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A FIRESIDE CHAT WITH INDERMIT S. GILL AND ARVIND PANAGARIYA: INDIA'S ECONOMIC PROGRESS AND WHAT IT MEANS FOR THE GLOBAL ECONOMY

Indermit S. Gill: Thank you all so much for coming. I'm going to fill in a few minutes because people are still trickling back in from coffee. It's a pleasure for me to introduce Dr. Arvind Panagariya. He is a professor at Columbia University. I understand that you still have a university. Yeah, as of yesterday. Yes, but Arvind and I go way back. Actually, we're very good friends. I first met him when he was working at the World Bank. And then, he became a professor at Maryland. And after that at Columbia. In between, he's had many other stints. He was a Chief Economist of the Asian Development Bank. He was the Sherpa for the Indian government at the G20 for three of its meetings. And then, he now actually has this... Oh, yes. And he was also the founding head of NITI Aayog, which is the successor of India's Planning Commission. And NITI Aayog is headed by a cabinet-level person. So he was in Prime Minister [Narendra] Modi's cabinet at the time. And now he's doing a really important thing, which he's the Chairman of the 16th Finance Commission. And for those of you who don't know what that is, essentially what the Finance Commission is, is that each five years, the central state fiscal relations are reviewed and updated. The person who heads that is the Chairman of the 16th Commission. Now, Arvind has not yet submitted his report as Chairman. He's going to do that later this year. Arvind, is it? Okay. When he's done that, we're going to bring him back, and we're going to have him actually tell us about his findings then.

Today, he's going to talk about two other things. He's going to talk about India, the Path to Viksit Bharat, because he's written a lot of books on growth and so on. He also wrote this wonderful work of economic history. It's called "The Nehru Development Model: History and its Lasting Impact," until today, actually. So he's going to talk about both these things. So I thought that what he would do is, in no particular order, he's going to talk about both the economic history of India, but then also India's economic future. Yeah, Arvind, you take your time.

Arvind Panagariya: Thanks very much, Indermit. Really grateful for providing this forum. As Indermit has mentioned, Indermit and I go a long way back, at least late '80s or maybe early '90s. I had spent four years actually at the World Bank from 1989 to 1993. If those of you who know India, I would recall that this was a crucial period because the big economic reforms in India started in 1991. So I had a good... The World Bank turned out to be a very good window from which to see those reforms unfold. And when the Second Structural Adjustment Loan was discussed, actually, I became a part of the mission that went to India to negotiate that loan as well. It's a pleasure to be back here. I've been here in between, but it's nice to be able to ruminate a bit about this.

For today, I'm going to talk about India. I am very bullish on India, and that is what you're going to see me or hear me talk about in the next half hour or so. The way I'm going to do it is talk first about... I'll talk about the future, the recent past. And then at the end, I'm going to bring us to, in a way, where this book begins. And I'll introduce the book at that point. And from there on, we'll take on to the Q&A section of the session.

So first of all, many of you would know that India now is the fifth largest economy. Its GDP is about \$3.9 trillion. And it's right behind Japan with its GDP at \$4.1 trillion and also a little bit further behind Germany, whose GDP is \$4.6 trillion. These are all 2024 figures, latest year for which we have the full year data. With India's growth, I'm going to talk about in current dollars, easily 10% or so right now, it will cross these two countries within the next three years or so. So pretty much by the end of 2027, and if there is a hiccup or something, maybe by the end of 2028, for sure, India will become the third largest economy. So it is something to watch, to see unfold, because the country will become progressively more and more important in the global economy, and that is a good enough reason for us to talk about it.

Now, while these good things are happening, the ambition of our leader, the Prime Minister, is much bigger. He wants to see the country become a developed country by its 100th anniversary of independence, which is the 15th of August, 2047. I'm going to, at least part of my initial

presentation, organize around that particular theme and ask the question, is this a feasible ambition for India? Now, to assess whether it's a feasible ambition or not, the first question one must ask is, what is the metric? How am I going to measure whether India has reached that stage of a developed country? Since this is the World Bank, I will conveniently take the World Bank metric, which is its own classification of the countries into low income, low-middle, middle, high-middle, and high-income country. The high-income country is what I'm going to identify as a developed country. There are other aspects of a developed country to which I'll come towards the end. That is the part of the challenge that I'm going to come to. But first, we'll take the World Bank's definition of a high-income country, which is in 2024, a per capita income of about \$14,000. It's \$13,995, but we'll take the round figure, \$14,000 of per capita income. Now, if we look at India's current per capita income, which is in 2024. Now, this is gross national income and all, but there's not a big difference. I'm just going to speak in terms of per capita income. Translate that into per capita GDP, but the difference is not large anyway. India's per capita income or GNI in 2024 is about \$2,740. Not a very large figure, and I'll come to that again later on. But we have to go then from \$2,740 in 2024 to \$14,000 of per capita income by 2047. Is that a feasible goal? Well, if you do a little bit of a compound growth rate math and back out what kind of growth rate you need of per capita income in real terms to get to \$14,000 in 2024 prices, that works out to a 7.3%. That's a simple calculation you can do. There's a complicit compound rate of growth, which in 23 years takes you from \$2,740 to \$14,000. You cross that. Can India grow its per capita income in real dollars by 7.3% is the critical question.

Now it turns out that well, I'm going to talk about the growth rates in GDP terms. What I'm going to do is first at least try to make a case based on what has India achieved. If India really hasn't done anything close to that, then there is no case, really. But if it has actually done something close to that in the recent past, there is at least a case and further discussion then may be warranted. The fact that it has done doesn't mean it will do in the next 23 years the same as well. So one has to argue that case also. But I'll come to that. But first, a little bit of what has India actually been able to do in the recent past.

The benchmark here is that I need a growth rate of 7.3% in per capita terms. Population of India, I'm taking the projection by the United Nations population division. According to them, the growth rate of the population will be something about 0.6%. I think it's going to end up less because India is already the average TFR across India now, the Total Fertility Rate has dropped to 2%. Population's still rising because the birth rate exceeds the death rate, and so therefore, population still rises. It will take time for it to peak and then stabilize. But 0.6%, I think, is probably going to prove to be an overestimate. But we will see here for our purpose, we are going to take 0.6% as a population growth rate. Which really means that the GDP in India has to grow at 7.3% plus this 0.6% of the population, 7.9% annually. And this has to be sustained over the next 23 years to get in 2047 to the high-income status in per capita terms. That's what we are asking.

