Introduction to Economic Growth- I

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Lecture-6

So, we just took a look at a few numbers here. I thought we will also couple it with the kind of headlines that we generally find so that we have a good understanding of how this data works. So this is a headline that mentions that India is to become the third largest economy by 2017 as far as Jefferies. So, here, when you know, we talk about how large an economy is as economists, we are not talking in terms of the geographical, you know, area to measure whether an economy is large or small, but we generally talk in terms of GDP, okay? So, this is what I wanted to mention, although here, I think they are talking about the market cap. In that particular term, but other than that also it generally when we say that you know so and so is the second largest economy, third largest economy it is done in terms of GDP. So, here in also lies another significance of GDP.

Now we come to the next part and very both an interesting part and a part where we have to be a little careful because ultimately, what do we do with these GDP numbers is one we can consider a particular nation say like India, and we can see how its GDP has changed over the years that is one way of looking at things. But the world map that we had seen earlier, we saw that nations are divided on the basis of their income because the economic status is, you know, what distinguishes nations from each other. So, in other words, we should know how to compare GDP across nations. And how do we compare GDP across nations? We have to be careful about a few things that we are going to mention here and in the subsequent slides, we will also look at some of the data.

So the question here is how do I compare country A with country B in terms of its income, okay? Maybe the first thing that comes to mind is to look at the income of country A and compare it with the income of country B, we have the absolute numbers, and whichever country has a higher income; well, that is what we infer from there. But when we are comparing, we should be careful because every economy also has a different population, right? So, maybe if we are just looking at absolute GDP numbers, it is not a good way to compare across nations. The reason being, think about it like this for a moment. Suppose we are talking of a joint family that has about 12 members, right? And we are comparing it with a nuclear family that has maybe, on average, about 4 members. Now, for sustenance,

we are talking about that is for, you know, daily livelihood and assuming that both these families have kind of similar standard of living.

Now, naturally more amount of money is required for sustenance in the joint family because you have to cater to all 12 members and their needs. So, if we just look at the absolute expenditure or the income of this joint family, this might appear to be very large compared to a nuclear family. But comparison wise this is not a worthwhile comparison. Why? Because naturally sustenance of a big family also requires more resources and more money, right? So, ideally what we should do is we should adjust it for population. So, for the joint family whatever is the total income or expenditure that should be divided by 12, then that will become the per head.

Or per capita income or expenditure, and then we should compare it with the per capita income or expenditure of the nuclear family, right? So, that is exactly what we do when we are comparing the GDP of two nations, nation A and nation B. If we just look at the absolute GDP numbers and we conclude on the basis of comparison between the absolute GDP numbers. That is not the correct way to go about it because the population is different for the two nations unless and until the population is exactly the same. But in most cases the population is not the same, right. So, the correct way of doing this comparison would be the first step is we have to convert the absolute GDP to per capita GDP.

This is the most common thing or the common term we come across. Per capita, although earlier in week 1, when we were talking about the different kinds of nations in stylized fact, if you recall, we also came across that term per worker, but that is less used, but that can also be another way of denoting because remember at the end of the day it is also dividing by the number of workers, but so whichever way we do it. So, we have to normalize it in the sense that we have to divide it by the entire population. So, that we get a per capita or per head GDP number, and for comparison purposes, that makes more sense, okay? The second thing that we also have to be mindful about is when we are comparing across different economies. Different economies are going to have different currencies, right? So, two countries unless and until they share the same currency, but if you are comparing two countries, there is a high chance they have the GDP numbers in terms of their own currency.

For the GDP numbers of India which we just saw a couple of slides back from RBI, it was in INR. Now if you are going to compare it with the US economy that will be in terms of US dollars. So, it is not just enough to convert these numbers to per capita numbers, we also have to make sure that it is converted to a common currency. Now the most popular way of doing it is to convert it to US dollars because it is known as one of the most hard currencies of the world. These are the general things that we will find when we look at the data.

So, first we have to convert it in per capita terms. Second, after that we also have to be mindful that when we are making comparisons. Everything should be in terms of a single currency; otherwise, we will not be able to kind of compare. The most common currency to which we find all other currencies are converted in terms of representation of GDP is the US dollar. There is also another kind of conversion that we will talk about, which is known as PPP or purchasing power parity.

