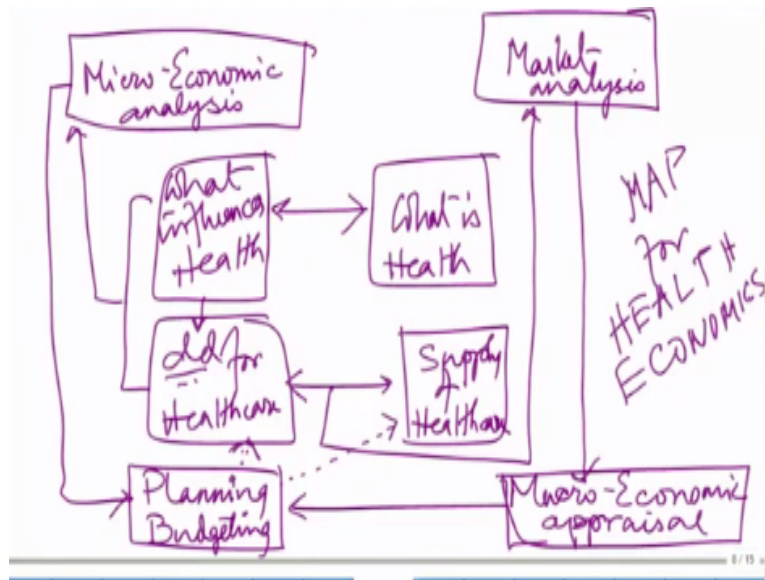


**Economics of Health and HealthCare**  
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**Lecture – 02**  
**Health Economics Map and Health Expenditure**

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So, if I want to map the health economics, I will start with what is health, I will start with what is health, if I understand, what is health that has an impact upon demand for health or healthcare, if I have a demand for health cure or I want to know the demand or I want to generate some demand, I am interested in that I would like to know what is health. I will Google it, I will ask my friends or I will go to a doctor.

So, it is a both way relationship, based on my demand for health or I will; I will keep it as what influences health, I can keep as demand for health. If I know that if I smoke, it causes me cancer and I did not know that I smoked and now, I suddenly, realized Oh! My god I used to smoke quite heavily and what I do; I want to learn that now what happens with this smoking behaviour.

You know I learned that it causes cancer, so I am afraid now, I have a family, I want to go to a doctor and that generates my demand for health care. Then, what influence or if I am staying in Delhi, it is highly, the air is highly polluted yeah, so I want to go for a regular check-up for you

know my acute respiratory infections or asthmatic conditions whether I have developed or not or whether I have a chance or not to develop a certain condition.

Therefore, for the demand for healthcare I also need to have a supply for supply of healthcare because I may have a demand, I may not have a supply, so in a particular market scenario, the demand and the supply should be matched, so as the demand will look for a supply, the supply would also look for a demand otherwise, go back to my previous slide or previous chart where I talked about it causes inefficiency if the demand does not match the supply; allocative inefficiency, right.

So, the demand and supply should be linked to each other very closely and should be evaluated that whether demand meets the supply or supply meets the demand, we will talk about the demand and supply more in detail when in our next session. So, this demand and supply; this relationship leads to a market analysis because whenever we talk about demand and supply, this is a market mechanism.

And when we want to understand that mechanism that whether I am towards you know achieving and if efficiency or not or whether my system is very inefficient, I have to do a market analysis. After doing that market analysis now, the government takes the decision right, they take the decision, I can just demand it yeah and I will just see whether there is a supply or not.

So, the Government has to take the decision whether there is a demand or whether the demand has to be generated or if there is a demand whether there is enough supply or not so, after this market analysis, I bring a macroeconomic appraisal. Again, macroeconomics is at the state or the country level where the Government takes the decision, at an individual level at the microeconomics, we take the decision, so we do a macroeconomic appraisal; we do a macroeconomic appraisal.