Now, what we do, is let's examine India's growth experience, and I'm going to start with the year 2003-4. Let's simplify it. 2003-4 is because fiscal year of India starts from April 1, ends on March 31, etcetera. But 2003-4 is like the year 2003. What I am going to do is examine India's growth rate, how it has done since then. I'm choosing 2003 because that is the critical year during which India really shifts into a high growth trajectory. A lot of reforms preceded that year, 2003. There are at least two Prime Ministers who have... One has a five-year term and the other one for six years, Narasimha Rao from '91 to '96, and then Atal Bihari Vajpayee from 1998 to 2004, who carried out lots of reforms and all of which ultimately, with some lag, lead to the growth rate shifting to close to 8% in real Rupees. But a lot of what I'm going to show here is going to be in terms of dollar growth, to which I'll come. But first, just a very quick view of what India has been doing recently.

These are the growth rates under Prime Minister Modi. So 2014-15 is the year, first year during which the Prime Minister took over, during which there were two crises that India went through, 2019-20. Actually, even that includes a bit of the 18-19 year as well. This was the internal financial

crisis. A lot of non-performing assets had accumulated with the banks and banks, really, the credit growth collapsed completely and all. Banks had to be capitalized on a very large scale and all, but this is all behind. But then soon after came COVID. You'll see that there are three of these, particularly these three years, but you could also include 18-19, which are crises years. If I take those at least the three years out, then for the period of '14 to '19, growth rate was 7.4%, this is in real Rupees, and then 2022 to 2025, that's 7.8%. That's a pretty impressive growth rate, but you'll see that it understates India's actual growth rate in dollar terms. Because you are all largely economists, so you'll understand this, that when a developing country grows, when per capita income rises from low to higher levels, the domestic cadency appreciates in real terms. This is the old [unintelligible] story that you start at very low prices. Price level is low, and as you develop, your price level rises. That, of course, means an appreciation is going to bring in an appreciation in real terms of your domestic currency. That appreciation will kick up the growth rate in real dollars as opposed to in real Rupees. That's what we are going to see.

Now, what I show here is the first annual growth in India, Indian GDP in current dollars. This is a simple calculation I downloaded from your World Development Indicators, India's GDP in nominal dollars, and compute the growth rate over the relevant period. I take 2003-04 to 17-18. This is largely crises-free. There is still one crisis in there, the global financial crisis of 2008, but India really robustly recovered from that. It had collapsed for the growth rate for a year, but it really went back up very quickly. Other than that, this is a crises-free period I've taken. During that period, in nominal or current dollars, India's GDP grew 12%. That's my first row with numbers here in this slide. Now, if I take also the annual growth in the US GDP a little later, which is 1.9%, subtract that out, I get the real growth rate in dollar terms. That's 10%. The little difference is the approximation that happens in the decimal point there. That period, actually, you got real growth rate of 10%. 18-19 to 23-24, that is this crises-ridden period, and you get a very low growth that is 1.9% in real dollars. In nominal dollars it's 5%. Actually, during that period also, the annual growth in the US GDP deflator rises to 3.1%. This is the big inflation that happened in the United States, which also then showed up in the year, like 2020, the GDP deflator rose in the US by almost 7%. Over this period, when you average it out, it's about 3.1%. Take the whole period. Now, I'm actually dealing with three crises during this period, 2003-2023. The global financial crisis, India's internal financial crisis, and the COVID crisis. And yet I grow at 7.8% in real dollars for the GDP. So what do I need to do in the next 23 years?

I need to get a growth rate of 7.9% to get to the high income, high per capita income status. And my past experience, if you take the pessimistic scenario, it's 7.8%, and if I take the more crises-free, largely crises-free period, it has been 10%. It's well within my reach. It is not a pipe dream, as some people might want to claim. It is perfectly feasible if I can do in the next 23 years what I did in the past, let's say, about 20 or 21 years, I get there. So with 7.8%, I almost get there. With 10%, I get past the finish line, well past the finish line or well before. Certainly, it's feasible. Now, I want to ask, this is the World Bank, our Chair of the session here has written a whole WDR about the middle-income trap and all. Could that be a problem and all? It certainly can happen. We are talking this is all gazing into the crystal ball and seeing what might happen. In the end, the reality will have to unfold itself to show what actually happens. But I'll make a case that unless something catastrophic happens, India has a pretty good chance to accomplish what I'm saying, what it can accomplish.

Let's see. Okay, I'm just going to skip that. Now, why? What are the favorable factors for India? First, I'm going to talk a bit about the favorable factors, then I'll come to the challenge that India faces. That's where then we will transition into the book. First of all, India's per capita income is still quite low. There's \$2,780. Earlier, the figure I gave you, \$2,740 was the GNI, the gross national income, per capita gross national income, per capita GDP is 2,780. Now, compare that to South Korea's \$33,000, Singapore's \$84,000, United States \$82,000, Germany \$53,000. So clearly, with the existing technology, it is feasible to actually, for per capita basis to produce that income. India

is extremely low. And so, if you think in terms of catching up or what have you, that if I accumulate capital over time, lead technology, even the existing technology, there's no further increase in productivity around the world. Even with the existing technology, I've got a lot of room to catch up. And this is, by the way, very quickly, I'll mention to you, if you look the transition of any country from the past in this latest time and later on, you see that this time period has been compressed over time. And I'll talk about that a little bit more later on. But the first point really is that there is a huge gap which really gives me a lot of room to catch up, and that is a plus point.

