

Population Studies
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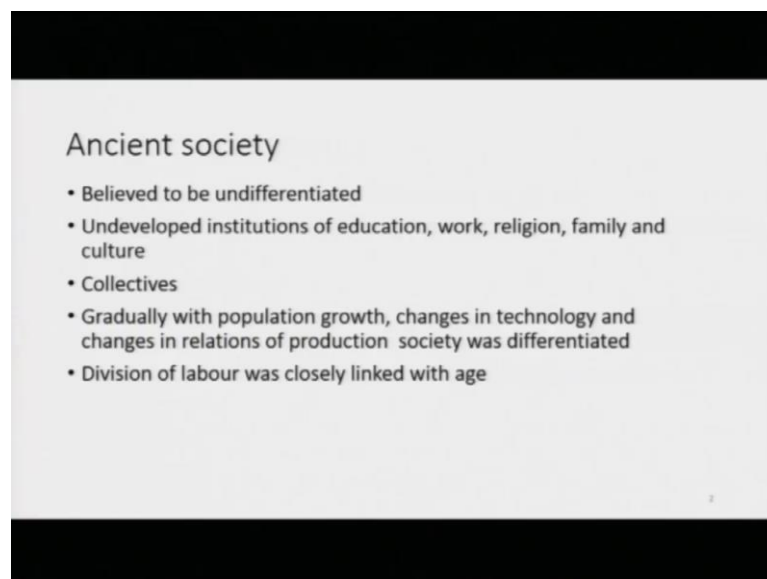
Lecture - 20
Population Growth and Aging-II

Dear students, we are talking about age and in the previous lecture first I said that age is an important status in society, it is part of ascribed statuses which are attached to us by birth. In almost all societies age is also a basis of social stratification and people belonging to different ages broadly old, adults and children are seen as groups which can be hierarchically arranged in terms of prestige, power and wealth.

Then I said that there is you can think of something like age of the entire society, age of the country, age of a population as the median age of its members. And this is a very important demographic variable which depends on other factors of demography. It depends on fertility, mortality and migration; it also depends to some extent on marriage; patterns of marriage.

I showed you how the variable of age is related to other demographic variables or what is the demographic significance of age? It is so significant, age is so significant that in all the surveys and most of the census tables; socio, economic, cultural; the dependent variables are classified according to age. We will spend some more time on age.

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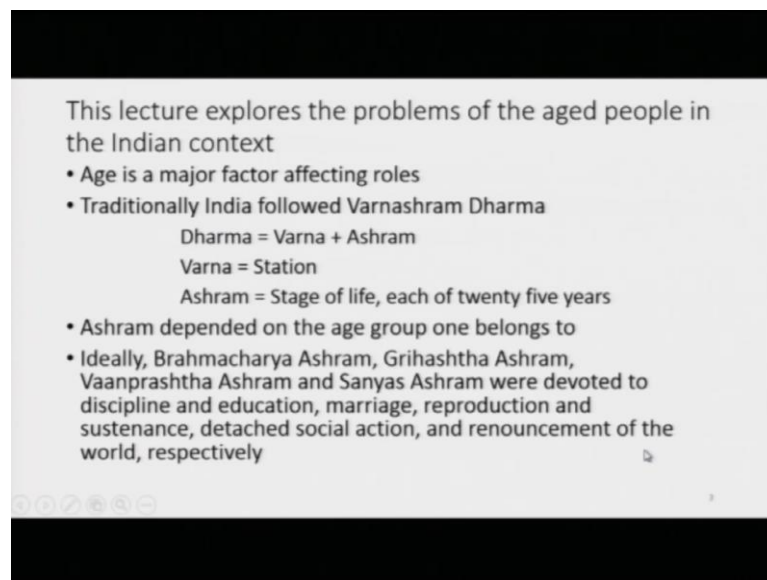
Ancient society

- Believed to be undifferentiated
- Undeveloped institutions of education, work, religion, family and culture
- Collectives
- Gradually with population growth, changes in technology and changes in relations of production society was differentiated
- Division of labour was closely linked with age

In ancient society, ancient society was believed to be undifferentiated; so age did not matter. The institutions of education, work, religion, family and culture which have become autonomous over time did not exist separately; everything was done in the tribal, in the context of groups. At the stage of hunting and food gathering the whole band, the whole tribe, the whole group was responsible for everything; they lived like collectives.

