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From poverty to empowerment: Raising the bar for sustainable and inclusive growth

Centre for Social and Economic Progress (CSEP)

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Know more details: https://csep.org/event/from-poverty-to-empowerment-raising-the-bar-for-sustainable-and-inclusive-growth/

Watch the video: https://youtu.be/Yd0VkqA6KI4

The following is an edited and revised transcript of the event. It has been generated by human transcribers and may contain errors. Please check the corresponding video for the original version.

Rakesh Mohan:

I am delighted to see my colleagues from the McKinsey Global Institute. Since I have been involved with them since 2010. As a senior advisor but of course, I am not responsible for anything they do. I tell them what they should or shouldn't do but whether they listen to me… since I have been an advisor in my life, most time people don't listen to me. But I have to say as an introduction before I introduce the speakers that I have actually learned a lot from McKinsey Global Institute. Because they do things differently from most of the rest of us. To not to say they are right, but they are certainly interesting in opening one's mind to many different things happening in the world. And among other things they do is to look into the future. Of course, often they get it wrong, but they do look into the future much more I think than most others and they are very daring about it. The subject for today – from poverty to empowerment. Isn't that genre really looking to the future on how you go from poverty to empowerment, along with all the issues to do with sustainability and SDGs put together and growth? So, it is not the case that they either talk on SDGs or talking about climate change or sustainability, they are talking about all of that together. So, let me now introduce them. Sven Smit is a senior partner at McKinsey, that is the actual consulting company. And the current chair of the McKinsey Global Institute. Actually, the first time I did have any contact with the MGI was along with Montek Ahluwalia back. I think Montek was it 2000 when we were involved in their growth study. I think it was 2000. That was the first time we were together in that particular activity. Sven is a senior partner and chair of McKinsey Global Institute. He also chairs the insights and ecosystems work. He is currently the member of the whole firm, not just the MGI, the whole firm's global leadership team which is called the shareholder's council which oversees the firm's knowledge development. Maybe later on you can tell us what that means. Overseeing the firm's knowledge development. And of course, being with McKinsey he works with leading companies to develop strategies for growth and serves all industries, analysing the success factors required for business growth and examining… this again what the MGI does for them… to weigh megatrends influence growth and how the world is going. He has been associated with the ideas and "**strategy behind the hockey stick: People probability and big moves to beat the odds**". That was 2018. And "**the granularity of growth and how to identify the sources of growth that drive enduring company performance**". Two books that he co-authored. And as a chair in MGI, he leads research and authors MGI reports on global economic trends and topics such as productivity and growth. If you see the productivity and growth with which MGI started as I understand. Urbanisation, innovation, and technology, labour markets, the future of work, the emerging markets, and also Europe's economic outlook. He holds a degree in mechanical engineering and an MBA. But he doesn't have a PhD. Being a research institute, I have to make that distinction for the chairman of a global institute. He has worked in measurement and control as an engineer and a researcher. He is also involved in the Netherlands his home country and is committed to a better future for the Netherlands. Sven, you should work for the whole world and not just for the Netherlands' better future. Then my colleague Anu Madgavkar is a partner at McKinsey Global Institute. And she leads global research focused on labour markets, human capital, technologies, economic impact, gender economics, digital financial inclusion, and inclusive growth. She also led research efforts focused on India's economic growth, labour market, and digital economy. Mostly assisted by Shishir Gupta who is now with us sitting there. Anu was previously based in Mumbai where she co-led McKinsey's financial institution work in India. She has a range of clients, of course, the top-tier global banks, Indian statehood banks, capital markets, and infrastructure-focused financial institutions across portfolio mix organisations of the product package, strategy and wealth management, wholesale banking, life insurance, and retail banking. Anu, there is a lot her way. And she has moved off to New Jersey. From Mumbai to New Jersey. So, I don't know what happened to her, but she moved to New Jersey. But this is basically she could do it because of all the zoom. Otherwise, I don't think she would have done that. So, having said all that, let me know… who is going first? Sven, from poverty to empowerment. I have been sort of preferably __ so, I know roughly what they are going to say. I often didn't like the numbers. But go ahead.

Sven Smit:

Thank you, Rakesh. I think this PhD is the knockout for the presentation. But I am also not an economist as you heard from that long resume talk. It is a privilege to be here among researchers again, no Ph.D. But I do research I spent a long time on it. I think the one angle maybe to Rakesh's point of what we try to do at MGI is to hold the test is what we do as it is from micro to macro. As macroeconomists, we are trying to figure out what does a company does, what 100 companies do, and what 1000 companies do, and if you add it up does that actually add up to what the economy does in the macro? We had one famous moment. Maybe Rakesh was also involved in the productivity and growth work, Robert Solo was involved because we needed to actually have real PhDs help us and we were doing the cost curve of the steel industry, of the supply side, the supply curve and we had every single steel plant in the world on there with full cash costs fully integrated cost with the real numbers. And he got into tears and he said can you actually do that? Because for him this was two mathematical lines upward sloping, upward sloping, convex, non-convex and God knows what mathematical. That is really it works? I said yes. And then here is the demand and that is the price of one cent off per ton. So, that is what we try to do so to say from that backup. So, for the work that we want to focus on today is, you might say things like, it is about sustainable inclusive growth and then we talk about from poverty to empowerment in the title. And why do we say this? Because we are talking here about economic inclusion. Not all the other inclusion factors that you could also talk about. But broad-based economic inclusion across the world and society. And what we are suggesting here in this work is that it is superior to do the work across growth, economic inclusion, and sustainability at the same time rather than in silos. And the answer is fundamentally different if you do it that way, than if you do it in silos. Let me give you two or three examples and then we will just get into the depth of it a little bit with me and Anu. The first point I want to make is if you were to only solve for the climate change energy transition you would do it at any cost. You say it is an apocalypse, at any cost let us do it. And then you basically get the global north to say to the global south, why don't you do it tomorrow and the global south doesn't have the money and it doesn't work. You would also maybe do the expensive first because it goes with higher volume instead of the cheap first if you were to do a silo optimization. What we are suggesting in this work is if you want to have sustainable inclusive growth the transition has to be affordable. But the other point is people need to actually get richer. Because when people have the money, they can pay for the transition. And I will make this very personal. So, strangely in the 60s, the GDP per capita in my country was the GDP per capita of China today. You could at that point not swim in the Rhine because it was dirty. Because at that time we could not pay for a clean Rhine. That is why the Yellow River had all these colors as China was getting richer. Now China is rich enough for the Yellow River to get clean. And that is a holistic way of thinking about these three parameters. So, with that maybe I go into this. So, we are suggesting that we need to solve for two opportunities or problems whatever you want to call these in parallel, and that actually there is some urgency to think about to 2030 even though you are working towards 2050. The crunch of this entire stuff is the next decade. Very simple, if you don't do it in the next decade, it is not going to happen. What you don't start never finishes. But if you do very little in the next decade, you will never meet these goals that are out there. We could have a long debate about how close we can get to these goals, but we think you need to not only solve the energy and land use systems problems of the energy transition at zero, but you also need to solve that an entire generation of people can live up to a much higher line of livelihoods, which we call the empowerment line which I will spend a little bit of time on soon. So, to this point of that, we want to solve economic inclusion and transition at the same time, You also do that while there is growth. And what we suggest, there are three little arrows, in an article that we wrote two years ago, there are basically 15 very fundamental arrows between these three. In the West, there is a bit of hesitance on growth, because people say with growth comes more footprints. So, we shouldn't do it. I mean carbon footprints or environmental footprints. However, growth also produces money with which you can pay for the transition which is my Rhine problem in the 60s. If the transition is very expensive as I said, then the economic inclusion gets bitten. If you keep a very low bar for economic inclusion, you might do a good net zero transition but you keep everybody poor. So, you have to not only solve the problem as a result set the goals for all three. So, we are suggesting that you can sort of solve this as an end and you should solve this end and yes there are some balancing acts that we will try to make transparent in this discussion. So, the first point we wanted to show and I am sure this will immediately jump to controversy and so on. But we all grew up on the one-dollar poverty line. Some of them in the world if you ask them what is the poverty line, they will still quote the one dollar although the World Bank has brought this to 2 dollars 50. Here in India, I don't need to say but it is useful to repeat when you are in the west, that for that you kind of spend one dollar on food and one dollar on the rest. And by the way, food means you still have famines. At the poverty line food is quite not so rich. We believe that for typical low and middle-income countries, the floor called Africa, India, Latin America, and many places should move to 12. That is not we only, world banks have done some work, the IMF has done work on this, and you might have done work on this that I haven't read. But for that, you see this is a step up in food from one to four. This is purchasing power equivalence. Then you get shelter, you get a little bit of discretionary spending. The difference in the human life between subsistence food at the poverty line and having access to all these four at this level is that the people become empowered. Why do we use the word living wages? It is a good term but that just says you can live. And empowered means that you are at the level where you can start being a participant in society and that you can live up to the potential that is in you. Because you have the education, you have the health, you have the say. By the way, at 12, it is still very basic. Yes, it is not… but it is a lot better than two. We think that when we solve sustainable inclusive growth, we can't just say it is against the poverty line. There are many, many reasons there are not many people, It is still 700 million but not that many people live below it. But also, it is just not the right line. So, if you solve this equation… then you might say ok, why is that for a rich country much higher, that has to do with the cost of living structure in the rich countries. But just think about the two to twelve as the main shifts because that is 90% of the people that we want to raise the bar for, is from that two to twelve. There are many people who say Well, what has McKinsey to do with an empowerment line? Isn't that the World Bank type kind of work? Development of the economy, whereas the micro-to-macro in that? First of all, this is a micro consumer spending pattern which basically they are going to buy with businesses. That means these businesses need to produce affordable products so that they can actually meet the needs at this level. And 50 to 60% on this will show shortly if this puzzle is sold by business-led growth. So, if businesses don't satisfy this condition in their living wages which by the way the living wage standard is not that far off from that 12 dollars that multinationals are starting to hold themselves on all across the world. So, if you think about that, that is a huge shift in that three-part framework of sustainable inclusive growth, and Anu is going to show you the parts that may be solved already and the parts that are still like a gap if we want to solve sustainable inclusive growth with the net zero bar that we already know. What does that growth do, what do these 12 dollars do? Then we will come back with a little bit more.

Rakesh Mohan:

Thank you, Sven. This is embargoed everything you have got these papers here. This is embargoed at 11.30 a.m. tomorrow when they will release it formally in the B20. So, please this is a very privileged preview. So, please keep it to yourself till 11.30. It is being recorded and once they have released it, we will also put this on our website.