Second, is the demography, and there are two aspects of demography. One, India's population is very large, and it is a very young population. So both factors are helpful for the country. A large population, of course, means that my per capita cost of providing public goods, such as infrastructure, whether it's physical infrastructure or it's digital infrastructure, is low. If I got a population of 1 million in a given area and I have to construct a road, there is a per capita cost of it, but if the population within the region is 2 million, the cost of making roads is not going to double. It will rise a little bit because more maintenance would have to be done, etcetera, but it's less than double. So my per capita cost is much lower. And on digital infrastructure, that is even more true because once you have created the digital infrastructure, adding more and more people to use it doesn't add a whole lot to the cost. And India has done a tremendous job of creating this digital infrastructure, public digital infrastructure. Transacting financially to do your payments, etcetera in India is so much more convenient and faster, and everything happens in real-time than it is here, actually, if you visit, you will see, and if you try to do that, you'll find that. And as a result, of course, even the smallest of the vendors have taken to it. And so, in terms of the number of digital transactions, India leads by miles, actually. It is the country now with the largest number of digital transactions, and almost half of its transactions are now happening digitally. So this has really made a big difference. So there are two sources of economies that you build the infrastructure per capita cost of building it is low, but also when you have more people interacting on that digital infrastructure, my benefits rise. If there are only 15 other people with whom I can transact on the infrastructure, there's not a whole lot of benefit, but if there are millions of other people with whom I can transact, my benefit of transaction actually rises. So both as the user and as the provider of the infrastructure, my costs become lower. So that's the size aspect of the population.

And then there is the young population aspect of it, which works in two ways. One, with the young population, my worker to population ratio becomes higher. That, of course, means that more people per 100 population are in a working age. That, of course, means that they will generate, *ceteris paribus*, higher output per capita for those 100. If only 20 out of 100 people are working versus 50 people out of 100 are working, you know that per capita output, then per 100 population output is larger if 50 are working rather than only 20 are working. That's the labor side of it, but then the younger population also saves. Older ones are the ones... The older population usually lives off of its past accumulated savings. So it accumulates actually savings, while the younger population accumulates savings for the future. So your savings rate also is kicked up if the population is a younger population. So that, I think, is the demographics or younger population aspect of the population.

Then, for last set of points, I would say that... Well, two more points I should make here. That, one, now there is incredibly good momentum India has achieved in building its infrastructure. As the Chairman Finance Commission, I have gone to every single state in the last one year. That was one of the big things the Commission does, visit every single state. And this is remarkable, the roads that have been built. I spent about three years from 2015, '16, '17, when I was at the NITI Aayog, and now I went back for about a year and a half, last year and a half, and the transformation, particularly in the roads, but also railways and the airports, is just phenomenal. I mean, airports' numbers have more than doubled during this period. Road connectivity, fantastic roads have been built up. We even went to these very high-altitude places in Sikkim, in Ladakh. And you see this at 12,000 feet height, 13,000 feet height. Fantastic roads being built by the BRO. This is the Border

Road Organization, which has a responsibility to build roads in the border areas, which is generally mountainous in the north of India, all the Himalayas. It's fantastic work going on. Also, in terms of the tunnels and the bridges, etcetera, you'll see the stuff that has happened is just phenomenal. That, I think, is going to be a big advantage for India, that connectivity really is fantastic now and it will continue to... The government now is really continuing on that capital expenditure of, particularly the central government, has really taken off, and so that's a big plus.

Finally, there is a lot of room for reforms, and particularly, I want to mention here, the free trade agreements that have been... Some have been concluded. Only yesterday the Prime Minister signed the US-India... I mean, UK-India Free Trade Agreement. A very good for the first time. It's a relatively large country, at least about the same size as India, the United Kingdom. Before that, we had signed with Australia, and after, and so forth, but this is a more significant one. But two very big ones are under negotiation, one with the United States and one with the European Union. For both of those, prospects look very good. If that really pans out, I think there'll be a huge, huge boost to jobs and growth in India because that then creates a market which is friction-free, which is extremely large for India. India's own domestic market, plus the European Union, plus the United States, UK. It's a very large market for any potential investor. That makes India a very attractive location because you got this very large workforce, which is both skilled and unskilled. There is some push happening from China, so therefore there's both a push factor, but if India's free trade agreements actually become a reality, quite likely that there's also a huge pull factor. So that, I think, is going to work very well for India as well. So that's my roadmap why I think that it is a very doable, very reachable goal for India.

Now, the challenge. This is where India turns out to be a bit different from the other rapidly transforming countries, such as South Korea, Taiwan, China, or if you want to add Singapore and Hong Kong, relatively smaller countries. But if you add those, there's one particular aspect in which India turns out to be different. And that has to do with this transformation that usually happens when you transition from a developing to a developed country, that your share of the workforce in agriculture declines and that of industry and services rises. Now, that process has been underway. It's not like that has not happened, but in India, that process has been quite slow. And in the process, also, you get urbanization. And you can look at... You can start with the UK, because the UK was the first industrializer and first country to transform. It took them 200 years. But if you look at the trajectory over time, it's the share of agriculture declines, that of industry services rises, and urbanization simultaneously rises. By the time in 200 years, when the UK really fully is industrialized, its share of agriculture drops below 20% in the GDP. And across the board, you can look for the US. The US comes after the UK; and therefore, it does it in 100 years. Japan comes even after that. The Second World War interrupts this transition, but it manages to do that in about 55, 60 years. And then, post-Second World War transforms all these four countries from East Asia plus China later on, and they do it in 30 years. It's only that time gets compressed for the later ones, but this process that the share of agriculture in the workforce declines and the urbanization rises. That process is across the board, across all these countries that happens. In India, this has been slow. It's still 46% of the workforce that is in agriculture. Also, the workforce that is in industry and services is in really small enterprises. About 40% of the workforce beyond agriculture is in enterprises with less than 10 workers. Then only about 10% of the workforce is in enterprises with 20 or more workers. That transition is going to be India's big challenge.

