability of women to determine their own economic security influence their reproductive decisions.

Population growth is determined by four factors, births (**B**), deaths (**D**), immigrants (**I**), and emigrants (**E**). Using a formula expressed as

$$\Delta P \equiv (B-D) + (I-E)$$

In other words, the population growth of a period can be calculated in two parts, natural growth of population (B-D) and mechanical growth of population (I-E), in which mechanical growth of population is mainly affected by social factors, e.g. the advanced economies are growing faster while the backward economies are growing slowly even with negative growth.

MORTALITY

Mortality is the state of being mortal, or susceptible to death; the opposite of immortality.

Mortality rate is a measure of the number of deaths (in general, or due to a specific cause) in a population, scaled to the size of that population, per unit of time. Mortality rate is typically expressed in units of deaths per 1000 individuals per year; thus, a mortality rate of 9.5 (out of 1000) in a population of 1,000 would mean 9.5 deaths per year in that entire population, or 0.95% out of the total. It is distinct from morbidity rate, which refers to the number of individuals in poor health during a given time period (the prevalence rate) or the number of newly appearing cases of the disease

per unit of time (incidence rate). The term "mortality" is also sometimes inappropriately used to refer to the number of deaths among a set of diagnosed hospital cases for a disease or injury, rather than for the general population of a country or ethnic group. This disease mortality statistic is more precisely referred to as "case fatality rate" (CFR).

Determinants of Fertility

Fertility is the driving force of population growth in the world today. Mortality rates are relatively low around the world by historical standards, though exceptions exist. Reductions in infant and maternal deaths, universally hailed as desirable, would increase population growth little compared with how powerfully reductions in fertility could curb it.

Fertility is the logical target for reducing population growth because of the place we occupy today in the history of population change. It is widely believed that for most of human history fertility and mortality were both quite high and kept human populations from growing except very slowly over very long timescales. Population growth "took off" on its dramatic rise when death rates started to fall with the advent of industrialization and, even more importantly, the development of the germ theory of disease, healthy sanitation practices, and antibiotics and other medicines. This decline in mortality began in the industrialized world in the nineteenth century and spread to the Third World after World War II, making relatively low death rates virtually a worldwide phenomenon.

In some countries fertility has followed mortality in its decline. Births and deaths are in equilibrium, producing slow or no growth, but this time at lower levels. These are the countries that are close to zero population growth. Elsewhere, of course, fertility has not fallen to match mortality. Indeed, the essence of rapid world population growth today is this incongruence between fertility and mortality rates. The gap is greatest in the countries where population growth is most rapid, where fertility is at a peak or has just begun to fall. Growth rates are slower where the decline in fertility has been under way for a longer time or has been more rapid. Where growth rates are nearly zero, the transition to a low-fertility regime is nearly complete.

The Determinants of Mortality

Robert Lucas once famously said regarding the determinants of economic growth, "once one starts to think about them, it is hard to think of anything else." The same could be said for the determinants of mortality, since the length of life is as critical a measure of our wellbeing as is our income.

In "Determinants of Mortality, David Cutler, Angus Deaton, and Adriana Lleras-Muney explore many aspects of this important topic, including the decline in mortality rates over time, differences in mortality across countries, and differences in mortality across groups within countries.

For most of human history, life expectancy has been short - perhaps 25 years for our hunter-gatherer ancestors and only 37 years for residents of England in 1700. Dramatic changes began in the 18th century, with life expectancy in England rising to 41 years by 1820, 50 years by the early 20th century, and 77 years today. The decline in mortality rates was particularly sharp among children. This can be explained by the near elimination of deaths from infectious diseases, formerly the most common cause of death, since the young are most susceptible to infection.

Weighing the various explanations for these mortality reductions, the authors see three phases. From the mid-18th century to the mid-19th century, improved nutrition and economic growth played a large role, as did emerging public health measures. From the mid-19th century to the early 20th century, the delivery of clean water, removal of waste, and advice about personal health practices all led to lower mortality rates, though urbanization had the opposite effect, due to high mortality rates in cities. Since the 1930s, mortality reductions have been driven primarily by medicine, first by vaccination and antibiotics and later by the expensive and intensive interventions that characterize modern medicine.