Anu Madgavkar:

Thanks, Rakesh. So, to pick up where Sven left off, with the empowerment threshold is defined based on the two dollars going to 12 dollars and then higher for higher-income countries. If you look at the distribution of population across all of these countries, we find that roughly 60% of the global population today has consumption levels that are below this threshold. And they are not all the same. So, the layer right at the bottom is roughly 10%, roughly 850 million people are at less than 20% of the empowerment threshold for their respective countries. And in most countries, these people would be considered in extreme poverty. But even above those people, there are another 4 billion odd or 4.7 billion total who are well below this threshold of consumption that is needed. So, that is kind of one of the gaps or challenges that this research delves into, what would it take or what would it cost or what would it take to raise the spending levels and the spending power of this 61% of the global population up to the required level over a ten year period. But on the right-hand side, you see the other gap. Another gap is really focusing on the net zero transition. And here what it says is that we will need spending of various kinds. We really focus on spending around low emissions assets and technologies across a variety of sectors around the world. And that spending in total over the same ten-year period would be about 55 trillion dollars, cumulative for the ten-year period. This is not including the high emissions investment, that will also continue in different parts of the world. But the 55 trillion alone is a large amount and it represents something like a 41 trillion step up relative to the investment level in low-emission spending that is already happening in 2020 that we can assume goes forward at the same level, all those ten years. So, 55 trillion dollars in total across, the bulk of that is actually in power and mobility, but there are seven sectors across which this accrues. So, when you translate both these two numbers into economic gaps, you think about from an economic standpoint what amount of resources need to be channeled to fill these gaps. On the empowerment side that is a cumulative of 37 trillion dollars again over a ten-year period. It is about 3.7 trillion per year over this period to raise everyone to that level. And as I said on the net zero side it is about 41 trillion of incremental spending on low emissions technologies. If you add up these two, that is 8% on a combined share of GDP basis. 8% each year over a ten-year period towards shifts in consumption, shifts in spending, and investment required to meet both these gaps. And the regional composition of this matters. On the empowerment side, more than half of this actually comes in from sub-Saharan Africa India, and other Asia. On the net zero side you have large shares that come from the US and EU, the more developed countries that have larger emissions footprints to start with. But even there the global south so to speak, developing countries would account for almost half of the net zero gap. So, this is one of the linkages that Sven alluded to that, for the global south, for developing countries, it's two kinds of gaps or two kinds of challenges that they have to confront pretty much at the same time. When you think about this as a share of GDP, I talked about 8% combined share of global GDP each year, that is 4% roughly on either side, but it varies a lot by region. For most advanced parts of the world, it is the net zero gap that is larger. It is 3 to 4% of GDP annually for the US or Western Europe for example. In developing countries, this can be as high as 6 to 7% of GDP. For India, these numbers are about 13% of GDP on each side. So, it is a large gap, and for sub-Saharan Africa in particular the empowerment gap is very high. And might even warrant thinking about a ranged level for how far can you actually get because the gap is actually very high from where they are today. So, there is a lot of regional variation. But the good news is that all told, when we look at the potential that growth and business-led innovation have, to address or fill these gaps, that is very sizable. Growth in business and innovation together can address and fill maybe half of the combined gap. On the empowerment side, the value is much more. About 65% of this gap can be bridged by protecting what we call baseline growth expectations which is the projected growth under normal conditions that we are looking into country by country and for the world. And the rest really by accelerating that growth by capturing productivity growth opportunities by sector in each of these countries. So, two-thirds of the global empowerment gap can be bridged on this basis. And on the net zero side, about 40% can be bridged through growth, but also through technological innovation that brings down the cost of these low emissions technologies. So, the good news is that not all of the gap can be addressed, but a sizable chunk can be. How does this actually work? On the empowerment side, the big lever is higher incomes that come with growth. But crucially the fact that growth can enable more jobs to be created in productive sectors, in productive occupations, and upskilling workers to move into those jobs is the channel through which incomes can rise and consumption rises as a result. On the net zero side, what growth does is, it expands the dollars of investment capacity that these economies have to spend on things like electric vehicles or renewable power. So, there is a 25% increase in investment capacity, but beyond that what growth does is, it spurs the reductions in technologies that would make in our estimates about 10 trillion dollars of investment in the money. By in the money, we mean cost-competitive relative to fossil fuel technologies after adjusting for market risk and technology risk. And when options become cost competitive the switch into those is easier and actually makes sense and we think there is 10 trillion dollars' worth of that, that can come on stream in a vibrant and fast-growing business-led environment. So, growth can fuel both transitions. But as I said it doesn't go all the way. So, there is an unfilled or residual gap on both sides. And its effects are also quite different based on the region that you might be in. For the faster growing economies, particularly in Asia, particularly India and China for example the combination of baseline and accelerated growth can do a lot to close most of the empowerment gap. Whereas, it is harder for countries that are growing more slowly. On the net zero side, the impact is more even across. Most region's growth can take you about a third of the way or 40% of the way, but leaving a sizable portion of the gap still unfilled. So, that was sort of the good news or the expectations around what growth can do. We acknowledge that we have about 13 trillion dollars of empowerment gap and 26 trillion dollars of net zero transition gap still to be addressed. So, the questions really are, what are the options available for societies to think about how those gaps can be bridged? (Question from Rakesh Mohan not audible). These are for 10-year periods. 2020 to 2030. No, with the logic that if you make this transition work over this period it sets you up well for the 2050 time frame. So, the ultimate goal is 2050, but the investments nethat be made at this point. So, there are some real questions about the residual gap and some real choices that societies and economies would need to make in terms of how far to go on those and how to finance them. For empowerment, we talked about a 13 trillion dollar cumulative gap. We think that there are 3 trillion dollars or so, a chunk of this which could come through the lever of making affordable goods and services available mapped to all the essential needs that go into the empowerment line. So, if you think about housing, health, food, and education, how can the costs of these things come downlinked to real productivity improvements in these sectors? And there is a public role and a private role to be played here. It is not possibly market forces alone but intelligent deployment of public support in areas that then make housing or healthcare affordable for example. But it is possible based on this micro assessment that says that real productivity gains are available and if we harness them and pass them on that is 3 trillion dollars of opportunity that goes towards filling the empowerment gap that is available out there. And for the rest then it is really a question of how much societies want to commit in terms of additional public support to things like direct transfers or other ways to subsidize the cost of living for people who live below the empowerment line. On the net zero side, there is again the question of 26 trillion dollars. Here you will see that portion shaded in grey which was the unfilled gap that growth and innovation alone may not be able to address. Here again, we see a role and we have broken this down into a large number of investment opportunities by sector and technology. But there is a big role for public capital to step in and create blended finance solutions that can improve the economics of these investment opportunities and crowd in more private capital. So, there is a potential pathway, We paint this as a scenario, the consequences of stepping up public finance commitments to the extent that we are describing here are uncharted. So, they will have consequences back to the baseline economy. But we do paint this as a scenario to consider and for societies to think about that and make a choice on a more informed basis. When you look at the net zero, this is a map of sources of potential capital on the left-hand side and then the end-use sectors and technologies where capital investment will be needed on the right-hand side. And what is clear is that the sources that are public in nature which include grants, concessions, and state-owned enterprises have the potential to flow into every end-use sector. And particularly in the power sector, they do have large opportunities where public capital can come in and have that crowding in effect that then spurs more private investments. So, there are a set of very granular, very detailed opportunities here, but as I said the consequences of actually doing this are quite unknown and uncertain at this point. What we do know is the following, which is that, just based on harnessing the forces of growth and innovation, historic progress is possible. We look at this by class of region, but even globally 600 million people could exit extreme poverty, and 2 billion or 2.1 billion people could actually attain the level of consumption we are talking about in the empowerment line. And