But before we go on to more definitions, I think it is time to take a look at some figures here. So, this is for instance GDP per capita in current prices remember again. So, this is actually what I hope you have guessed by now this is actually nominal GDP. So, this is see it is written US dollars per capita. So, that is because we see the world map here.

So, it is considering the GDP per capita for all the countries that we see here, but all countries have different currencies. So, they have all been converted to US dollars. So, that is the meaning of this particular term here. Okay. What are the other things you have to be mindful about? As we said it is written current prices.

So, remember this is not real GDP; this is actually nominal GDP, okay? And, what else do we see? We see that the countries have different shades, okay? There is light green, there is saffron, there is indigo, there is blue. So, what does this imply? It implies the different income ranges, okay? So, for instance, I think the lowest one that they have considered is a deep saffron I guess. This is under 500 US dollars per head income. Then the next band is between 500 and 2500 US dollars, and the highest one is this dark blue thing that we see is 25000 US dollars and more. So, even if we do not have much information about each country, but from this map for comparison purposes, just by looking at the colors and what these colors imply, right? We can infer something about the economic status of these different countries here.

So, a closer look at that, and I would also like to mention here that this data is taken from IMF's. There is something known as a data mapper. So, I am also providing the links here if you are interested. You should actually go out and check out these very colorful figures and this is just a magnified version of what we just saw here. Here, I wanted to give you the entire screenshot because if you are interested in the actual figures or numbers, that is also there, which you see on one side of the screen.

But if we are just looking at, you know, just the pictorial part of it, just we are just not looking at any numbers, then how do we infer? This is how we infer this, just a closer view of what we saw earlier. Now this one on the other hand this is also per capita GDP, this is for the year 2022. And here, you see this is written adjusted for inflation and adjusted for the differences in cost of living between countries; this is also another important fact. That different countries have different cost for living, right? So, in other words, what 100 rupees can buy in India, so 100 rupees will be roughly, I think, about 1.

5 US dollars. Does 1.5 dollars in the US also buy the same things? What 100 rupees can buy in India? So, this is what we call the cost of living. So, it is not always the monetary part, but the deeper question is what money can buy that is a more important question. So, it is a same map that we had seen here, but remember this map was at current prices. So, this was not adjusted for inflation or cost of living and every country its price is different. The same thing here is represented, but here there is difference in nomenclature and it is a different data.

Why? Because this has been adjusted for inflation, and this has also been adjusted for the cost of living between countries. Here, also, like before, we see that this goes from very light green to indigo, and of course, the boundaries are different, as we can see here. But, by and large if you were to keep the two figures side by side, the broad conclusions from both figures are the same, okay? So, the point I was trying to make here is that, again, It depends on which kind of GDP we are looking at. If it is nominal GDP, will the representation be different? If it is real GDP, which is the one that we are seeing here right now, then again, the representation will be different, but the conclusions are not very different from one another, okay? This same thing again, I wanted to show the magnified image here, so that if you wish, you can compare the figures you have seen earlier. for this, I have taken this data from a very interesting website again, which I will urge you to visit.

This is our world in data, they have a lot of you know data, they have a lot of the pictorial representations of this kind of data. So, it is taken from that particular website. Sometimes for comparison purpose we see something like this. Let me first show the data then I will go back to PPP. There is a concept known as purchasing power parity.

The purchasing power parity concept is slightly different from the way the conversion of currencies is done. You see when the conversion of currency is done, for instance, here. Everything is in US dollar terms you see because the intervals are in terms of dollars. So, no matter which country we are talking about the currency has been converted to US and how is the currency conversion done? It is generally done based on the market value of the currency.

Okay. As I said like, you know, at this time when I am speaking, 1 US dollar is roughly about, you know, 84.5 rupees. So, how is this determined? This is determined by the market. On the other hand, there is another kind of currency conversion that can be done, which is based on something known as PPP or Purchasing Power Parity. And why am I showing a Big Mac here from McDonald's? Because the concept of PPP and how it is measured actually goes back to something known as the Big Mac Index.

So, what is the whole idea of PPP? PPP actually talks about what money can buy, okay? So, what it means is that if a Big Mac, I am sure that you might be familiar with McDonald's and the Big Mac that is available there. So, let us say a Big Mac costs 50 rupees in India.

The same Big Mac costs 2 dollars in the US, then going by PPP, this 50 rupees will be equal to 2 dollars because what is important here is what money can buy. So, the same product, how much does it cost across different nations? Of course, one can argue that prices will also vary because of trade, because of national taxes. So, there is a transaction cost that is always attached, yes.