Gradually, with population growth changes in technology and changes in relations of production; society became a class society and it got differentiated along several lines. Age is one and division of labour in such societies is closely linked with age.

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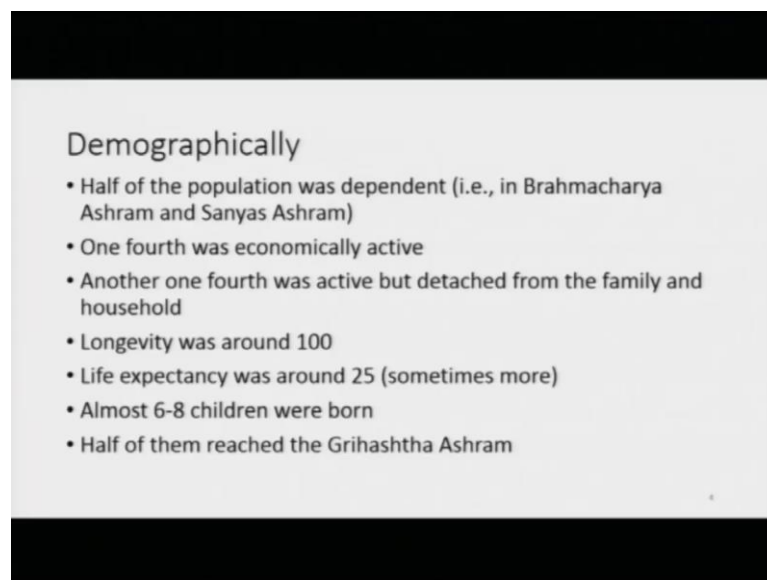


This lecture explored the problems of the aged people in the Indian context, to repeat age is a major factor affecting roles. Traditionally, India followed Varnashram Dharma some people may say that this is one version of Indian history or one myth about Indian history; that is not so important for our discussion because our discussion is only illustrative of the relationship between culture, age and demographic consequences.

Traditionally India followed Varnashram Dharma; Dharma is Dharma equal to Varna plus Ashram for each varna, means each major caste categories and for each stage in life there was a separate Dharma. Varna is station or major caste category, Ashram is stage of life and each stage of life was considered to be of 25 years duration. Ashram depended on the age group one belongs to; 0 to 25; 25 to 50, 50 to 75 and 75 and above.

Ideally, the first ashram the Brahmacharya Ashram, then second Ashram Grihashtha Ashram, then Vaanprashtha Ashram and Sanyas Ashram were devoted to discipline and education, marriage, reproduction and sustenance, detached social action; this Vaanprashtha or 50 to 75; this is for the detached social action. And 75 plus is considered to be the Sanyas Ashram and known for renouncement of the world respectively these things happened. More or less same thing happens today, but we do not call them people belonging to these Ashram are we divide them according to age and educational and work status which resemble very much like the considerations of Varnashram Dharma earlier.

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Demographically

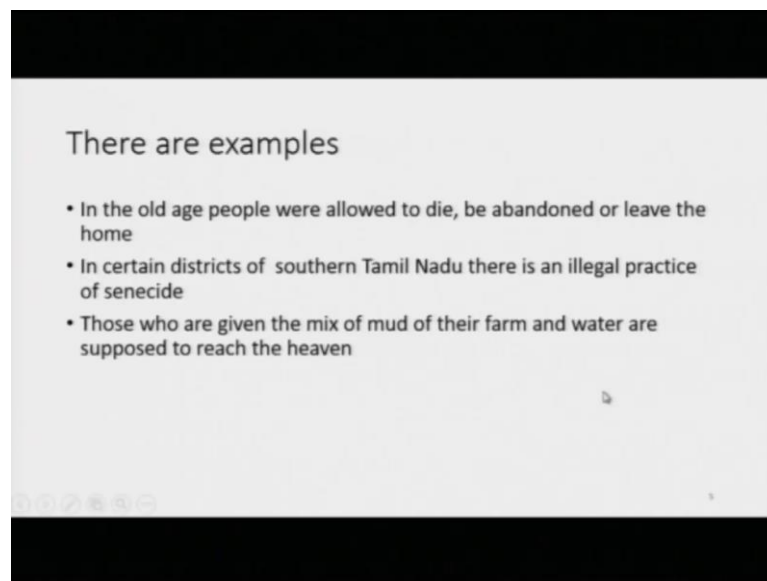
- Half of the population was dependent (i.e., in Brahmacharya Ashram and Sanyas Ashram)
- One fourth was economically active
- Another one fourth was active but detached from the family and household
- Longevity was around 100
- Life expectancy was around 25 (sometimes more)
- Almost 6-8 children were born
- Half of them reached the Grihashtha Ashram

Now, demographically what it means? That half of the population were dependent; who were dependent? People belonging to Brahmacharya Ashram and Sanyas Ashram; they were dependent. Other two people belonging to Grihashtha Ashram and Vaanprashtha Ashram they were active. One fourth of the population was economically active; another one fourth was active, but detached from the family and household.