Now, why is that the case in India and all? This is where the economic history matters. This story really goes back to the 1950s. When India started its development process, it chose to take the path of heavy industry first. India started building steel mills, machinery enterprises, chemical industry, fertilizer industry. It completely neglected the labor-intensive industries. It left all the textiles, clothing, footwear, furniture, stationery, kitchen repair, whatever. Simple light manufacturers that we use in daily lives through for these very tiny enterprises. At the time, it was called household industry, village industry, cottage industry. These are the enterprises that are going to be producing

these light manufacturers. But the formal industrial sector is going to focus on this heavy industry. That was the approach taken. And this was a very deliberate approach by Pandit Jawaharlal Nehru, India's first Prime Minister, on the presumption that he wanted to have self-sufficiency in the country. Now, if you want self-sufficiency, and in those days, the driver of growth was always seen, not so much the productivity growth, but the investment growth. Well, if you're going to invest, if investment has to be expended, you need the machinery. But if you don't want to rely on international trade, then you got to produce your own machinery. And that is how the heavy industry approach to industrialization was taken, but the fallout from that, of course, was that the bulk of the capital got invested. It was a starting country, very low GDP and very per capita income. Savings was only 7%, so 7% of a very low GDP is a very low number. But whatever capital was available got put into these very heavy industries. All the rest of the labor force, got no capital to work with. It was a very bad allocation of resources because at one extreme, you have capital working with no labor, the other extreme, you got labor working with no capital. And that, of course, means a very gross underutilization of your abundant factor. Your abundant factor is labor. And if you're not using that very effectively, your productivity is not going to rise. So growth itself actually got badly impacted by that choice of allocation of resources. India grew very slowly for almost five decades, which, I mentioned, 2003 was really the year for India when growth rate really finally kicked up to 7% to 8% trajectory. So a lot of those years got lost. But simultaneously, and that is the running theme of this book, that look, simultaneously, what happened was that it hardwired everybody into this very heavy industry approach. So even today, the successful industries in India remain the machinery industry, the petroleum refining. India is very big on refineries, very heavily capital-intensive. Then you got chemical industry, fertilizer industry, the usual or you got pharmaceutical industry, IT industry. So either this is capital-intensive or it is skilled labor-intensive. India's workforce still sits, as I showed you here earlier, almost like 40% of the workforce, well, 46% is in these very tiny little farms, which is agriculture, and another 40% is in these enterprises which have less than 10 workers. These are enterprises with almost no capital. And it is this misallocation of capital that continues till today.

So this is the book, develops this team that this is the Nehru-era history and its lasting impact. And that impact is not only in this allocation, but also in terms of thinking, in addition to this heavy industry, another piece of Nehru's thinking was that we want to be a socialist economy, which means that the government public sector should have the means of production. And so, the public sector was expanded in a major way. And the public sector still remains pretty dominant in India, less so in manufacturing, because the private sector has advanced much faster. But still there is that mindset, it still remains. And of course, this history due to legacy effects. Usually what happens is that the newer generation that comes in learns from the old one. So whether it's the political class or whether it's the bureaucratic class or whether it is even the businessmen, they all learn from the previous generation. And there's this bequest that happens, this legacy effect that continues. So even businessmen in India, if you talk to them, they're not into labor-intensive industries. You go to any industry organization, whether it's FICCI or you go to the CII, ask them, "How many of you are exporters or are in apparel?" You'll probably not see a single hand go up. It's really that bad. And think about the oil sector, for example, today, a 500 billion plus global marketplace. Today, in spite of China's wages being 5-6 times those in either India or Vietnam or in Bangladesh, China still has about a 35% share of that 500 plus billion dollars of apparel market. This transition has to happen. India has to step up into labor-intensive industry for the transformation to start becoming more rapid out of agriculture into industry and services and simultaneously of urbanization. That is the rough roadmap where I think can I just conclude there.

Indermit S. Gill: Excellent, excellent. Excellent summary. I'm actually going to ask you one quick question. It'll be a set of actually three, but I'll ask you the first one now because I would like the folks in the audience to actually ask you a question. Actually, we have lots of them. My question was actually from your book. The book is worth reading, guys, and it's free for you. But there is this

really nice chapter where you talk about the role of economists. Because you see, India starts to take up a policy, I guess in the mid '50s, of taking all the capital and putting it into a part which is very non-labor-intensive and leaving the labor-intensive sectors without much capital at all. So there should be economists who should call this out. You have this chapter 4, which actually talks about how, I guess the short summary would be how economists were co-opted into this story. Why don't you tell us that story a little bit?

Arvind Panagariya: It's not so much co-opting, but really the economists were active co-conspirators, if you will. I shouldn't call it conspiracy because that was the general thinking at the time. The intellectual agreement was just absolutely phenomenal. What had happened was this was the launch of this particular model, what I call the Nehru Development Model. Economists think of it as a Mahalanobis model, but I really think appropriately it should be called the Nehru Development Model because Mahalanobis was simply giving academic expression to what Nehru wanted. So he wrote the formal model, and so we call it Mahalanobis model. But really, this whole heavy industry approach had wide support. This was launched in the second five-year plan, which is 1956, mid-1950s, as you've just mentioned in there. What Nehru did was to appoint a panel of economists, a total of 21 headed by the then Finance Minister and was also a member of the Planning Commission. But 20 other economists, which were the leading economists from different parts of India. It was very conscious that he takes up from the East, from the West, from South, and also regional representation. But these were all leading economists of India and asked them to assess the draft five-year plan which Mahalanobis had written and comment on it. When this panel of 21 economists gave its report, it strongly not only endorsed, but argued that the plan really did not go far enough in terms of regulation, that much greater regulation was actually required. Our economists wanted even more regulation than what the draft plan was advocating. There's only one who dissented formally by B.R. Shenoy, who questioned the size of the plan, that your plan is too ambitious and you're going to print money, print Rupees to mobilize the resources, and that's going to create inflation, who is going to be counterproductive in the future. But that was the main formal dissent. There's one more economist on this panel, Vakil, who with his associate, Brahmananda. So Brahmananda and then Vakil posed an alternative model where they said that the focus should be agriculture, and as far as machinery is concerned, think in terms of the agricultural machinery. But even they did not question the basic heavy industry approach. It's simply that they didn't want agriculture to be neglected, but that is about it. So intellectually, everybody was on board. Politicians were on board. Businessmen, no. Businessmen had written a Bombay plan in 1944 and 1945, there are two parts to it. One came in '44 and the other '45. You read the Bombay plan, and it more or less reads like the second five-year plan. There's hardly a difference. The businessman also endorsed the heavy industry approach. They endorsed the leading role of the public sector. They endorsed the objective of self-sufficiency that India needs to be self-sufficient; and therefore, not rely on international trade and all. There was acceptance and consensus all around during this period. In a way, that was the world. Also, Mahalanobis himself invited a large number of foreign economists and statisticians from different parts of the world, and they all agreed also. There's only one disagreeing force. There was only one voice that completely disagreed and wrote a little note which was only about 6,000 words, and absolutely dissected it beautifully. I cannot disagree with a single word in that comment or in that note. But of course, you can probably guess who this... Whose voice was this one. This was Milton Friedman. Now, of course, Milton Friedman had no acceptance, even in the United States at the time. So there was no way in hell of being accepted in any way in India. And really, if you read the contemporary literature, nobody is aware except one who is really an associate of Milton Friedman himself. This is Peter Bauer, who is coming from the same corner as Milton Friedman is. And so Peter Bauer is very aware of it in the 1960 book, "Critique," he writes of the five-year plan. He quotes from Milton Friedman's note, but other than that, nobody is even aware. And I myself actually became aware of it around 2000 or so. And I was so excited. So I wrote a whole column following up on that at that time, but that was it.