10 trillion dollars to address 50 gigatons of carbon abatement could also come onstream. So, all of this is possible. Beyond that, if you think about the societal commitments or the public capital commitments that are consistent with the full scenario we painted, that would be about two percent of global GDP on an annual basis. So, it is a large shift and again it is regionally very uneven. So, the needs of lower-income and middle-income economies will be higher. and there are real questions about how much of that can be committed. Notwithstanding that, focusing on the growth and innovation piece is one of the big takeaways I think of the work from our standpoint.

Sven Smit:

So, I think you sort of saw the full depth of the problem now. You might say why McKinsey even wrote a report that doesn't solve it all. And I think the most important point that we actually want to do with the work is that the world asks itself the right question. The right question is not the energy transition alone, it is not growth alone, it is not economic inclusion alone. It is all three at the same time. And the answer is going to be different if you think about all three at the same time. In the place I live, the Western world, there is hesitance about growth. It is tentative about growth because basically, growth leads to more footprint. But if you do the full analysis of what Anu just shared, additional growth gets so much more additional financing capacity. It is easier to solve the transition with growth than without growth. Now in India, this might not be a question. But the large amount of money in this world will have to come from the Western world and if there is hesitance on growth on that is a problem. So, if you asked the right questions you are going to have a couple of shifts that are on these pages. Instead of scattered siloed solutions for sustainability, for growth, and for economic inclusion. By for example, for an economic inclusion, you will do a lot of development economics, let us bring these tools, but not the growth, that doesn't work. A farmer in Africa is going to only send their kids to school, farming families only send their kids to school when they have the money and the capacity to send them away. Then it is good that the school stands there. But it is not true if you build the schools, they will come. They actually need to have the growth to free themselves and have the capacity to live that. So, that interaction just works everywhere. And the problem is solved differently. This notion that we only focus on extreme poverty which is only 700 million people instead of the 4.8 billion people that aren't talked about is a big shift in trying to solve the problems for the world and the opportunity for people. Net zero at any cost will bite the empowerment and so on. That is another thing that makes or puts the urgency on the transition to go cheaper. And we are currently not doing the cheapest things first. There are three cheap things. Heat leakage or cold leakage, methane leakage, and food waste which are behavioral that we don't address as much as wind and solar. But they are and everything that has to do with the efficiency of energy consumption. It is just cheaper. You would want more of that first to get there. And again, since business-led innovation can drive a lot of this solution, there should be a lot of focus on the deregulating those sectors so that they can do it. Why is there such a big permitting discussion in the environmental space, because if you can't… even if you want to build the new plant, but you can't do it because it is not allowed by permitting. We are not going to get there either. So, you need to unleash the business-led growth also on the regulatory side. So, I can go through every segment of energy or in this. Same thing again for the empowerment. So, this joint solution is to ask the right question and we fully well acknowledge and we think the world should acknowledge that by business-led innovation with all the preconditions I already gave which is going to be incredibly hard work, we only have solved half. It is an interesting question when you ask society to solve something that is not solved, whether you are going to try to acknowledge that and then change the problem-solving or you are hiding it. At the moment I think the gap is hidden. This half gap that we can't solve on the empowerment yet with purely business-led innovation, what you would have as a societal response is just up the regulation. Tell them to go do it then. But if that cost then becomes a burden that will eat the empowerment again. And over time people will become resistant because if what you do is not recognize that you are somewhere moving the costs around into the spending bucket of the empowered consumer, they at some point will revolt against these policies because they were not told the truth of how much it is that we are taking on. And we hope that this works with that says we need to solve it across the three elements. Not siloed. And that this work changes the question and we know that the __ has the right question. Sustainable inclusive growth with the bar for poverty at empowerment. We will get closer to a good answer for society than if we just solve it one by one. Thank you.