So, there are some assumptions that go behind PPP, but we are very simply speaking here. So, the idea is this is in contrast. To the market exchange rate that we just talked about. So, this is more in terms of, and that is where this goes back to, and this is measured by something known as the Big Mac Index because the idea is the same. You know McDonald's is one of the most popular what food outlets that is found globally, right? So, the idea is how much does a Big Mac cost around the world.

So, you might like to pause here this particular screen and see how much it actually costs around the world. So, that is the origin of PPP or the Big Mac Index. Now, if GDP is adjusted for this PPP, then this is how it looks like. So, what are we doing here? We are trying to look at different representations of per capita GDP. We are looking at how GDP can be compared across nations.

It can be a comparison based on nominal per capita GDP; it can be a comparison based on real, you know, per capita GDP. It can be a comparison based on real GDP, but it is adjusted for by PPP. So, here this is another kind of representation where the GDP price levels are all relative to US. This is also another kind of formalization that everything is relative to the US.

So, this can also be done. So, that is why on this scale, you see, It is not in terms of dollars; earlier slides, you see these legends. They were in terms of dollars because they were strictly in terms of income. Here, it is not in terms of dollars; it is how many times relative to the US. This comparison is being made, as you can see here.

So, the US is the benchmark. Is the income of different countries, is it higher than the US, equal to the US, or lower than that of the US? So, two parts that we see here which are shaded in yellow. and the number is greater than 1. So, what it means is their per capita or the GDP levels, okay? They are higher compared to the US. So, that is why they are in a light yellow shade; everything else most in most cases it is either very close to that of the US or lesser than that of the US, and they are in different shades of blue. So, this data is also taken from our world in data, and the point of showing this particular, you know, image is that we are familiar with different kinds of representations of GDP.

This is one of my personal favorite figures. I always generally go back to this and make sure I mention this particular data. This is the comparison between income and population in a slightly different way. This is taken from Easterly and Levine. I will just read out what is written here in this particular map.

It says that countries in black. They contain 15 percent of the world's population, but they produce 50 percent of the world's GDP. Whereas, the countries that are in grey and India is also in grey here by the way. So, half of the world's population resides in these gray-shaded areas, but they produce only 14 percent of the world's GDP. I think this pretty much summarizes, you know, the global scenario as far as this particular course is concerned, and as you can see, even the map is titled rich and poor. So, again, we come back to the same questions right, but again, it is represented in a different way.

So, what we have been talking about here is that data can be represented in many ways, and here, what we have been trying to see is different forms in which it can be represented. As we wrap up our discussion on GDP, I think it makes sense to spend a little bit of time on answering this question that: does GDP measure economic well-being? Because remember we said that when we are trying to determine the status of different nations, we are trying to compare their economic growth, the unit is always GDP. It is strictly speaking a unit of income or expenditure. So, from time to time, several questions have been raised about this that well we are distinguishing across nations based on GDP, but is GDP really an indicator of economic well-being, okay? Well, we should also be aware of several limitations of GDP As you know, there can be data gaps in measurement. Also, GDP does not include the resource depletion or environmental costs that societies have to incur in the process of production.

Also, GDP does not capture the quality of life indicator. What is the quality of life indicator? This is different from income. Quality of life generally means, as the term suggests, quality of life. And where does that come from? It comes from the kind of place we live in, the ambiance, the environment, the infrastructure, the health infrastructure, and the educational infrastructure; all these things determine, you know, the well-being of a human being.

But that, again, is not a part of GDP. And most importantly, GDP does not include the distribution of income. So, it does not tell us what percent of, say, the GDP of a nation belongs to what percent of the population. You might be familiar with this term known as economic inequality. The associated terms are the Gini coefficient, Lorentz curve, etcetera. If you have studied that somewhere, you would relate to it.

And economic inequality is a big concern in today's world. So, it is not just about income; what is also important is how income is distributed. Now, that is also something that we do not get to know from the GDP numbers per se. Yes, GDP numbers are used to get down to the Gini coefficient etc, but the GDP number itself per se does not convey that information. So, these are some of the things that we should be at least aware of, and these are known as limitations of GDP, but still, by and large, you know, GDP is accepted as one of the best economic indicators for comparison purposes when we are comparing the economic status across different economies.