Looking across countries, there are vast differences in life expectancy, as illustrated in Figure 1. There are also sharp differences in who dies and from what. Deaths among

children account for 30 percent of deaths in poor countries but less than 1 percent of deaths in rich countries. Most deaths in rich countries are from cancers and cardiovascular disease, while most deaths in poor countries are from infectious diseases.

Though differences persist, many poorer countries have recently experienced large improvements in life expectancy. In India and China, life expectancy has risen by 30 years since 1950. Even in Africa, life expectancy rose by 13 years from the early 1950s until the late 1980s, when the spread of HIV/AIDS reversed the trend.

What factors explain these reductions in mortality rates? Some of the leading candidates are changes in income, literacy (particularly among women), and the supply of calories, as well as public health interventions such as immunization campaigns, improvements in water supply, and the use of antibiotics. Although it seems logical that economic growth should improve health, the authors point out that the evidence for this is mixed at best. This may be because urbanization often goes along with growth, or because growth must be accompanied by effective public health measures in order to bring about mortality reductions.

Within developed countries such as the U.S., there are well documented differences in mortality rates by race, income, education, occupation, or urban/rural status, with the low socioeconomic status groups exhibiting higher mortality rates. Some explanations for these inequalities include differences in access to medical care, in access to the resources needed to buy food and shelter, in health related behaviors such as drinking and smoking, or in levels of "psychosocial stress." While the link between social status and health is likely not due to any single factor, it does seem to be primarily a result of health affecting income rather than the reverse. Education seems to have a positive effect on health, which may result from differential use of health knowledge and technology.

Is there a universal theory of mortality that can explain improvements over time, differences across countries, and differences across groups? The authors argue that "knowledge, science, and technology are the keys to any coherent explanation," perhaps controversially downplaying the role

of income. As for the future, they predict that acceleration in the production of new knowledge and treatments is likely to increase inequality in health outcomes in the short run, but the silver lining is that "help is on the way, not only for those who receive it first, but eventually for everyone."

MORBIDITY RATE

The frequency with which a disease appears in a population. Morbidity rates are used in actuarial professions, such as health insurance, life insurance and long-term care insurance, to determine the correct premiums to charge to customers. Morbidity rates help insurers predict the likelihood that an insured will contract or develop any number of specified diseases.

"The ability to accurately predict how many customers will get sick and what diseases they will get sick with helps insurers predict how much money they will spend to provide treatment for insurance customers. Thus, accurate morbidity rates are crucial for keeping insurance companies in business. Morbidity rate should not be confused with mortality rate, which is the frequency of death in a given population."

Mortality rate, female child (per 1,000 female children age one)

Definition: Child mortality rate is the probability of dying between the exact ages of one and five, if subject to current age-specific mortality rates. The probability is expressed as a rate per 1,000.

Mortality rate, male child (per 1,000 male children age one)

Definition: Child mortality rate is the probability of dying between the exact ages of one and five, if subject to current age-specific mortality rates. The probability is expressed as a rate per 1,000.

Mortality rate, under-5 (per 1,000 live births)

The value for Mortality rate, under-5 (per 1,000 live births) in India was 62.70 as of 2010. Definition: Under-five mortality rate is the probability per 1,000 that a newborn baby will die before reaching age five, if subject to current age-specific mortality rates.

Mortality rate, adult, female (per 1,000 female adults)

The value for Mortality rate, adult, female (per 1,000 female adults) in India was 167.98 as of 2010. As the graph below shows, over the past 50 years this indicator reached a maximum value of 407.28 in 1960 and a minimum value of 167.98 in 2010.

Definition: Adult mortality rate is the probability of dying between the ages of 15 and 60--that is, the probability of a 15-year-old dying before reaching age 60, if subject to current age-specific mortality rates between those ages.

Mortality rate, adult, male (per 1,000 male adults)

The value for Mortality rate, adult, male (per 1,000 male adults) in India was 253.18 as of 2010. As the graph below shows, over the past 50 years this indicator reached a maximum value of 397.94 in 1960 and a minimum value of 236.47 in 1990.