This first bullet one fourth was economically active this is Grihashth and another one fourth which was active, but detached from the family and household responsibilities was Vaanprashth. Longevity was around 100 years, it is not life expectancy longevity; how long did people live, people lived for about 100 years.

Life expectancy was small life expectancy was around 25; sometimes less, sometimes more. It is believed on the basis of census records and indirect estimation that about 100 years ago in India average life was around 20 years only and in this stage through folklore, religion, culture, social structure, value systems norms, high fertility was encouraged and almost 6 to 8 children were born. They were not a burden because half of them died before reaching the Grihasththa Ashram.

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So, only 3 to 4 reach the Grihasththa Ashram, there are now today there is no Vaanprasth people continue to work till 60, 65, 75, but that desire is to live in the family and contribute to family, to society and to work for their children.

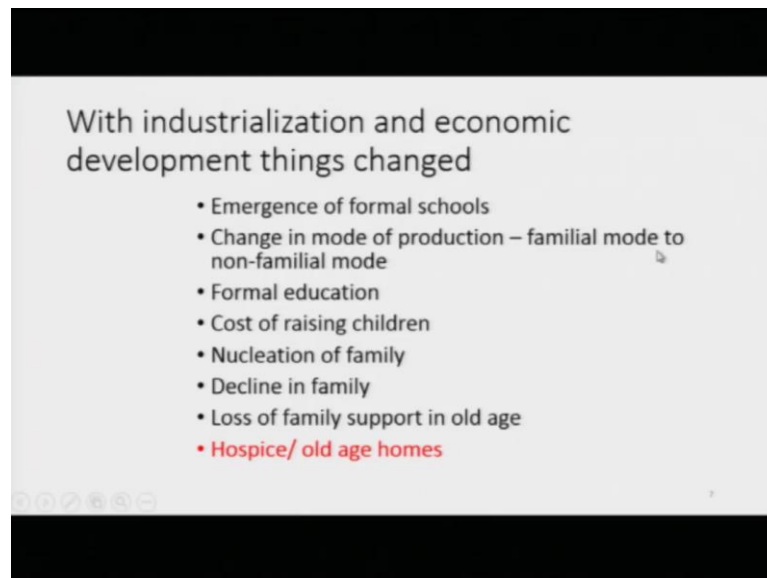
WHO quote which I gave in the last lecture also shows how as parents and grandparents; older people are useful to their children and their grandsons and granddaughters. In the old age means in the Sanyas Ashram, people were allowed to die or they were abandoned or they were expected to leave the home. Now, today situation has changed there is no Sanyas Ashram and people are not abandoning the home.

According to a new tendency some of them may go to hospice or old age homes, but that they go under compulsion; when either they do not have children or their children are unwilling to take care of them in the old age. So, new practices arise if old people are a burden and they are not part of Sanyasa Ashram, they are not leaving the family, they are not abandoned, they do not leave home; so there are new practices.

And one illegal practice of senicide in certain districts of Southern Tamilnadu; recently discovered is one such case God forbid such practices do not spread to other parts of the country. In certain districts of southern Tamilnadu; especially among certain castes though those who become old means parents, they are given actually they are given several treatments and one of them is to give the mix of mud of their farm mixed with water. And they die when they get up in the morning after drinking this mix of mud and water they die and they are supposed to reach the heaven there are many other simpler ways of killing people and this killing of old age people comes under senicide

This may look very cruel to you, but this is a practice; only recently I discovered that some students in Pondicherry University were doing PhD on this topic; in Department of Sociology. There are other ways of killing people; what do you do when society does not need people, but people are unwilling to leave society; then such practices will emerge. In one practice they give cold massage and that leads to heart failure in 4, 5 minutes. In some cases they use they give fresh coconut water; so much of coconut water that eventually the people die.