Indermit S. Gill: Chapter 4. Chapter 4 of the book, beautifully written there. Okay, who has questions? You should look at the amount of hands there. We have to get mics quickly to people. If you can have two mics and people have first Christopher and then Soumya. Yeah, right here. Second one there. But first to Christopher, then to Soumya. Keep your questions short, we'll get a lot of questions in.

Christopher: Can you talk a little bit about AI? Because Modi in France woke up the European Union by saying India was going to go ahead. I gather that one of the good things that AI has already done is to converge 30 dialects so people talk to each other. But Modi was saying there's a great chance to connect with your digital ID. You seem to have convinced Zuckerberg to go into small open AI modeling with Llama, and then you've got the edge of people putting things onto personal computers all at the same time. So is AI going to work for India and harness your growth or not?

Indermit S. Gill: Can we take two more questions?

Arvind Panagariya: What was the question?

Indermit S. Gill: The question was, is AI going to work for India or against India? Soumya.

Soumya: Thank you. Yes, your last note on the intellectual origins of this problem were fascinating. To Bauer, I would then add the movement that began in the 1970s at Nuffield College, Oxford, with Little, Scitovsky, and Scott that questioned the model. Then, of course, we had the great Bhagwati, who wrote enormously on that. You have been excessively modest, you also made a very strong contribution in that direction. Now, you explained the baleful influence of our legacy on the present misallocation of capital and labor. What I'd like to ask you is, what are the present factors that are holding back reform? Holding back reform, particularly in labor. Our labor laws and industrial laws are a severe deterrent to the growth of small and medium enterprises. Our laws concerning land and land acquisition. And thirdly, the growing autocratic tendency of the Indian government. Now, you've been working on the sixth Finance Commission and visited all these states. You know very well how the central government is holding back reform efforts in some of the Southern states for purely political reasons, allowing governors not to give their assent to legitimately pass laws which would push the economy forward. These are some of these current barriers that I'd like you to reflect on.

Finally, for Indermit, you were very polite and you stopped with the Indian economists. I'd like to ask him, was the World Bank complicit in the 1950s and '60s as well?

Indermit S. Gill: I'm not that old, somewhere, but I think you know the answer. Yeah, take these two, AI and then—

Arvind Panagariya: Well, AI, if it's going to work for America and Europe, it will work for India. There is a huge presence, particularly in the American enterprises, in the form of the GCCs in India. It's almost a very large, skilled workforce working in India for all the leading tech companies in these GCCs. And so, they are not so visible in a way, but they are very numerous. I really think that that is one major concentration where the AI is going to really give huge returns in cooperation with the American and European firms. But also, I think the Indian independent entrepreneurs are doing wonders with AI as well. And the government of India itself is also trying to bring it in. I've tried to use it a little bit for my own work as well for the Finance Commission. The limitation right now, I think, is a bit of having an internal platform, AI platform, because the data cannot go out of the country, so you can't use any of the existing ones, ChatGPT or Grok or whatever else. But that will be sorted out. But I think it's really the private sector which will drive it. And for that, certainly the fact that Indian IT sector is fairly large, it will benefit. So I certainly see that as a very positive development from India's perspective.

Other things, the labor laws and land reforms, very, very important, actually. It's what I will call the land is really the urban land, the real bottleneck, because it connects back to the urbanization point

I was making. And it is the urban land, if you look at it, is incredibly expensive in India compared to its per capita income. In Mumbai, if you want to have a house, if you take the top 5% of the population, this is an estimate that got played up in the press, that if you're in the top 5% of Mumbai, you'll still on average take about 109 years to buy a house to pay the mortgage. So it is really the land prices that are that high. Mumbai is exceptional, but other cities are also on that same front. So why are the reforms not happening? So the labor law, of course, four labor courts had been enacted by the parliament about five years ago, six years ago, 2019 and 2020. So sequentially, they were passed in 2019 and 2020. They're sitting there, they've not been implemented. Of course, the issue that came up was that simultaneously, these three farm laws had been enacted. The government wanted to implement those. And you saw, since you are so familiar with India, that led to a huge movement. And all in the end, farm laws had to be withdrawn. And to some degree, the collateral damage was that the labor laws have not been implemented yet either. I was very hopeful that after the 2024 elections, they would get implemented. But in the end, the government's own expectations of coming back with a large majority did not pan out, and it ended up with a coalition government. So that also then has had a difficult go.