Definition: Adult mortality rate is the probability of dying between the ages of 15 and 60--that is, the probability of a 15-year-old dying before reaching age 60, if subject to current age-specific mortality rates between those ages.

Mortality rate, infant (per 1,000 live births)

The value for Mortality rate, infant (per 1,000 live births) in India was 48.20 as of 2010. Definition: Infant mortality rate is the number of infants dying before reaching one year of age, per 1,000 live births in a given year.

CONSTRAINTS ON DEVELOPMENT

The pace of development can be slowed down, or even reversed, by various factors affecting the economy. Some of these constraints can be dealt with through economic and social policy, while others may be difficult to resolve.

The constraints on development include:

1. Inefficiencies within the micro-economy.
2. Imbalances in the structure of the economy.
3. A rapidly growing or declining population.
4. Lack of financial capital.
5. Lack of human capital.
6. Poor governance and corruption.

7. Missing markets.
8. Over-exploitation of environmental capital.
9. Barriers to trade.

Inefficiency

Productive inefficiency

Producers in less developed countries may not be able to produce at the lowest possible average cost. This may be because of the failure to apply technology to production, or because of the inability to achieve economies of scale. Opening up the economy to free trade may help reduce this type of inefficiency, and encourage technology transfer.

Allocative inefficiency

When developing economies remain closed to competition, when they are dominated by local monopolies, or when production is in the hands of the state, prices might not reflect the marginal cost of production. Opening up the economy to free trade, and privatization of industry may help promote a more competitive environment, and reduce allocative inefficiency.

'X' Inefficiency

X inefficiency can arise when there is a lack of competition in a market. It is primarily associated with inefficient management, where average cost is above its minimum. Competition is limited in many developing economies, and resources are often allocated by government. This means that inefficient management is common.

Social inefficiency

Social inefficiency exists when social costs do not equate with social benefits. This can arise when externalities are not taken into account. For example, under-spending on education creates social inefficiency. Some of these inefficiencies are the result of the economy not allowing market forces to operate, while others are the result of market failures. Negative externalities like pollution are often largely uncontrolled in less developed parts of the world, and this imposes a constraint on the sustainability of development.

Imbalances

Not all sectors of an economy are capable of growth. For some developing economies, too many scarce resources may be allocated to sectors with little growth potential. This is especially the case with the production of agriculture and commodities.

In these sectors, there is little opportunity for economic growth because the impact of real and human capital development is small, and marginal factor productivity is very low. Failure to allocate scarce resources to where they are most productive can impose a limit on development.

Population

Population is a considerable constraint on economic growth, either, and most commonly, because there is too a high rate of population growth for the country's current resources, or because the population is growing too slowly or declining as a result of war, famine, or disease. Many economists see population growth as the single biggest issue facing developing countries. The line of argument runs as follows:

At first, the take-off phase of development and economic growth creates positive externalities from the application of science and technology to healthcare and education and this leads to a decline in the death rate, but no decline, or even an increase, in the birth rate. Over time life expectancy rises, but the age distribution remains skewed, with an increasing number of dependents in the lower age range. As a result, the number of consumers relative to producers increases.

The short-term gains from growth are quickly eroded as GDP per capita actually falls, hence, only when the birth rate falls GDP per capita will rise. In this case, there is a positive role for government in terms of encouraging a lower birth rate.

Lack of real capital

Many developing economies do not have sufficient financial capital to engage in public or private investment. There are several reasons for this, including the following:

Low growth

Growth is not sufficient to allow scarce financial resources to be freed up for non-current expenditure.

Lack of savings

A general lack of savings is often seen as the key reason why financial capital is in short supply. High interest rates to encourage saving will, of course, deter investment.

Debts

In the case of public sector funding, spare public funds are often used to repay previous debts, so there are less available funds for capital investment by government. This is often called the problem of *debt overhang*. The recent *sovereign debt crisis* has highlighted the problems faced by countries with large public debts, and how such debts limit the ability of government to inject spending into a developing economy.

Crowding out

In addition, because many developing economies have large public sectors, private investment may be *crowded out* by public sector borrowing. This means that a government may borrow from local capital markets, if indeed they exist, which causes a relative shortage of capital and raises interest rates.