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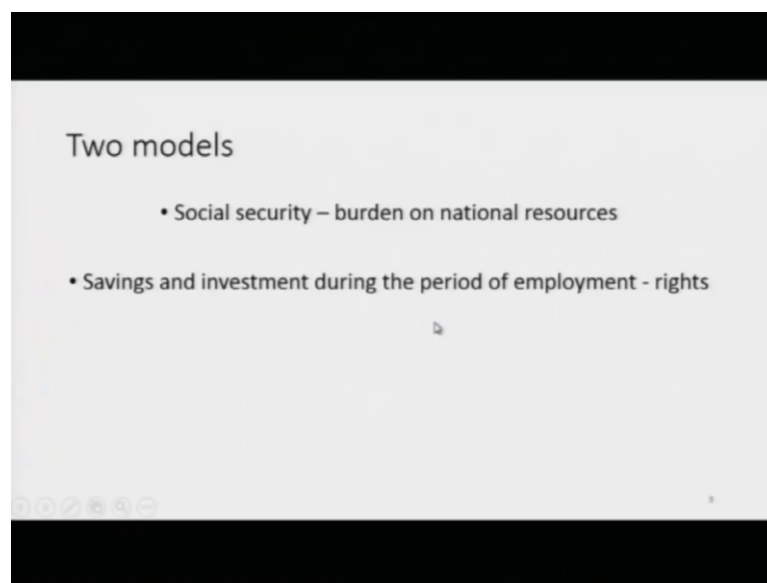


With industrialization and economic development therefore, things change and what kind of changes arise with industrialization and economic development? Emergence of schools, change in the mode of production from familial mode to non familial mode,

formal education, cost of raising children, nucleation of family, decline in family, loss of family support in old age and hospice and old age home.

So, the interaction or interdependence between people belonging to different age groups is falling and nobody is supposed to be responsible for anybody. In so called neoliberal economy when state is withdrawing from various forms of welfare and individuals are expected to look after themselves; old people who are more vulnerable have more problems.

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There are two models under which problems of old age can be taken care of. Social security that the state takes care of old people; welfare state that the old people become dependent on the state, you can call it dependency theory that welfare state creates a number of dependents and that includes the people in the old age.

So, social security, but the social security is a big burden on national resources. In a ambitious economy like India, where all sectors wish to grow, expand, agriculture, industry, education, defense everything has to be modernized and everywhere new technology is to be used and everywhere there is demand of resources. So, the resources for the old people are not going to get priority.

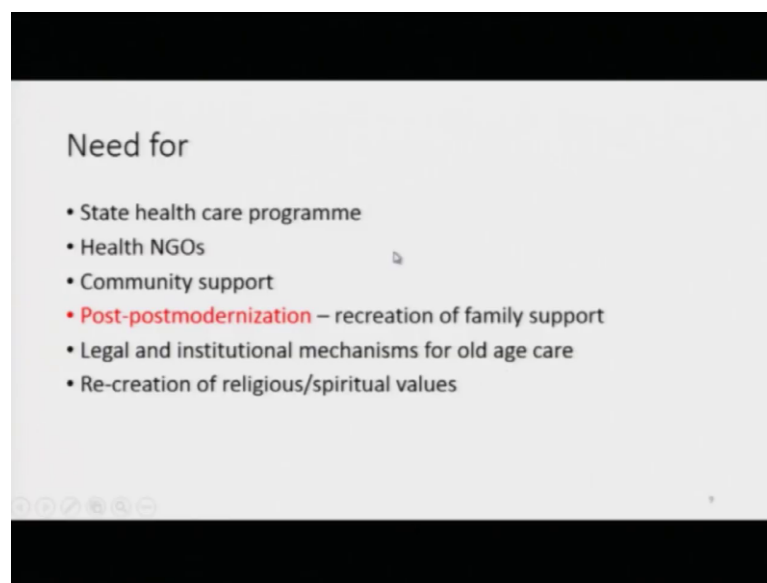
Another model that people save and invest during the period of employment and after retirement; they get certain rights in the form of pension, provident funds or they have

spent money in mutual funds or shares. And now in old age when they cannot work they get economic returns from those fixed deposits, shares, bonds, from pension from provident funds etcetera.

But even then the national resources in the form of pension and retirement benefits is spent on old people can be seen as a burden because that reduces the amount of capital that can be spent on directly productive items. Once we were talking about Coale and Hoover model of economic development and this expenditure in old people in any form leads to reduction in productive resources or growth outlays for the development.