Rakesh Mohan:

Thank you very much, Sven. I think you got a little bit of flavor of the approach of the MGI as in the beginning. Really connecting the micro to the macro which we often don't do and of course, they have their own particular way of doing it __. The other thing I would say is that one thing that is very characteristic of MGI is the work across geographies very, very easily. And the teamwork is… You have teams in different places and the teamwork is amazing. That is how they are able to do all this number crunching that you have seen. So, Laveesh, can I ask you to do your comments from up here? And let me just for the benefit of our guests, if not for CSEP people, Laveesh has done a lot of work on many different areas, but prior to becoming president, he was really coordinating and leading our climate change work. But he has done a lot of work on livelihoods, financial inclusion, and many other issues. One thing maybe you don't know is that when he got his Ph.D. in economics in Boston, he got the best thesis award in international economics. He has become much more domesticated in a sense. And of course, he is now our president.

Laveesh Bhandari:

Thank you, Dr. Mohan. It's really nice to be here. To actually listen to a full-scale McKinsey presentation. I have long admired your work and the capacity to be able to bring up amazingly disaggregated, multi-dimensional things into a common coherent framework and you do the same here. It is very nice to be able to see that. It is also really nice to see those amazing graphs that you make and have always wondered and felt quite jealous really of not being able to do that. Some of those graphs I get so mesmerized I actually can't see the numbers but as a result, I am not going to talk about the numbers. There is a problem we understand all the basic issues and I think you do a great job of putting together the fact that economic growth is a component, an inherent component of the transition process, and of course, for both sustainability and equity purposes. You do that and you do that well with a lot of numbers and frankly, I don't know why anyone would not agree with your numbers because it is very difficult to agree or disagree with numbers in this space. There are so many numbers floating around, that it is very difficult to get a good grip unless we are able to unpack each and every one of them. And of course, that is difficult to do. So, there is that part. But I was quite taken in by this point about that for empowerment roughly similar to our overall SDG goals, roughly… not the same, the investment requirement is similar to those for roughly what I call mitigation. That is quite a surprising one for me. I never realized that it would be similar. But then I start to ask the question where is resilience here? Where is adaptation? I would have thought that they should be a part of empowerment because you really cannot sustain these kinds of benefits that you are talking about without those kinds of investments going under there. I am not sure what you have done because I don't really have the report. But if you… I am assuming you did not add those investments there, I am just going with that assumption. My guess is if you were to, the empowerment figures would way overwhelm those for mitigation. Just a thought. And which leads to some other ramifications. I am not going to go there but perhaps it is something to think about as we go further. The second really striking part of your work was the focus on innovation. And absolutely rightly so. However, the path from innovation to surplus, that chain is really not necessarily straightforward. Innovation may not be productivity-enhancing, and productivity enhancements may not lead to surpluses. Of course, there are many interrelationships in that whole chain. But the most important one I feel is that of prices. Surprisingly you haven't addressed the pricing issue in this. It may not have been directly linked to some of the points being made here. But it to me stands at the base of everything. And of course, with price, there are also the non-price kind of interventions and so on. Perhaps for simplicity and lucidity, you left that whole domain out. But I feel that prices lie at the base of whatever we will go ahead to do. Those are the two key thoughts that arose while I was looking at this. But then I started to of course, like any good piece of work I think it does generate some thought. I just started to think about three points. I am going to very roughly and quickly go with them. First, we are not going to get any global cooperation, any substantial global cooperation in the next few years. And if that is not going to happen, then the question is, is there a non-cooperative solution at all, in the short term towards this? I will come to that point a bit later. The second part, the point here is to do with, you do make it fairly clear where funds could potentially come from. It is also fairly clear, well you don't talk about it, but given the macroeconomic conditions in many countries at least from the public side those funds are not going to come in. And given all the externality arguments etc., we are not… I mean it is a realistic assessment, but today say those funds are not going to come up in the next ten years. So, then the question is that what could change that could make this whole system work? And there is the third point I would like to add. That essentially has to do with innovation. But a very specific kind of innovation. Innovation that leads to low-cost processes in, of course, energy, in storage, in carbon storage and sequestration, in healthcare, in education, and so on. So, we have to quickly shift from whatever the costs are right now to a low-cost economy and that to me is the only way this whole thing is going to be possible. And what then that says is that perhaps the critical investment here is not adaptation and not mitigation and so on. But actually, it is on R&D, just some thoughts that emerge which I thought is something for all of us to think about as we go forward. There is a last part here, which is a small one. But I thought it was something that just came up. There is no gender in your empowerment thing. But you know, gender obviously is it goes across all of those items that you have there. So, I completely agree with that. But I feel we all know how a gender focus leads us to a greater bang for the buck even on each of those empowerment elements. So, whether it is inclusion which you call savings or I think financial savings or it is communication or it is of course education, health, etc. gender focus can lead to far greater returns than otherwise. So, that essentially I think is my ten minutes. Thank you, Dr. Mohan.

Rakesh Mohan:

Thank you very much Laveesh for very, very thoughtful and analytical words which I hope that you will get a chance to… Now I will ask Renu Kohli. Renu Kohli is now a senior fellow with us. She has been a long-time researcher and practitioner, with experience mostly in macroeconomic policy issues that cover lots of sense. She has worked with RBI, and then many institutions starting with IMFIEG, which is the International Monetary Fund Institute of Economic Growth. And ICRIER before landing here. A lot of work has been focused on the financial sector, liberalisation, capital flows, and exchange rate management in emerging markets with of course a special focus on India and with us more recently she has been doing in some sense macro and climate change and pricing and non-pricing, issues to do with the mitigation. Renu.