Absence of credit markets

Finally, there is an absence of credit markets in many developing economies, and this discourages both lenders and borrowers. Credit markets often fail to form because of the extremely high risks associated with lending in developing countries. This is one reason for the importance of micro-finance initiatives commonly found across India, Pakistan and some parts of Africa.

Corruption

Some developing economies suffer from corruption in many different sectors of their economies. Corruption comes in many forms, including the theft of public funds by politicians and government employees, and the theft and misuse of overseas aid. Bribery is also alleged to be a persistent threat, and tends to involve the issuing of government contracts. In some developing economies, bribery is the norm, and this seriously weakens the operation of the price mechanism.

Inadequate financial markets

Missing markets usually arise because of information failure. Because of asymmetric information lenders in credit markets may not be aware of the full creditworthiness of borrowers. This pushes up interest rates for all borrowers, even those with a good credit prospect.

Low risk individuals and firms are deterred from borrowing, and a lemons problem arises, with only high risk individuals and firms choosing to borrow. Thus, the credit market in developing economies is under-developed or completely missing, with few wishing to borrow, and with those who wish to lend expecting high loan defaults and hence charging very high interest rates.

Insurance markets

In a similar way to credit markets, insurance markets may be under-developed, with few insurers willing to accept 'bad' risks. Insurance charges (premiums) will be driven up, and potential entrepreneurs may be deterred from taking out insurance, or will be unwilling to take uninsured risks. The result is that new businesses may fail to develop.

The principal - agent (landlord - tenant) problem

In agriculture in particular, the principal-agent problem existing between landlord (principal) and worker (agent) creates asymmetric information and moral hazard. Workers may not bother to work hard. With low pay rates, the risks of being caught 'shirking' are small – the loss of pay is not a big enough incentive to work hard and efficiently.

Protectionism

One significant constraint on the economic prosperity of less developed countries is the protectionism adopted by some developed ones. Developed countries can impose tariffs, quotas, and other protectionist measures individually, or more commonly as a member of a trading bloc.

POPULATION POLICY

Various types of campaigns to manage the size of the population started as early as the mid-1950s. Generally speaking, they were targeted at women. The early campaigns concentrated on family planning rather than on population reduction, but it was obvious that all aspects of birth control were considered to be a female responsibility. This impression was strengthened further by the fact that

the person in charge of the implementation of the policy was the (local) representative of the Women's Federation - usually a woman. In the period of mass upheaval that marked the Great Leap Forward, there was no time and no political inclination to address population issues as early as 1956, the term "planned childbirth" began to buzz around the various departments that were caught up in the planning campaign resulting from the relative successes of the First Five Year Plan. While most leaders continued to advocate birth control rather than birth planning, the latter increasingly became the guiding doctrine. Even Mao supported this development, endorsing the need for birth planning in public at various occasions in 1956-1957. Contraceptives became widely available only in 1962, coinciding with the reaffirmation of the need for birth planning work. It was seen as key component of the economic recovery strategy following the grain and food crisis of the failed Great Leap. Even during the Cultural Revolution, and in particular after 1969, steady progress was made with setting up an administrative framework for planning policies. Yet, family planning remained voluntary until 1970. In that year, and again with Mao's explicit blessing, a beginning was made with a sustained attempt to implement family planning as part of a policy to reduce the birth rate to 2%.

To bring this about, a new model of family size was propagated, accompanied by such slogans as "later, spaced and few", and "one's not too few, two will do, and three are too many for you", limiting each couple to two children. Zhou Enlai was the proponent behind this plan, which was unevenly enforced.