Now, with aging and also with the fact that good quality jobs are less and more and more people are working in the informal sector; there is contextualization of labour to use a term from economic contextualization of labour without various kinds of provident and pension securities we need something for the old people.

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We need state healthcare program, we need health NGOs, we need community support. NGOs are important.

By the way this issue of senicide in Tamilnadu came to light when some old person recently discovered that his children are going to kill him by this method of giving mud water. So, he escaped and he told his neighbours and other relatives that this is what they are going to do and reached the police station. It was his reaching the police station the

government became aware of this thing, they were already aware because this was part of informal norms, but it became an issue and when it became an issue the Government of Tamilnadu has appointed some government officials in those districts to look after the matter and to stop the practice of senicide.

We need community support; NGO's can identify cases of senicide and vulnerabilities of old people. Community support; the whole village, the whole community, the whole world support them community based organizations. Then post postmodernization recreation of family support in modernization and in postmodernization family support was gone.

Now, under different circumstances and for different purposes for purposes which are unique to post modern post modern society; we can recreate the family in the interest of the society and also in the interest of the family. We can also we should deal with this issue of old age care legally and through institutional mechanism. Several laws in favor of old people are being passed and another important thing in society an important institution of religion there is need to recreate the institution of religious and strengthen religious and spiritual values.

You see in the last lecture we were talking about demographic dividend.

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The concept of demographic dividend

- Harvard economists: David Bloom and David Canning
- For boost in economic growth attributable to age structure

$$\frac{Y}{N} = \frac{Y}{L} \frac{L}{WA} \frac{WA}{N}$$

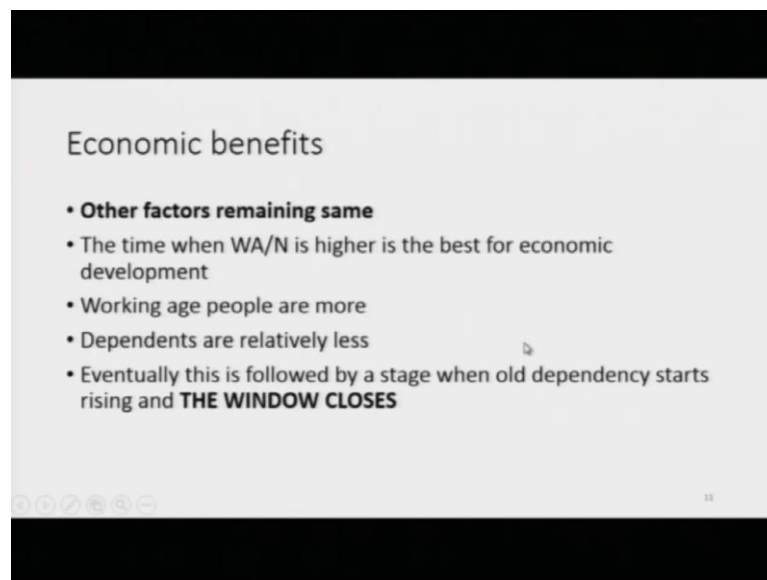
Where Y= Income
N=Population L= Labor force
WA=Working age population

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I wanted to give a formula there, but I thought let me first talk about the problems of old age and then give this formula. Harvard economist; David Bloom and David Canning suggested that for boost in economic growth, attributable to age structure, we can write $Y \text{ upon } N$; equal to $Y \text{ upon } L$ into $L \text{ upon } WA$ into $WA \text{ upon } N$ where Y is income N is population.

So, this is sort of per capita income and income to labour force ratio and labour force to working age and working is to total population. Now what it means? That this ratio of working age population to total population is a significant predictor of $Y \text{ upon } N$.

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But it and these benefits come under demographic dividend, but as usual in economics; economic benefits of demographic dividend come when other factors remain same.