So, when we do a macroeconomic appraisal, then it leads to planning or budgeting now, the amount of money the Government will provide to the states of Bihar, Orissa, Jharkhand, UP, Chhattisgarh to work on under nutrition Oh, the same money probably, they will not give to the states like Kerala or Punjab, there they may look at other diseases, which are basically non communicable diseases.

You know cardiovascular disease, the diabetic problems hypertension because it is after this you know the market analysis, the Government has an idea that what is the; which kind of demand a particular state or a particular population has, what kind of supply is required or how

much supply I do have and then, they do macroeconomic appraisals if that for non-communicable diseases, how much needs to be invested, where it needs to be invested.

And how it needs to be invested and they are very different for this infectious disease or diseases related to chronic energy deficiency that is under nutrition, so this is this comes as an outcome for this Government and this planning and budgeting finally, affect the supply and demand for healthcare because then this provision comes you know and this the; what influences health, what is health at the demand for healthcare.

This primarily is the macroeconomic analysis, so I can keep it like this together and this is my microeconomic analysis because this is at an individual level or a household level therefore, this macroeconomic analysis not only determines the planning or budgeting eventually, the micro economic analysis also determines the planning and budgeting and finally, the regulation mechanisms from the Kaufman's point of view.

So, this is a map for health economics or how health economics works in the society, yes, so this is as far as our basic overview about what we do in health economics, what we study in health economics or the broad health economic variables, the next session we will talk about the; we will talk about the market mechanism and the demand and supply of healthcare or the consumer behaviour.

So, the micro economic perspectives connecting healthcare, so here before finishing this session, I will give you a broad overview about the health expenditure to measure indicators of health expenditure in terms of either we think of Government or we think of individual level, if we are thinking of individual level you know, there is a concept of out of pocket expenditure which is nowadays, highly researched that is primarily because in; in the poor countries, this out of pocket expenditure has been identified as the major cause towards poverty.

You know because it causes you; causes us a you know vicious circle of poverty, if a person from a poor family, who cannot afford health care is falling ill, they cannot go to work, they lose their salary, if he has to be taken to a city which is far away for the treatment and that takes longer time or longer you know that takes transportation cost as well, so which contribute towards their income loss or other costs, if not directly towards the treatment cost.

Therefore, they are family members, if they are accompanying them, they are also losing their income for a longer period of time, so and if far though you know, the treatment seeking is expensive, then there is another addition that is the main component of healthcare cost is adding

up. Together, the healthcare expenditure is rising and when in these poor countries, the poor families do not have the health insurance.

Because they often think that from health insurance, we are not gaining back anything and they often cannot recognize their health related problems, so their health seeking behaviour is poor and hence they do not want to invest which is not giving them any return visibly in a shorter period of time, so that is a luxury to having a; to have a health insurance which in a developing market in terms of health insurance in these countries are mostly, a private health insurance.

So, though the Government of all these countries are making their best initiatives to penetrate towards these poor people therefore, this out of pocket expenditure comes into picture because they are not you know, covered under any health insurance nobody is basically, pooling or paying against their risk, so there is no this pooling.

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Out of Pocket Expenditure  
World bank website.

	1995	2014
Australia	16.1	18.8
B'desh	60.2	67 ↑↑
Netherlands		5.2
India	67.5	62.4

Therefore, they have to pay the entire healthcare treatment cost from their pocket, which is known as out of pocket directly coming out of pocket yeah, out of pocket expenditure, you can go to this World Bank websites, which gives almost all countries World Bank website, I do not really remember the website but you can just type in Google World Bank and health care or cost or you know out of pocket expenditure.

And then that World Bank website gives you a detailed information over the period of time across all the countries on this out of pocket expenditure you know, percentage of their total health expenditure or the total expenditure or total household expenditure, it is generally understood that when a country is poor, they are out of pocket expenditure is more. Taking an

example, if Australia pays you know in 1995, in 2014, Australia used to pay 16.1% of their healthcare expenditure out of their pocket.