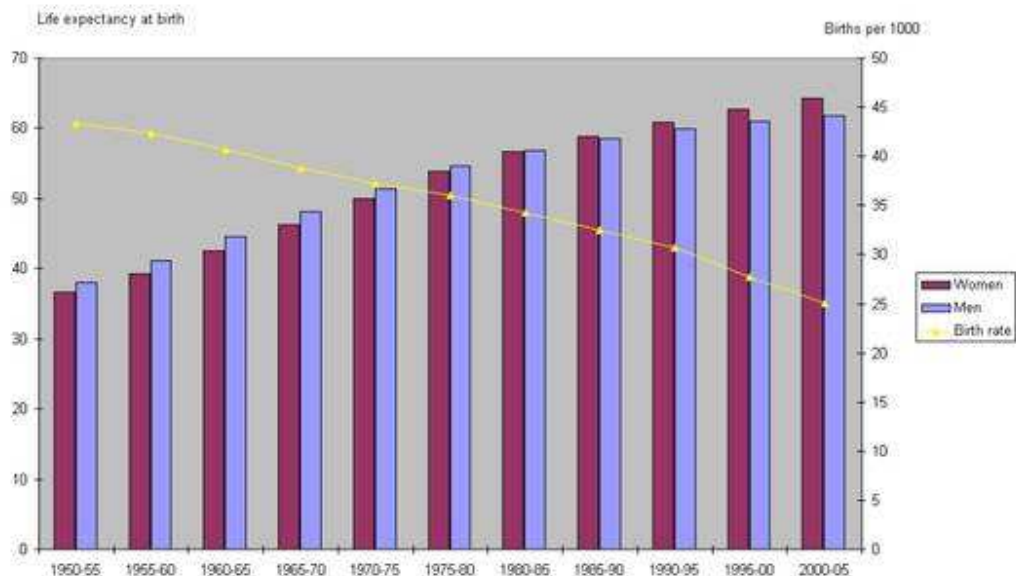
In contrast with the first two decades following 1949, when family planning had been voluntary and the final decision to adopt birth control methods had been left to the couples themselves, some attempts now were made to implement the policy according to a quota system.

To publicize this campaign, a nation-wide network was set up to provide family planning services, in the form of committees for planned birth work, which were organized at every administrative level. The cadres working here - often, but not always women - were made responsible for family planning education. The delivery of contraceptives was closely tied in with the provision of basic health care by local clinics in urban areas and by the barefoot doctors in the countryside. Other means of birth control (IUD, abortion, sterilization) were provided free of charge.

The medical means of birth control were supplemented with the personal approach and peer group pressure in the small group. In factories, enterprises, urban streets and rural villages, women were divided into small groups headed by a family planning worker, who organized the meetings and met with each member individually. Birth quotas were passed downwards through the administrative hierarchy until each small group received its allocated number of births. Thus, decisions regarding family size became subjected to intervention by the state in the form of controlled peer or group pressure.

In 2008, India's population stood at 1.15 billion after having crossed the 1 billion mark in May of 2000. This huge population puts India in second place behind China, with 1.32 billion. Yet faster population growth in India will likely make it the world's largest country before 2025. All numbers in India are large: 27 million annual births, 8.7 million deaths and 1.5 million infant deaths. The group of male children below the age of five, at about 60 million, rivals the entire population size of France. The 2001 Census counted 743 million people living in rural areas, defined as towns of less than 5,000.

Population growth was viewed as a problem very early in India's history as an independent country in 1947. Fertility was high with couples averaging six children each and the country's difficulties with its public health situation was reflected in life expectancy at birth of only 40 years. It was clear that raising standards of living and improving health conditions would be a difficult task at best in the face of rising population growth. India was the first country to declare a policy to slow population growth in 1952. When we look at the large numbers cited above, was that policy a failure? Not at all. Today the fertility rate of women in India, three children per woman, is half of what it was when the first measures of population policy were announced and life expectancy at birth has risen to 65.



India put the aim to stop the growth of its population after the reaching of independence in 1947 on its agenda. With success: the birth rate in India sunk continuously between 1950 and 2005.