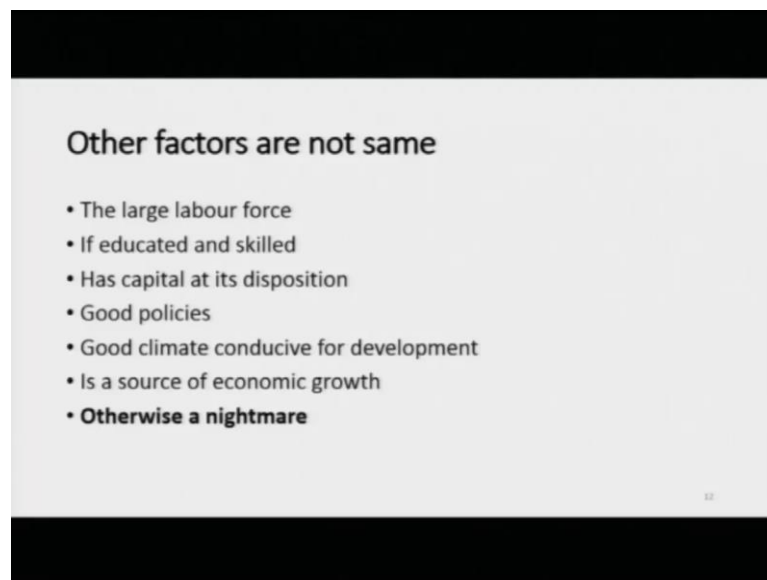
The time when working age population to population ratio is higher is the best time for economic development; there is no doubt about that if other factors remain same then this is so. Working age people are more; more people are contributing, dependents are relatively less and eventually this is followed by a stage when old dependency starts and thus the demographic dividend comes to an end.

Developed countries do not have demographic dividend today; some very poor least developed countries of Sub Saharan Africa also do not have the advantage of demographic dividend. Young countries like India where proportion of population in

working ages as a ratio to total population has increased or is increasing; they are reaping the benefit of demographic dividend.

After some time when mortality starts improving without improvement in fertility, then the demographic dividend goes and the demographic window closes. So, there is a time when demographic window opens due to decline in fertility and closes due to decline in mortality; the window closes. How long will this window remain? That depends on the demographic processes and different countries may enjoy the benefit of demographic window for different periods of time. India is expected to reap the benefit of demographic window for about 20 to 25 years, but other factors are not same.

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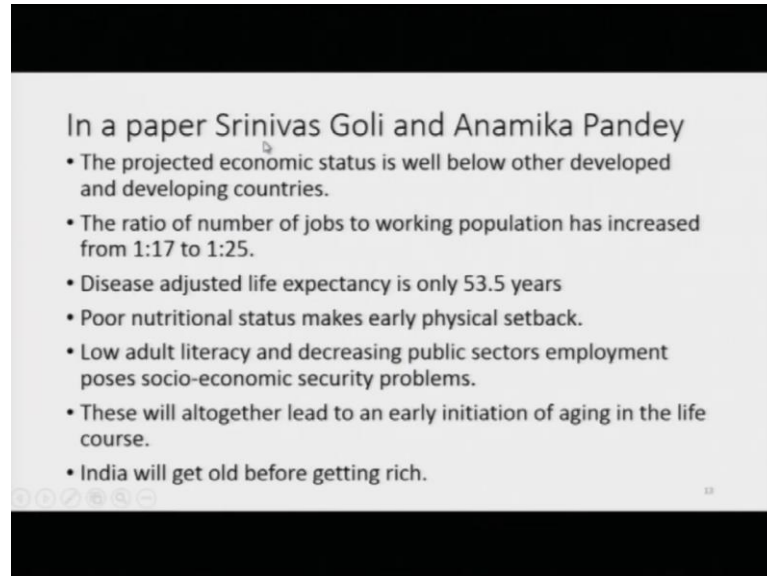


The large labour force already available means that the marginal utility of additional labour force is not much. And additional labour force will be productive will be of use to society only if they are educated and skilled. If illiterate unskilled uneducated people increase in number who are not employable in different modern sectors of economy and there is already a burden of population on rural resources land particularly, then this demographic dividend is not going to actualize or materialize.

It also assumed that the people who are workers have capital at their disposition; worker capital ratio is good and there are good encouraging government policies. There is good climate conducive for economic development; then demographic window is a source of

economic growth otherwise it can be nightmare. Our plan documents have already started writing that in absence of education and skills; it can be demographic nightmare.