Now, on your land, of course, the large part of it is the state issue. Many different aspects of it. You mentioned land acquisition. The central government had tried to amend the Land Acquisition Act, which the previous government had actually enacted with vengeance, I must say. It was a big step back, but that government in its second term, the UPA2, really did a lot of things among which Land Acquisition Act was one, which were anti-reform. These were steps backward. The Modi government immediately in 2015, tried to... I was at NITI Aayog at the time and actually was in the thick of this. At the time, the government couldn't convince sufficient states. In the lower house, it had the votes. It passed it there, but the amendment failed in the upper house. So it didn't happen. And now, I think for any government, an amendment that has failed once is very difficult to bring it back. States can do it. And one state has, in fact, done exactly that, Haryana, has actually amended the Land Acquisition Act. That amendment cannot be done without the central government's assent, but the central government has given its assent. So in 2021, they did it. Now, that is something I also, as a part of my commission work, learned about only very recently, that Haryana has done it. So other states can really do it also. I think it will happen at the state level. So that's a story why some of it has not happened.

You talked about something autocratic and all. This is a bit of a loaded term. Any exercise of authority within a democratic setup is very easily described by the opponents of the other side as autocracy. Well, this is a very well-functioning democracy, sir. Elections have happened and very fairly with full participation of the voters. And if leadership is not going to exercise authority, who will? We have had enough of the history of leadership failing to exercise as authority. How can the nation move forward? It's just an exercise of the authority that is given fair and square to the democratically elected government. I don't see any autocracy here.

Indermit S. Gill: So I'm going to try to answer the question that Soumya asked about the World Bank. At the time, Sumya, I don't think the World Bank was actually engaged a lot in analytical work and so on in India, right? But around this time, India actually established its resident mission there. And India, at that time, the World Bank at that time was much more engaged in what the President at the time, Eugene Black said about development diplomacy. I think it was in this Indus' Accord. There were, of course, some projects. One was a railway project. There was even an IFC project at that time. But I think that mainly it was, I think that the discussion at the time, at least at the World Bank, ended up being about IDA, because IDA was established around this time, 1960. At that time, actually, Nehru had a very good influence on IDA because he actually insisted that IDA not be pure grants, but be subsidized loans, because he felt that grants diminished both the receiver and the giver, but a loan actually created things. It was much more along those lines. I don't know if the World Bank actually weighed in on India's developer model at all. It was just financing it. Yeah.

Now, the thing about autocracy. If you contrast India and the US, Arvind, there is a lot of faith here in the numbers that the government puts out, and not a lot of faith here in terms of how clean elections are and so on. In India, it seems to be the opposite. There's a lot of faith in the Electoral Commission and how elections happen, but increasingly less faith on the numbers that come out. But that, I think, it's part of the problem. Anyway.

Arvind Panagariya: I don't know why there is less faith, but let's say because India is full of skeptics. So Indians themselves actually raise a lot of doubts about the numbers. But go in and tell X, Y, Z. This is the problem in generating the numbers. For example, this whole debate that happened on the GDP numbers, this was 2018, '19, somewhere there. None of these people pointed [that] out. They would not do the hard work. There is a 30-page manual that is out there which describes exactly what methodology is followed. Where is the methodology failing? Point [that] out. But that nobody was doing. But just saying that, "Oh, I run my regression, and you don't fall on the line. Therefore, there is something wrong with the numbers." First of all, your own econometrics was very bad. There's a professor at the University of Michigan who pointed out those flaws. But even if the econometrics was rightly done, was India the only outlier there? So make your case in a way that the changes can be made. There is a huge amount of receptivity in the statistics. The government doesn't interfere. I was there for three years. The government never interfered with the statistical Ministry because the statistical Ministry would consult us at the NITI Aayog consistently. There was never... And when the GDP numbers were given out, the government never had [them] advanced. Each of us found out an hour or two before the press conference on the GDP numbers, and we were informed an hour or two before only because we would be the ones who would be going to talk to the media after the numbers have been given out; but that was it. So the Ministry, the statistical Ministry, has its own independence. What you need to do is point out what the flaws are. I mean, did the World Bank also undertake the hard study? Did they put out that, look, these are the methodological problems; and therefore, you need these corrections. Then if the corrections don't happen, you can complain.

Indermit S. Gill: Danny, and then who else one? I think we'll have to take four questions this time, because otherwise... First Danny, and then... Yes, you.

Danny Quah: Thank you so much, Professor, for such a wonderful lecture. My name is Danny Quah. I'm from the Lee Kuan Yew School of Public Policy. My question to you is, you have thought a lot about the domestic challenges in India's growth trajectory. My question is, is the world ready for the India shock?

When Singapore underwent its transition, as we say, from third world to first, it barely made a ripple in international relations because we're a tiny economy, four and a half million people, 720 square kilometers in area. But when China undertook the same growth trajectory, the whole world set up and said, "We are now subject to the China shock. China's export progress is stealing our jobs, undermining our industry, turning into ghost towns what were once-thriving middle-class communities." The difference is in size. India is the same size as China. When India grows from what it is now to 2047, along the growth path that you have described, India's impact on the rest of the global economy will be huge. Today, India already trades 46% of GDP. China, only 35%. Is the world ready for the India shock? How is India helping us prepare for the India shock? Thank you.

Indermit S. Gill: Very good. Just so you know, Danny is one of the hosts of this conference because LKY School and the Center for Global...

Arvind Panagariya: He may not know of me, but I know of him.

Indermit S. Gill: Everybody knows of him. Everybody knows of Danny.

Arvind Panagariya: I heard him speak. He gave a wonderful seminar. This was at [unintelligible]. You had a beautiful paper about the time differences and how that plays out for the IT industry in India.

Indermit S. Gill: Hold this and speak. Okay, next question. Yes. Great question.

Audience Member 1: Thank you. My question is, your projections for the next 23 years are largely based on past trends, and a big part of that picture was the services exports. And now in this age of increasing protectionism globally, do you see the same picture playing out, or do you see changes in the trajectory or the patterns of growth? Thank you.

Indermit S. Gill: We'll take two or three more questions, and then one more round, and then we'll be done. We will go over time. We'll go over time a bit. Yes, please.

Audience Member 2: Thank you, Mr. Panagariya for this. My question is about inequality. I think that's a story that's something that we've discussed as a part of India's drive towards development, but specifically with respect to where we land in terms of inequality now and where we expect to be in 2047, we can expect GDP numbers...

Indermit S. Gill: Question, question. Give the question.