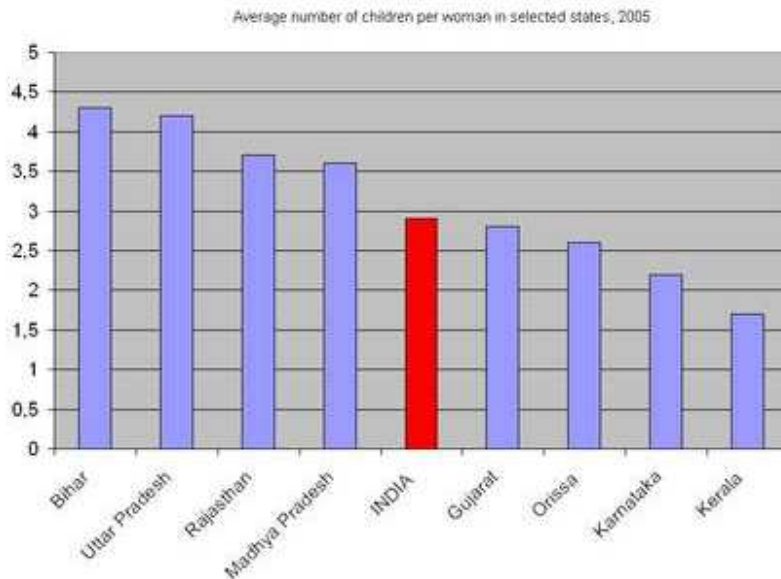
But such progress did not come easily. By the end of the 1960s, fertility had fallen only to about 5.7 children per woman as the family planning program had not reached the rural areas. In the 1970s, during the state of emergency proclaimed by the government of Indira Gandhi, overzealous promotion of family planning through activities such as sterilization camps gave the program a bad reputation. The name of the Ministry of Health and Family Planning was changed to the "Ministry of Health and Family Welfare". For a time, during the early 1980s, fertility decline was slow as a result but it did reach about 4.0 by the end of the decade. During the 1980s, a goal of two children per couple by 2000 was declared but was much too ambitious to be achieved.

Following the 1994 United Nations Conference on Population and Development, a new policy was announced to do away with specific targets and to adopt a more comprehensive approach to reproductive health, de-emphasizing any idea of "population control". Much of the new policy came from the commission headed by Dr. Sawminathan but no new official policy resulted, partly due to many politicians unwillingness to take up the issue. Still, many targets for family planning supplies and services were officially dropped by the central ministry in Delhi, although the new "target free"

approach was often not followed at the state and local level. States such as Andhra Pradesh and Rajasthan designed their own programs in which targets were not abandoned. Evidence of this, for example, is the high percentage of younger women, ages 25 to 29, which were found to be sterilized by the National Family Health Survey-2 in 1998 to 1999 in Andhra Pradesh, 67 percent. In 2000, the central government finally defined a new population policy, which covered a wide spectrum of health concerns and services for mothers and children. The new policy, National Population Policy 2000 (NPP2000), also set another too ambitious goal for a two-child family, the year 2010. Despite the more comprehensive scope of the policy, which, in the long run, will be of lasting benefits, differences of opinion continue on approaches to population policies. In the late 1990s and early 2000s, some states adopted policies to allow elected officials down to the village level only two children. This step was clearly intended for officials to set an example. Yet such a drastic policy was likely to have unwanted results, particularly increased abortion of female fetuses given the strong preference for male children. Today, the two child limit for officials is in force in Andhra Pradesh, Orissa, and Rajasthan and in parts of Maharashtra. Three states, Haryana, Himachal Pradesh and Madhya Pradesh, which did have such a policy, withdrew it following outcries from many segments of society.

When we consider population policy in India, the independence of state governments from the centre must be considered. And, the current demographic situation gives added importance to the role of local government. While it is true that the number of children per woman has been halved since 1950, from six to three, continued significant progress may be in doubt. Much of India's birth rate decline has been in the states of the south where educational levels and the status of women is generally higher. As a result, any future success in fertility reduction will come from the poorer and more rural northern states where levels of poverty are higher.

The average number of children per woman differs in the States of India



In states such as Bihar and Uttar Pradesh, fertility remains above four children per woman and is declining only slowly. But these two states, with about 95 and 190 million populations at present, respectively, account for one-fourth of the country's population. In 2001, their populations numbered 166 and 83 million. Other states where the average number of children is above three are Madhya Pradesh and Rajasthan. Clearly, success at reducing the population growth rate now depends on the future trend of fertility in these states.

While the goal of a TFR of 2.1 by 2010 in NPP2000 was certainly unrealistic, other goals of the policy have not been met as well. In many northern states, there has been little improvement in the decentralizing of health care to the district and village level. Given the very rural nature of much of the population in the north, this is, in fact, a very difficult task.