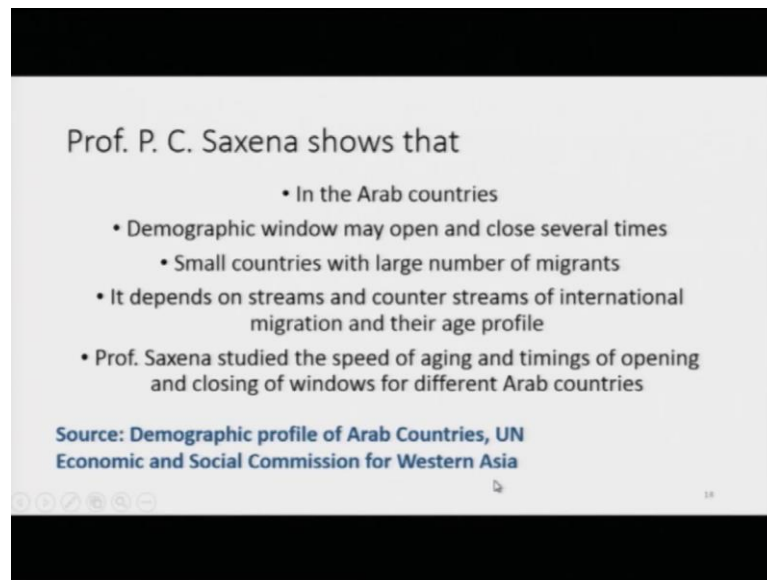
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In a paper Srinivas Goli and Anamika Pandey; the projected economic status is well below other developed and developing countries. The ratio of number of jobs to working population has increased from; 1 to 17 to 1 to 25.

Disease adjusted life expectancy is only 53.5 means all the life expectancy has increased, but a significant part of that is spent in diseases; various forms of sicknesses and vulnerabilities, disabilities. There is poor nutritional status that makes early physical setback, there is low adult literacy and decreasing public sector employment; they pose socio economic security problems. These will all together lead to an early initiation of aging in the life course and India will get old before getting rich a very significant statement; let me repeat India is likely to get old, before getting rich.

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Prof. P. C. Saxena shows that

- In the Arab countries
 - Demographic window may open and close several times
 - Small countries with large number of migrants
 - It depends on streams and counter streams of international migration and their age profile
 - Prof. Saxena studied the speed of aging and timings of opening and closing of windows for different Arab countries

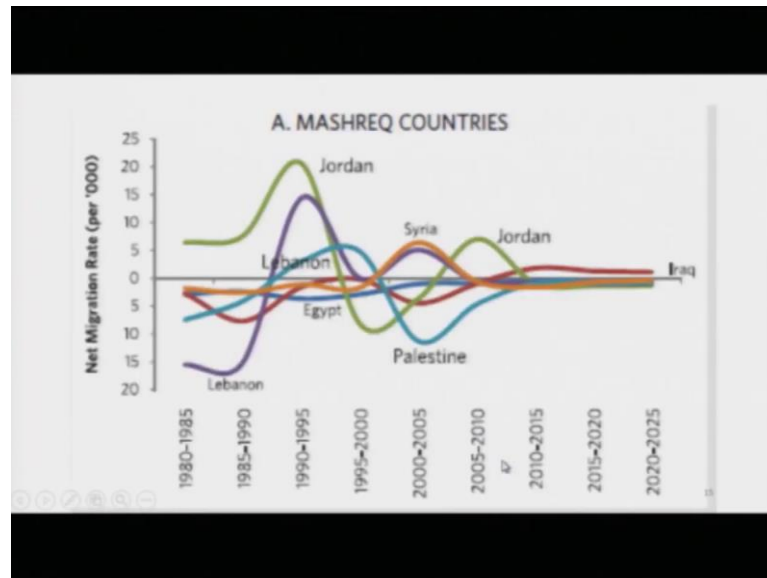
Source: Demographic profile of Arab Countries, UN Economic and Social Commission for Western Asia

Professor P. C. Saxena showed that in the Arab country he gives the example of that due to migration in some countries; demographic windows may open and close several times.

In the Arab countries, demographic window may open and close several times; in small countries there is all small countries with large number of migrants. So, large number of migrant that in some countries number of migrants constitutes about 50 percent of the whole population. It depends on streams and counter streams of international migration and their age profile whether demographic window stays opens or closes.