Audience Member 2: Yes. The question is what do we think is more important for India in the next 20, 22 years to reach the path of a developed country? Are we thinking about the question of inequality and what inequality numbers are we believing in?

Indermit S. Gill: Good. So we take two questions from here. You first, ma'am, and then Dilip.

Audience Member 3: Well, I just have a couple of quick questions. The first one is, what is the Viksit Bharat? You never defined that for those who are not from India or has a background in the economy of India, we don't know what that is. And second, quickly, you claimed that the per capita in India is close to 14,000, but actually, several Federal Reserve banks here in the US, especially the St. Louis Bank, it says that for 2025, it's projected to be not even close to 13,000. Why the difference?

Indermit S. Gill: Explain that, too.

Arvind Panagariya: Thank you for—

Indermit S. Gill: I think she misunderstood. She thought that you were saying that India's per capita income today was 14,000.

Arvind Panagariya: Yes.

Dilip Ratha: Thank you. I'm Dilip Ratha from the World Bank. You are in the core of the center state relationships in the country, in India. I hear a lot of talk about forming a city [NITI] Aayog, like a state-level NITI Aayog in many states and probably in all states. How do you see that playing out? And will that help the coordination or will it not help coordination, especially when the same party is not there in other states?

Indermit S. Gill: Very good. Any more questions? Over here, this side, this side, this side? Yes, over there. One more question, then I turn to Arvind. Keep it real short because there are other people who still want to ask questions.

Audience Member 4: All right. Thank you, Professor. You showed a table of growth rates based on between 2004 and then 2018. And then you had another one in 2018, 2023, and then another between 2004 and 2023. And you had US... Sorry, the dollar deflator for those years. My question is, since we had a recession between 2007 to 2009, a global recession. And during recessions, normally what happens is, since you're recovering from a low base, the growth rate tends to be higher than it would be just to a pre-crisis level. And then the same thing we had with COVID, and those were structuring recessions, if you will, in the global economy.

Indermit S. Gill: We got it.

Audience Member 4: So did you adjust your average to those discontinuities, or what would you do in the case of the Indian economy to make sure that those things are reflecting your average? Thank you.

Indermit S. Gill: Good. We'll take this round.

Arvind Panagariya: Okay. All right. So, Danny, what I would say is that the fact that one shock has already been observed, the China shock. So probably there's a little more room for the second one, meaning that there's less of a surprise element left when India gets to that level. But also, I would say—

Indermit S. Gill: But less of an appetite.

Arvind Panagariya: That is true also, but preparedness is a bit more. But the India shock is going to be a little different. I'll tell you why. One, the Indian growth process has not been as export-driven as the Chinese has been. That's the first point. The second point is that the shock, really, of the Chinese expansion really was felt largely by the developed countries. You look at, for example, I go back to the 1980s, there was quite a bit of textile and clothing industry in the United States, and all these multifiber agreement quotas existed, and all gradually, they all went out, and textile clothing practically disappeared from the United States. So the shock in this sense was to the developed countries. When India's growth happens and continues, whatever shock happens, economically at least, is going to be felt perhaps more in China, I would say.

Today, as I said earlier, that even on the apparel industry, China accounts for 35% of apparel exports still. So when India takes over that industry, US and Europe have already exited those industries. So in this sense, for both the reasons that India is less export-oriented than China, and now the global economy also includes China, which is the second largest economy. Some of the shock is going to be felt more in China then. So it's a bit more—

Indermit S. Gill: I just wanted to add one quick thing to this. I looked at household final consumption ratios in 2023 for China and for India. For China, it was 40%, and for India it's 60%. It really speaks to your first point.

Arvind Panagariya: Yeah, correct. That's right. India's savings rates are nothing like close to 50% savings rate, which is the mirror image of what you had said.

That also actually speaks to the second question, which was, will India be a little different than in the past that has been IT-driven? I'm hoping that it will be somewhat different. The next 23 years will be somewhat different because without that, this transition I talked about from agriculture industry and services and urbanization, that's really not going to happen. You really then end up with these pockets where you got a very highly capital-intensive industry producing all the output and workers are being left to agriculture or some of these household industries, which is not very good. That's not a good transition. I hope I will see what happens, but this requires both the urban land reforms. A lot of things in that need to be done by the cities and by the states on the land aspect and labor reform, I think. So hopefully, the next 23 years would be a little more different. Job creation would be better than it has been in the past.

I'll come back to inequality at the end, actually. That's an important point, and I want to address that a little bit because my thinking on this is very different from large part of the profession.

Viksit Bharat was simply meant by that, the developed India. Bharat is India, Viksit is developed. Will India be a developed country by 2047, which is the 100th anniversary of independence of India from the British? That was the question.

On per capita income, actually. No, India's per capita income, as I stated, was quite low. It's below \$3,000, \$2,780 or so. The \$14,000 was the goal to reach by 2047. That was the goal by 2047. That

number applied to... Can India do it by 2047? Can it get to that income per capita income level from this very low, below \$3,000 today? That was the question.

Indermit S. Gill: It would have to double and then double again, basically.

Arvind Panagariya: Yeah, right. On the center state, this is ongoing. Its, ultimately, decisions are by the states. It's not something that the center can decide. If the states want to... Because states always had the planning commissions. There was a counterpart always in the states when the planning commission existed. The center closed down the planning commission, replaced it by the NITI Aayog. And some states are doing this. Some states are converting their own planning commission. These used to be called the State Planning Commission. So State Planning Commissions are being converted by some states into state NITI Aayog. So the fact that the states are run by different parties and so forth is of relevance only in that if that means that some states will choose not to convert the State Planning Commission into NITI Aayog, then that will be their choice. That is perfectly fine. In the end, it is the functions that matter more. And as long as even within the State Planning Commission structure, the functions that have to be performed are performed in the way that a state NITI Aayog would do, that's fine also. The label is not of major consequence. So then what was there about the recovery effect?