In response to this problem, the National Rural Health Mission (NRHM) was launched by the Prime Minister in 2005, a landmark event in India's struggle to improve health conditions and to slow population growth as well. In many ways, NRHM supplements and updates NPP2000, with many of the same goals but with a concerted effort. NRHM is different from NPP2000 in that it focuses on 18 of India's states and Union territories, those in the northern "Hindi Belt," several mountainous and states of the northeast. NRHM does set a goal of a TFR of 2.1 by 2012 for these states and so it

does have a population component. By planning to bring all health services, including reproductive health, to the very smallest geographic level, NRHM has set a high goal, one never before achieved. Its success could well have a significant effect on future fertility.

An additional important aspect to India's population policy is the imbalance in the sex ratio at birth, which is becoming a major problem. The widespread and strong preference for male children has resulted in the abortion of female foetus. The practice is more prevalent in states with higher income and educational levels, such as Haryana and Punjab, given that the cost of testing for the sex of a foetus is often beyond the reach of poorer families. The magnitude of this population issue can be appreciated when we consider that, according to the Registrar General of India, in 2003 to 2005, there were only 801 girls born per 1,000 boys in Punjab.

Today, India's population policy and programs has become more complex as it involves many different aspects and now places even greater emphasis on health care delivery and population services to India's 594,000 villages. If the government's goals are to be achieved, that is where it must happen.

Population Policy of India

Population policy refers to the Government policy to control the population. Government has realized the problem of rising population on economic development of a country.

Improvement in standard of living of the people needs a significant decline in the growth of population.

Improvement in health facilities leads to decline in death-rate. It implies that decline in birth-rate is necessary to control the growth rate of population.

Family planning measures have been adopted by the Government for the effective control of birthrate. Government does not make any coercive method to implement the family planning programme. Family planning is democratic in nature. It means married people are persuaded to limit the size of their family. It persuades couple to limit the size of the family and also gives incentive for the family planning. Different steps which are taken by the Government in the family planning programme are given below:

Family Planning Programme:

Government gives different advertisements on radio, television, newspapers and films to educate the couple about the benefits of small family and teaches people those children by choice and not by chance. This type of advertisement gives incentive for the people to control their family.

People are now being educated about the problems of large family and different methods to control birth.

- (i) Birth control facilities are now being provided in different health centre and hospitals.
- (ii) Financial incentives are now being given to the couple for vasectomy operation,
- (iii) Green card is now being provided to the couple who have operated two-child-norm. This card helps people to get facilities in employment and promotion.

Other Measures:

Except these above stated programmes other steps are now being adopted to reduce birth-rate.

- (i) Child marriage is prohibited. The marriage age for male and female has been increased to 21 years and 18 years respectively.
- (ii) Educated couples are generally interested for small family. So education is being given to the females to reduce birth-rate. If females are educated, they will prefer small family and late marriage. Due to more incentive for the female education, it is expected to control the growth rate of population.
- (iii) The measures which are now being taken in different five year plans will help to control birth-rate because, due to economic development standard of living of the people rises. So to maintain a high standard of living, people should be interested to adopt small family norm.

POPULATION EDUCATION

It's all about people - how the human race has grown and shaped the world around us. World population has quadrupled in the past century, changing the way we use natural resources and function as societies. Population education is the ultimate multi-disciplinary field; its ecology, human geography, anthropology, economics, biology, public health, sociology, environmental studies,

history and civics all rolled into one, with a good bit of mathematics to help us understand where we've come from and where we might be headed.

Measures for control of population growth or for improve population growth

Interestingly enough, one of the most potent weapons in population control is the education of the female half. As girls are educated, the women they become have greater economic opportunities, and as a result they, and their husbands, are less likely to want a large family.

In the four nations known as the Asian Tigers (Taiwan, Singapore, Hong Kong, and South Korea), lower fertility and birth rates were directly linked to compulsory education for girls. Not only did this lower the population growth figures, it also upgraded the quality of the workforce from the cheap sweatshop variety to one capable of performing higher paying and more technologically-oriented tasks, which of course led to the economic explosion experienced by these nations.