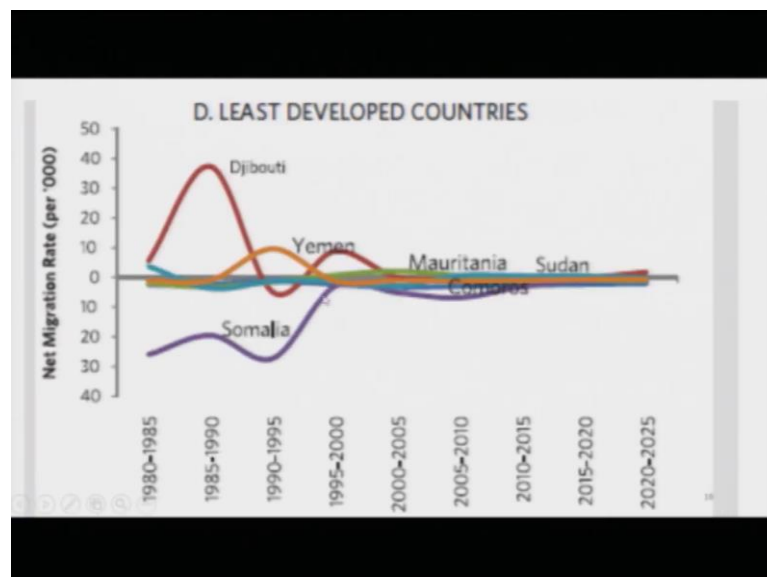
Professor Saxena studied the speed of ageing and timings of opening and closing of windows for different Arab countries ok. The source is demographic profile of Arab countries, United Nations economic and social commission for Western Asia.

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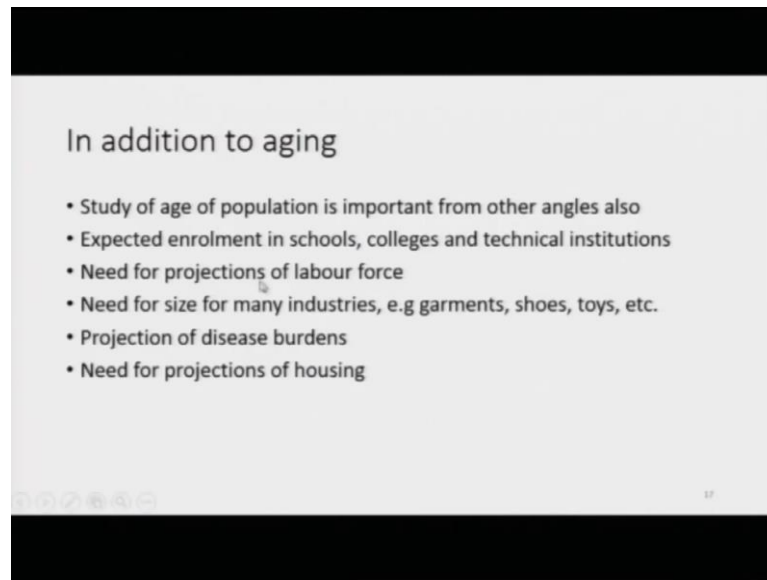
Mashreq countries Jordan, Egypt, Lebanon you find that on the y axis; there is net migration rate and on the x axis time years. So, migration rate fluctuates around this period of 90 to 95, there was maximum in migration in some of these countries. And that was followed by emigration or decline in the number of migrants; this happened around 1995-2000; so, migration fluctuates.

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And similarly, in least developed countries Somalia, Yemen, Mauritania, Sudan same picture fluctuations and because of these fluctuations demographic window may open or close several times.

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Now, friends in addition to aging study of age of population is important from other angles also. For estimation of enrollment, expected enrollment in schools, colleges and technical institutions, projections of labour force; here we can use ratio method of projection or some other method more sophisticated based on simulation or multiple decrement life tables.

Need for size for many industries, garment shoes, toys, projections of disease burdens and needs for projections of housing. Friends, this course was small, but I have tried to cover various aspects of population in these 20 lectures each of half an hour. I would tell you that population is a wonderful subject and most of the necessary material on population trends and policies facts and figures they are available on net.

There are so many sources; registrar general India; for the world you have UNDP; United Nations sources, some and international NGO's like Population Council. And all the countries some statistical department in all the countries produces all kinds of data and that are available on net; I would also tell you to become member of some associations like ISP, IASSH possible population association of America is there is a

similar association for Asia. And attend these seminars and conferences you will learn about new facts, new figures, new theories and new concerns in demography.

You may be working as a researcher directly in the field of demography or other related fields, knowledge of population trend is always going to help you. At the end, I would thank our local IIT Kanpur coordinator of MOOC; Professor Satyaki Roy and the staff members of media centre for enabling me to give these 20 lectures in Population Studies; I feel that they are useful to you.

Thank you.