And in 2014, it was 18.8, where is Bangladesh; where is Bangladesh, it was more than 60%, so yeah, 60% and as you know, the health seeking behaviour is improving, they are going to the doctors and mostly funded by themselves, the percentage is also increasing over the period of time you know in some cases, they have reduced because the Government schemes providing them free insurance and all but not in all the cases.

You know, in say in Netherlands, it has been eventually less than Netherlands and France, it has been eventually < 10%, in Netherlands is 5.2%, in France it is 6.3% in 2014, in India it was 67.5%, which has come down to 62.4%, yeah if I do not note down here in China, they have reduced this out of pocket expenditure by a large margin from 60%, 46% in 95, 232% in 2014, in Sri Lanka; they have again < around 40%, it was 45.1 now, it is 42.1.

Taking a couple of examples from the most 2 prominent, you know prominent developed countries USA and UK, in USA it has been 11% in 2014, where is in UK it has been 9.7% and we have; we often feel very proud when we you know compare ourselves as a nation with Pakistan and this Pakistan's health expenditure; out of pocket expenditure as a percentage of their health expenditure has been 56.3% coming down from 72.1 in these 20 years.

So, ours one was; ours one was 62.4 whereas, Pakistan is in 52%, the other prominent the other prominent health economics measure is the health expenditure in; in terms of percentage of GDP, the public health expenditure that is how much the Government pays in terms of the GDP gross domestic product of the country. So, in here a developed country will always be higher because in most of the developed countries, the money comes from the Government.

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	2014	Health Exp (Public) [% of GDP]
Denmark	9.2	
China	1.8 → 3.1	
India	1.1 → 1.4	
B'desh	0.8	
Pak	0.9	
SL	2	
UK	7.6	
USA	8.3	

So the; or through taxes, so in if I take the random examples, say in Denmark it has been 9.2% in 2014, I am not showing the you know the difference it has increased from 95 to 2014 by 2.5%, it was 6.7 now in Denmark, it is 9.2, in China it has increased from 1.8 to 3.1, in India it has been pretty stagnant 1.1 to 1.4, in Bangladesh it has been 0.8, in Pakistan it has been 0.9, whereas in Sri Lanka, it has been 2 and in UK and USA, it has been 7.6 and 8.3; 7.6 and 8.3 respectively.

So, this is the health expenditure public expenditure, public health expenditure as a percentage of GDP of that particular country's GDP. So, when we look at the private expenditure, it is again you know, it is little dubious and then in India of course, it is higher as compared to the public health expenditure and in India, the private health expenditure as a percentage of GDP is higher.

Because the; you know the Government facility is not very prominent or you know does not reach to the all the sections of the population, so it has been 3.3% in 2014, in China it has been 2.1, in Germany it has been 2.6, you can compare in USA and UK, it has been; in UK it has been 1.5 as I said in my earlier just to know, earlier part of my lecture that in UK, it is mostly coming from the; coming from the Government through taxes, so the private health expenditure has been pretty low and it has been only 1.5% of their GDP.

And USA again, you know their contribution towards the private health expenditure is higher and the percentage of GDP is 8.9%, so when we talk about another indicator that health expenditure per capita.

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Health Expenditure (Per Capita) [US \$]	
[2011]	
Australia	4357
China	64 → 731
India	60 → 267
SL	102 → 369
UK	1350 → 3377
USA	3788 → 9403

When we talk about health expenditure per capita that means, health expenditure, it is for an average for one individual, so it is the total health expenditure divided by the total population given in US dollar and the base price is 2011, so and then again for the developed countries, it is very higher yeah, so because they have a better health care facility, they are paying for the insurance or the Government is paying for them, the healthcare provision is good.