Indermit S. Gill: The last question was, were there these recovery effects that—

Arvind Panagariya: Oh yeah. When I wrote down those, that was precisely the reason that I gave the breakdown of the growth rates with crises, without crises. No matter how I look at it, the growth rate turns out to be high enough. You can take the pessimistic one, which is because of the crises, etcetera, the growth rate turns out to be 7.8%. You can take that, or you can take the high one, free of prices, which is 10%. My story works actually even with the low 7.8%.

Indermit S. Gill: Good point. Actually, we'll share your slides with the people so that then you can actually look at these. There were two questions online.

Arvind Panagariya: But the inequality one, should I address it?

Indermit S. Gill: Actually, one of them has to do with inequality as well. The first question was, of course, because you mentioned infrastructure and so on, the first question is, is the tax base large enough to support public infrastructure, or is that not a relevant thing for India?

The second thing is, how will the government ensure equal sharing of growth benefits as India becomes a high-income country, given the existing amount of discrimination? Those are the questions. I know that the second one relates to what you were going to say about India.

Arvind Panagariya: Okay. On the tax base, you see, what I would say is that even if there's a huge scope for widening the tax base. It has been a challenge, but efforts will continue there. But even with the current tax base, what I would say is that the government has been incredibly efficient at using the resources, particularly the capital expenditure part of it. So the capital expenditure went up maybe of the central government from 2% to 3% of the GDP, and that really made a big, huge difference. In a way, there's also the issue of absorption capacity, which will only rise gradually. Even defense, for example, needs a bit more impetus. Defense expenditure in India is still very low, actually, particularly the capital expenditure, which is what you need to do. There is also the issue of absorption capacity, which will rise gradually. With that, I think the tax base will have to be widened as well. So that's an ongoing effort, both in terms of base as well as collection, much in rates, the administration of the tax system.

Indermit S. Gill: Inequality.

Arvind Panagariya: So now the inequality issue. I have really a different view on this. For a developing country, the first priority has to be always poverty. What am I doing for the bottom 30%, 40% of the population? And on that front, India has done actually quite well because of the

democratic setup, and this also speaks to the question that came from online, that democracy has an inherent bias in ensuring that those who are in the bottom 30%, 40% of the population are paid attention to. And in India, there's a huge constituency. Even with this relatively low per capita income, as early as 2005, 2006, where the per capita income was just barely beginning to rise, the NREGA, the National Rural Employment Guarantee Act, was put in place. Then the Food Security Act was put in place. The Right to Education Act was put in place. So a large number of them are very redistributive. Now, believe it or not, there is a huge competition among political parties during each election about announcing these redistributive programs to the widows, to the women, you name it. Every constituency that you can name it, any large group you can name it, there are redistributive programs. So at least the government revenues, as they become available more and more, will get channeled into redistributive programs. That goes on.

So to both the questions, this is what I would say. Inequality. Now, when poverty begins to get conquered, intellectuals always go, "Oh, but what about inequality?" The first thing actually in the Indian context I saw was that, "Oh, what about the Scheduled caste? What about Scheduled tribes?" These are the traditionally neglected groups, caste groups in India. And so, I actually did myself all the numbers because luckily, the sample surveys India does actually identify the Scheduled caste and Scheduled tribes. And lo and behold, when growth happened, all boots got lifted up and poverty declined. I did it by every conceivable group you could identify from the sample surveys, Scheduled caste, Scheduled tribes, OBCs, the Other Backward Caste, then Hindus, Muslims, Sikhs, Jains, you name it. Every single group actually got lifted up with the growth. So it is a powerful engine. And what growth by itself doesn't do in the Indian democracy, the redistribution policy then compliments that.

Now, come to inequality. In the end, let me ask you, would it please you if we asked all billionaires in India to migrate to Boston or to Washington, DC? We can ask, would you make that recommendation? It's a complaint then isn't it? If you do the income inequality or expenditure, really, our surveys really talk about the expenditure surveys. These are all expenditure surveys. That inequality, if anything, your own numbers actually show that India is one of the lowest or probably the lowest. No, wealth. Wealth in India, in the rural areas, what is wealth? It's land. And that land, of course, is not evenly distributed from the British days, we know. And the land reform in India failed. So if you look at that kind of wealth inequality, which is driven largely, the measures are driven by who owns how much land. That will turn out to be very high. But is that the relevant inequality I should worry about?

And lastly, let me make this point, which I like to make, actually, if nothing to tease you all. I mean, the fact that tomorrow, let's say, whichever billionaire you want to pick, Bill Gates or something, any billionaire you want to pick or any billionaire that you dislike. If he makes another billion dollars, are you going to sleep any worse tonight with that knowledge? I'll tell you, one fine morning, I got up, Wall Street Journal ran a story about this billionaire row that apparently there was a row of these high-rise apartments that had appeared in New York City within the previous 10 years. I had no idea, actually, that it had happened, but I learned it from that story. And the billionaires lived there in the penthouse apartment in those buildings that went for about quarter billion, \$250 million. I slept as well that evening as I had slept in the previous one. In fact, I was more fascinated, "Wow, I didn't know that there were these billionaires living in my backyard." Inequality where it hurts is in your immediate social context. What happens is if my colleagues get a salary raise of 20%, with the same productivity as me and I get only 10%, that really is killer. I lose my sleep for months. That's my immediate social context. The inequality really hurts in your...

I mean, the sociological aspect of inequality is that we really compare ourselves to what happened to... When I visited my village, for example, the question is, look, how come the town next door, which is Bhilwara, why the development has been so much more there than in our village? Because that's an immediate context that they were the same as we were 10 years ago. How come they are

so much farther now? That's the immediate context. But the fact that the Mukesh Ambani makes another billion. They don't even know about it. And the fact that he builds this fantastic house in the middle of Mumbai, which is worth a billion dollars, they all think that this is it. So if you go to Mumbai, people say, "Did you visit?" "Did you see that building?" It's not a jealousy aspect. It's just a fascination.

Indermit S. Gill: It becomes like a pyramid.

Arvind Panagariya: So it's very different... The inequality, the way we get exercise is very different. Now, there are aspects of it. If it's the wage inequality we are talking about it, that's real.

Emcee: I'm really sorry.

[END OF TRANSCRIPT]