Renu Kohli:

Thank you for the introduction. Thank you for the presentation of the report. It was certainly as Laveesh said and Dr. Mohan said, very thought-provoking and absorbing actually, and a huge amount of work, a very broad area, and then to distill it into down to the brass tacks, it is an enormous effort. It did provoke a lot of thought in me. My immediate reaction was that, ok, here is another concept of economic empowerment and it adds to all those multiples, besides the poverty lines the multidimensional poverty index. Then the concept of inclusive growth itself and then all the things. So many other objectives and all noble objectives, so hard to disagree with them. But there is a difference which is as you said, it is all connected and the closest parallel I thought was perhaps with many of these models which have modelled how to approach or to reach the net zero, make the net zero transition in the low carbon scenario. These models at least some that I am familiar with are integrating all of it together, investment requirements, and a certain GDP growth rate are assumed and it is distilled into sectors, investment of course shifts from high carbon to low carbon and therefore given the employment elasticities assumptions over there, job shift and all that. So, I think that is the closest parallel. I also found that the starting baseline of 12 dollars per day is close to the threshold level of entry into the upper-middle-income group from the lower-middle income. So, in a sense, it is reframing the poverty thing and so you add instead of 700 million, you add 4 billion more so you get this number 4.7. So, one of the things is that it will keep multilateral agencies like the World Bank busy with a lot of developmental work to do. Because that is the trajectory of the poverty lines thresholds has continuously been raised so that the number of poor has never really fallen if at all. But moving from that, there are some specific comments, especially about the numbers. I am curious as to why 2020 has been taken as a starting point. It makes sense to have it as a threshold for a decade. But 2020 is hugely abnormal in all regards. Especially with the enormous amount of GDP contractions in all parts of the world. Then it is linked to the fact that some number which struck me was that 90% of investment in 2020 was public in the public sector. And 20% of the consumption was by way of transfers. So, from the public side. That means a huge depression in both investment and consumption and starting from that base point then to have this huge spring and bounce in investments and public spending it seems very, very over-optimistic to me. Although I do not know the mechanics too much in detail. The next is that I saw the baseline assumption which is a 2.7% growth in annual real GDP. I am wondering whether what it does because a third of your world economy looks set to be contracting which is China. And 2.7% might not be very realistic. But however, these numbers are always like that. I am also not very convinced about the increase in… closely matching the point that Laveesh made… on innovation and driving productivity because the last two to three decades particularly show us that there has been innovation and tech but, aggregate productivity has actually systematically gone down. Whereas, inequality has risen. So, how do we achieve, because the concept of inclusive growth has been there at least since 2001 or 02. Then there was this growth report again by the World Bank. Then the G20 also adopted that inclusive growth sustainability etc. It hasn't come about. So, I am sorry to be… The sources of this increased productivity I saw is not cost savings as much, but innovation and new businesses and new job creations, whereas the experience in the last two decades has been quite the converse. So, that is where I think that there is a lot of optimism as to… the question I had in my mind was that, why should we assume this time it is going to be different considering that so much of investment is in the public investment domain. So much of consumption itself is subsidized, if that support wasn't there, consumption would be so much more depressed, and therefore demand overall the economy itself in the world would be so much depressed. That is the last. In the baseline, at least for India, I find 7% optimistic although that seems to be the… yeah, filling in the gaps, how to reach the frontier. There are three main things that are the source of reaching the frontier of this thing. This is, efficiency improvements, interestingly the sector that you talk of efficiency improvements is construction, and all over the world construction you see low productivity and one of the least productive sectors and it is very hard to achieve productivity improvement in that. So that is again another point. Second is work arrangements and I assume that is jobs or more efficient ways of operating. And then direct support to reach the front. So, there is a huge dependency on transfers which is okay, Most of the net zero carbon pathways that are looking at the impacts upon GDP and unemployment also assume a lot of transfer. So, that props up consumption apart from the income growth. What will it take to get to net zero? Public support is about 20% of it. Another 21% I think comes from private crowding in, private investment crowding in effect, and private transfers money 10%. Now, I am not sure about this bit about which is on the investment side. And then savings from efficient learning. I am not so comfortable. If I remember correctly this 10% was coming from consumer finance etc. so that is private borrowing. So, that is a lot of consumption support smoothing which is an increase in debt. And given that the starting point even now today it is 2023 debt levels are so high in all the countries including India. All over the world debt levels are very high. So, their bandwidth for all this is very narrow I would say. We will have the society… I think that is about completes it and specifically for India the need for public support to get on to this net zero 50% and the GDP. Your number is which was quite interesting that the India's need for public support to get to net zero is 50% larger or higher than the current social spending shares at now which is a lot. Again, I don't think that it is likely to happen. But in terms of, of course, framing the debate and setting or triggering a discourse which is also an extremely important part of provoking thoughts and discussion. So, that is all for myself. I am done.

Rakesh Mohan:

Thank you very much, Renu. Once again it was a very thoughtful analytical point. Before I ask you to give some comments down, we will throw it open. I just have one question which is that you are talking about an increase in overall investment for both net zero and for SDG effectively. It also implies that savings have to come from somewhere, globally __. To the extent that the world is aging and that the surplus savings which the last 20 years have been coming from China are not likely to come. So, where will all these excess savings come from?