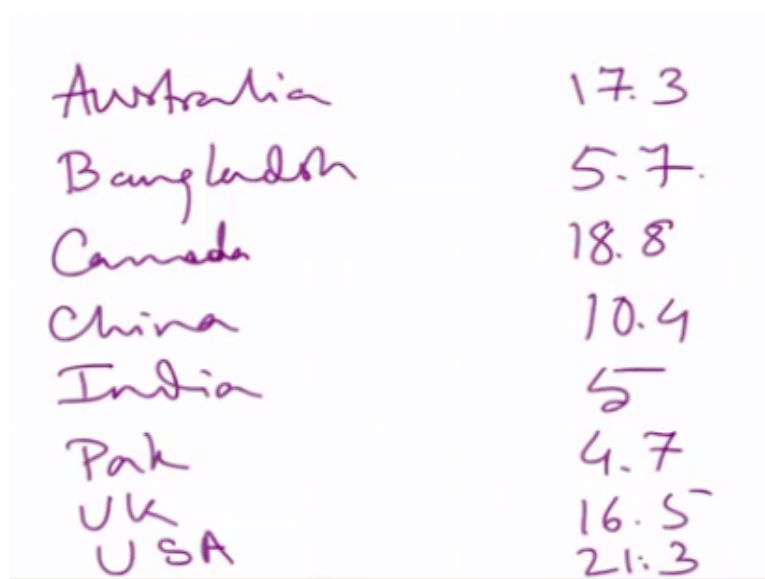
And therefore, the expenditure is high be it from the; from the you know, individual payment or the insurance based payment or the government payment through taxes, so it is the total healthcare expenditure and finally, their awareness and the health seeking behaviour is quite good, so they go for a regular health check-up, they have knowledge about the Health perspectives.

Yeah so, in Australia again, in Australia it has been 4357 in 2014, in China it has increased from to 64 to 731 US dollar per capita per Chinese population, in India it has been; it has increased from 60 but it has increased at a pretty a slow rate as compared to China to 267, so we spend 267 US dollar per capita you know, per individual in 2014, in Sri Lanka it has been high as compared to India, Sri Lanka has been doing pretty well in terms of their demographic indicators development indicators.

In UK, you can obviously see it is fairly high and in USA, again because mostly coming from the private facilities, so the cost is higher it is 3788 in 1995 and now 9403 in 2014, so we can see the healthcare expenditure increases with the development with the awareness, with the education, with the health seeking behaviour. In most of the sub-Saharan countries the health care expenditure per capita has been around 100 US dollar, it can be 60, it can be 80, it can be 100, it can be 120.

But not more than that in 2014 there, it is not very fascinating over there and the finally, the health expenditure is a percentage of GDP, the total health expenditure as a percentage of GDP is again will be higher because you know, the health expenditure is higher, so the health expenditure in terms of as a; as compared to the country's total income has been higher in developing developed countries.

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Australia	17.3
Bangladesh	5.7
Canada	18.8
China	10.4
India	5
Pak	4.7
UK	16.5
USA	21.3

So, in Australia, it has been more than 15% during this period you know, it was 14.9, now it is 17.3% of GDP goes to health or health causes, in Bangladesh it is 5.7, in Canada 18.8, China 10.4, India 5, yeah, even lesser than Bangladesh, Pakistan very close to India, 4.7, where USA and UK a pretty high, UK is 16.5 and USA is 21.3, so you get a broad idea about how we are doing as in terms of macroeconomic perspective that or the micro economic perspective that the developing countries and developed countries.

And from different regions; USA, the European countries, the southern Asian countries and in China and to mention another country, Korea has been doing pretty well in terms of their demographic indicators which encompasses health of course and the out of pocket expenditure has reduced fairly, the healthcare expenditure has increased in terms of percentage of GDP even though, we almost have got our independence at the same time though so, we share the same independence day India and Korea.

But Korea has been doing exceptionally well during last 3 decades and so just giving you a broad overview about this, you can you know further check these documents, these details freely available, you can download them as an excel file or Word file and do some simple you



know, statistical analysis you through the; you can download them from this World Bank website just get this health expenditure, out of pocket expenditure, percentage of GDP.

Even, you can get some basic you know, the demographic indicators say infant mortality rate you know the death rate, the birth rate and all these things and you can do some basic analysis you know, what is the impact of healthcare expenditure on say declining death rate and all this yeah, so thank you very much, see you in the next session.