## **ASSIGNMENT (DEMOGRAPHY)**

## **B. Stat Year III**

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## Question 1: Explain the fact that; "The fertility decline in India has created a situation favourable to the economy. The challenge is to make the best utilization of this opportunity."

Answer: After independence, there was widespread concern over the prospects of growing population and the sustainability of both population size and resources. As per the Malthusian train of thought, it was believed the food stockpiles grow much slowly compared to the rate of population growth. Hence, it was believed that, in the long run, there would be acute shortage of resources to sustain the population, leading to hindrances in sustainable development and fall in standards of living. On the other hand, there were schools of thought postulating that growth in population, especially the working class, was a boon considering the growth in the workforce and that this would lead to an increase in overall productivity. Thus, there were widespread debate on the "optimality" of population and the limits to growth.

With the light of constraints on the resources and the diminishing returns to labour in long run, the neo-Malthusian philosophy gained ground, leading to a consensus among international organizations to reduce population growth by controlling fertility. During the three decades of the 1950s, 60s, and 70s, neo-Malthusian programmes, generally labelled as family planning programmes, were introduced in India, mostly operated by the national governments and some by non-government organizations. Kulkarni showed a clear indication of decline in birth rates at the end of the century.

Marx noted that due to the capitalism spreading all over the world, technological advancements has been introduced almost everywhere, pushing the diminishing marginal returns of production even further. In this context, fertility control closes the way to overpopulation and provides a situation to effectively use the large cohorts in production.

Boserup forcefully argued that increase in population pressure will contribute to induce newer technologies because of increase in demands. This will in turn increase inefficiency in production, as the whole workforce will not be utilized and will hinder the growth of per capita income and production.

Lee, on the other hand, postulated that population growth will have, possibly, adverse effects on economic scenarios or standards of living, or resource-access disparity, most of which will be restricted to the short-run agenda, leaving the situation population neutral in the long run.

Also, because of the stable downfall in the fertility rate, the new birth cohorts decline in size and thus the share of the population comprising persons of young ages declines. At this stage, the percentage of the old ages in the population also declines because of extremely high fertility rates in the past, which is extremely evident by the narrow shape of the age pyramid at higher ages. As time passes, the large cohorts of young ones move to middle ages and forms the working force of the population. Thus birth control measures potentially increased the share of the labour force of the population and generated demographic bonus to the economy of the country. However, with time, this large cohorts of middle aged

people forms the old age group, thereby, negating the effect of demographic dividend. This demographic bonus allows the increase of the share of the workforce, thereby increasing the potential for higher productions. Also, the dependency ratio declines, showing an indication of less consumption and higher productions, which together brings higher savings and investment potential for the country.

Kulkarni showed that India has showed clear indication of fertility decline in recent years, and has generated the demographic bonus in 2011, which is expected to stay till 2051. The key problem to utilize this demographic bonus (or dividend) is for the politicians to understand that the share of the working force is increasing and use those labour forces effectively in a distributed manner to maximize production of the country, thereby leading to a sustainable rapid growth in the economy. Another problem is that despite considerable success in the expansion of primary schools, the quality of education in India has not improved satisfactorily. Besides the standard of education, the insufficient capacity of the economy to absorb the labour force entrants is the key problem; simply put, there is a lack of jobs. Population growth and inadequate education systems have led to a surplus of poorly qualified labour. Women experience even more discrimination in the labour market. Thus, the labour market participation rate of adult women is only just above 30 percent according to the calculations of the International Labour Organization (ILO). This figure, too, indicates the failure to utilise the favourable age structure for an inclusive socioeconomic development – since a particular advantage of the demographic bonus is the chance to integrate women in the labour market as they have to look after less children. Through increased participation in the labour market, their status in the household may also be raised and this could contribute to gender equality.

In summary, India can gain a lot of macro-economic development by utilizing the demographic bonuses, by taking fertility control measures at the micro-level. The key challenge to fully utilize the boon is to integrate the micro-level transitions to the macro-level transitions.