Sven Smit:

So, what we thought is we would split the answer a little bit. I will give your answers a little bit. It is just in the sequence that we are thinking about. I will just give one general comment about the two reactions which I found very thoughtful. Yes, the one thing we were afraid of and are afraid of by this report because we have had testing reactions from advisors and so on is that this is too pessimistic. Because it does not solve the problem. Yeah, this is only – there is a 50% gap. And what I hear from both of you is you are too optimistic because you are not having this and all that. And I could very much lean into that thought too that there is what this actual frame is, with ambition, ambitious assumptions on growth, and with ambitious assumptions on investment and innovation rates, you can get to this level and there is still a gap that would also have to acquire ambitious levels of public support. I think we are actually wanting to lay out that we cannot hide this discussion anymore. Because otherwise, we will run into a different train wreck. And let me give you an example of that on innovation to Laveesh's question. We are very much on the innovation side and that should be happening. That is why the IRA is actually a better implementation at the moment than what is forced regulation to deploy. There are two kinds of regulations that you could do. One regulation is I tell you by that date this has to happen. And if you don't meet it, you can't sell your product anymore. And by that regulation, you force deployment of the whatever the then available technology is, but you are not accelerating the curve of innovation. Whereas …

Rakesh Mohan:

This is the inflation reduction…

Sven Smit:

This is the inflation reduction is constructed in a way that we will subsidise the prices that you keep investing and you are upping the R&D which has actually happened already globally. Because the innovation money has now shifted to the US. And the innovation investments. We believe there should be an enormous amount of work to rather even delay some of the deployments and use that money to make the future cheaper to make this possible. And we are doing the numbers actually ahead of COP28 on that. It is not that I have them fully, but if every dollar you deploy at the wrong price in the next decade instead of deploying towards R&D to make the future two decades cheaper might be sub-optimal. And so now we are very optimistic on the R&D side if we actually do it. And then we can have all the old debates and we can do it. But the learning curves in solar have been enormous. The learning curves in wind are enormous. Even on batteries learning curves are not horrible and so on. If those learning curves continue at least, but we might have to open nuclear too… I mean many other things need to grow on this. But the money is towards more enforced deployment because it is urgent rather, you then end up not spending the R&D as the money goes to the… that is maybe one area. You mentioned about not mentioning the price. Price can be… of course one way to stimulate innovation. But the price is also a way to destroy empowerment. So, the question is why we didn't do the price. We deliberately in this work which in most other work does not happen is to not already input the carbon price. You said this is the investment, this is what it takes and we are going to say, this is what companies will do at market prices and then this is the gap that is left. Which you then can implement for the carbon price, you can implement with other mechanisms and we could have all our own views of what the best one is. But most models that you read have it somewhere implicit the price already in which basically tells you that the consumer is paying which means the empowerment is not happening. So, we wanted to take that clean. But I understand that for that final gap… we believe for the non-final gap. So, the pre-public support gap, you could do it without a carbon price. That is how this is calculated. For the remaining, you could put a carbon price but every bit of carbon price deployed would just hit the… The last point on low cost, everything this says we need to get innovation to lower price. I believe there are lots of incentives in R&D but it is also deregulation. Part of the cost is permanent. Part of the cost is, if you think about nuclear there is an enormous chunk of the cost is permanent. It takes so long to build one because when you get the permit nobody is going to take that risk. So, there are many, many other places that are the case. But this focus on low-cost solutions is everywhere. I think by the way low-cost solutions but also the lower cost of production exist in these possibilities and the question is are we creating a regulatory incentives system that produces that outcome both in the labour market, in the R&D subsidies, maybe the R&D credits or whatever you do to actually focus on the low-cost innovation. Low-cost housing exists. Low-production homes that are there are 50 to 70% cheaper than our homes today for the same square meter size. But as the permitting rights and other things are actually in the way of getting out as much as other reasons. So, I think there is lots of innovation too, for this question in that area. But again, we are fully with you. This is not at all an easy exercise this will happen tomorrow. Even what we write down, we think it is challenging. But we should have the debate on the real challenge and not just the moving the ball forward and see whether the train ends because it might be on the rails or off the rails.

Anu Madgavkar:

Yeah. I just want to echo Sven in thanking Laveesh and Renu for your comments. Very thoughtful and I think have sort of hit many of the issues that we ourselves have been thinking through as we did the research. Then to build on Sven's responses maybe I will address Rakesh's question first. Which is perhaps we should have even clarified this up front that when we are talking about the empowerment gap, that is actually a consumption spending gap. So, that is not the investments required to build all of the infrastructure or other things that will support empowerment. It is just the sheer gap in spending or consumption that these households or individuals have and how that should be bridged. So, from that standpoint, it should get financed through income and then surpluses and transfers as opposed to being funded by savings. On the net zero side, it is a combination of capex investment and what in economic data would be classified more as spending. So, when an individual buys an EV car for example or an E two-wheeler, that is not necessarily capex. That is consumption dollars that go into that. So, it is a combination of both of these things. But there, because we are looking only at the low emissions part of the overall envelope there are actually investment dollars shifting out of high emission because for all these countries there is a high emission trajectory which either plateaus… developing countries it continues to grow but in more advanced economies it either plateauing or coming down. So, there is a shift of resources that takes place from high to low which is part of the reason why the overall macro question of savings and investment is coloured by the shift as opposed to incrementally thinking about this as purely new investment.

Rakesh Mohan:

So, you are saying that the overall investment level does not have to increase.