## Question 2: Explain the fact that "A whole generation of Indian couples, millions of them, regulated childbearing judiciously and in the process generated the demographic dividend."

Answer: Due to the pressure of the neo-Malthusian train of thoughts, people began to understand the importance of fertility control measures as well as the endless opportunity for growth of economy created by demographic transition. Initially, the evidence on fertility decline was not viewed seriously by civil society and media since the rate of population growth continued to be over two percent per annum. However, the 2001 census showed some fall in the rate of growth, the rate falling just below the psychological two percent mark. The 2011 census showed a clearer decline, to 1.6 percent per annum. These evidences of the decline in growth rate showed a clear indication of fertility control at the end of the century. It was evident that the Indian couples had begun to regulate fertility and the family size desire had also fallen. The reason was mainly two things, one being the hope of demographic dividend influenced by neo-Malthusian thoughts, another being the decline in Mortality rate due to technological advancements in medical science. Contemporarily, the use of contraception became universally known, to all sections of society, rural and urban, educated and illiterate, rich and poor, to varying degrees. There were also regional variations. In some states, there were clear fall in Total Fertility Rate (TFR), while some of the states reached the optimum level slowly over time.

Due to this fertility control measures taken by millions of couples in India, the fertility rate declines rapidly. Thus, the share of the population comprising of young age persons declines sharply. At this stage of time, due to the higher fertility rates in the past (about 50-60 years back), the population pyramid was quite narrow at the top, and hence, the share of the old ages in the population also remains small. Just

prior to this stage of time, the large cohorts of the population was comprised of only young age persons. However, due to this fertility control, a demographic transition takes place and the large cohorts move from young to middle ages, thereby increasing the share of the working force (15 – 64 years). Also, at the same time, the middle aged cohorts move from middle age to old ages and share of the old age rises in the population. Consequently, due to insufficient young aged cohorts, the working age of the population declines. In this process of cohorts moving from young aged to old aged group, the young aged cohorts decline faster due to preventive measures, while the old aged cohorts increase less due to saturation in advancement of medical science. Kulkarni depicted that this extra pressure will push the share of working age group following by a notable increase in that share. If this share grows more than 65% of the population, then the economic benefits from such demographic transition becomes evident.

If the age distribution of a population is considered, persons of all ages are consumers, while the producers range from 15 to 64 years, i.e. the middle age range. Therefore, a relatively large share of these people implies a large share of workforce, thereby leading to a lower dependency ratio, which is always favourable to the economy as a whole. Lower dependency ratio will also indicate a higher amount of potential production capability and lower amount of consumption capabilities. This will lead to possibly higher amount of savings and thereby enabling a scope of higher investments. This economic benefit is called "Demographic dividend". Also, the period over which such dividend accrues is the "window of demographic opportunity".

As an evidence of this demographic dividend over the world, one might consider the relationship between the economy and the demographic transition in the already developed countries. It is depicted that the developed countries have already experienced the transition in age distribution, which in turn increased the share of their workforce considerably, thereby leading to a growth in the economy (e.g. - China). It was also pointed out that these transition stayed for a considerably long time, and after that the workforce shares begin to decline and generates increased share of old ages in the population, which would be the end of the demographic bonus (e.g. - Japan).

In view of the report by Prof. P. M. Kulkarni, it is evident that India has generated demographic dividend from around 2001 and will continue to do so up to 2051. India crossed the 60% mark in the share of the 15-64 aged population around 2001 and is projected to cross 65% soon after 2011. The peak (around 69%) would be achieved in the 2030s. For about 40-50 years, the share of the 15-64 age group would remain over 65% that is, the dividend would last for a long time. Also, if the fertility measures were taken more seriously, it would lead to sharp fall in Fertility Rates, which would provide a greater benefit of demographic dividend for India. However, since the decline is actually moderate, the demographic dividend generated for this economy is very little, lower than China and East Asia.