Anu Madgavkar:

A little bit, but not anywhere near… So, that is on that question. Then I think coming to Renu, your comments, and Sven addressed most of Laveesh's comments. But coming to you, first of all, we would agree that the numbers we put out are not predictions or projections. What they represent is based on the understanding of the micro and the best performance levels that we have actually seen across sectors or countries or technologies at a micro level. If you scale that up this would be the realm of possibility and that is really what we are painting. So, to give you an example on all of the affordable services piece, construction, let's take affordable housing for instance. What we did is to look at the actual rates of construction sector productivity improvements across maybe 20 to 30 countries over time. Then to group them into different cohorts based on initial low construction productivity but then some other countries have high construction productivity. So, the improvements that you can expect would be different based on your starting point. And then we took the best performing level of improvement in each such cohort and said Well, what would it look like if other countries were able to match this? So, it is very much in that spirit of saying let us look at empirically what has been the best for a set of peers, let us say countries or regions and if scaling that can get you so far, then that is what we took into our model as a frontier of possibility. If you can call them that. Then similarly to work arrangements, so there are two parts to how the labour income increases and helps to pay for empowerment. There is one part which is just the structural transition that happens when workers move into better, more productive jobs and sectors and that is kind of one part of the puzzle. But we found that in the advanced economies though there is scope for that to happen what has actually happened is that labour share of national income has actually been declining steadily. So, we benchmarked countries where they have the social contract or the overall approach to wage setting and so on, such that their labour share has been kind of more stable. It hasn't declined so much. And then we asked ourselves how much could that contribute if other countries also managed to improve work arrangements so that labour share can actually stabilise. So, that is a little bit of the thought process that went into saying what is possible as opposed to predicting that this is going to happen because in the past it has happened. It has not happened and what makes it different now is, I think just to Sven's point, raising this bar and asking the right question of saying this is a legitimate aspiration. We have to think about these aspirations alongside with net zero. And what would it take and where should societies put their might or consensus built to say that these are the areas in which we want to work together, public and private come together, whether it is paying a better living wage or setting work arrangements better or cooperating to make affordable housing come on stream. Laveesh, you made a point on pricing that all the productivity gains may not be passed on as pricing benefits to consumers and that is absolutely right. But that's why we put that in the bucket of public and private action. Because something has to happen either by way of regulations or nudges or some form of concessions for example that then make this viable so that, that amount of gain can get passed on to the consumer and that is why we think about the whole affordability piece in that.

Sven Smit:

Just one little thing. And then we can go over to q7a. I think what may be the contrast here is also the current system is pursuing ESG, and SGD goals by __. I am a little black and white now. Because there are so many. As a company, you can't do them all. I am just talking to lots of executives. You can't satisfy all SGDs at the same time at the same date. So, they are reacting to maybe what they can do best. They are maybe reacting to where the pressure is the highest. But the world is doing the same thing. Which is there is this agenda, there is that agenda. They just negotiate by pressure and economics, but there is no sort of integrated sense of well, this is at least pursuable. With all the caveats. It is pursuable and then we can wait and see how far we can go to wet the gap and not asking people to act against something that is not there. Because you can't give a group of people a goal without the… for example say the public support of the final gap. If that public gap is not solved, we are going to reach with stretched assumptions. Half of it, not full of it. Ok, so let's have that discussion. And then we can say we don't have the money for that last step of public support. Ok. Then we will have to also be a little less ambitious, maybe come back to your point on the energy and climate we might have to do more on adaptation and resilience than just mitigation which is one of the things we are doing work on in the transition work. What part of this would you do adaptation-wise? At the moment that adaptation discussion is not completed at all. I am not sure but if you do work on it, we should collaborate. But I think it is a question that is not part in full of the mix and could be one of the economic levers to make this whole thing a little cheaper.

Rakesh Mohan:

Thank you, Sven, on adaptation and mitigation which some comments I have been making all the time is that basically, it is only about 20 countries that really need to do the mitigation. All the other 180 countries it doesn't matter what they do to the world. It matters to them in a certain extent. And therefore, for them, it is almost all adaptation. Even the international MDBs don't pay enough attention to this. Ok. So, Daljit.

Daljit Singh:

First, I want to thank you for an excellent study. And what I really liked is this the integration and the integrated look at inclusion, growth, and dealing with climate change. So, I thought that was really good. The one concern that I do have is that the whole conversation has been about money and the investment and so on. It reinforces this view that if you throw enough money at a problem, you will solve it. And I think it doesn't look enough… I realise it is hard to look at other things because what you have looked at is comprehensive in that part of it. So, I understand the difficulty. But I think it's important to look at those institutional issues. And just to give you an example, in India, we don't have any entity that is responsible for an integrated strategy to deal just with climate change. And now we want to put in growth and empowerment. So, that is one thing. Or you look at the US. The IRA I think is great. But the big problem they are going to have is citing transmission lines. And they do recognise it. But citing is a state-level issue. and they are having lots of trouble. And given the political divisions in that country, it is going to be difficult. So, I think these issues and how do we… basically the point is how do we do it. I think that is just as important as how do we get the money to do it. Thank you.

Sandhya Venkateswaran:

Very quickly. Thank you very much. That was really interesting. I have a question, a clarification, and a comment. So, the clarification is in the empowerment discussion, in defining the threshold at 12 dollars, there were several elements that constituted that. Housing, education, nutrition, health, etc. I wondered what assumptions were made, some of these are binary like clean drinking water, either you have it or you don't. It can't be cleanish. But in terms of education, nutrition, and health, there is a continuum. So, what are we talking about? Is it primary education, or is it higher education? So, that was the clarification. The comment was where does equity come into this? Because as we talk of innovation who will have access to innovation? If you are talking about innovation guiding growth, who has access to innovation, and that in a sense leads back to the question of being able to access education, etc. Equity then becomes a very big question then. In a sense, it is sort of echoes the question that Laveesh raised on gender, but there could be other equity issues beyond gender as well. Thanks.

Rakesh Mohan:

Shishir, do you want to roll down that road?

Shishir Gupta:

Thanks, Anu. So good to see you. And Sven, nice to see you. A couple of things, one is I want to build on what Sven said that there was a bit of hesitation in coming out with the report which says part of the solution is not fulfilled. And that I think is very satisfying to me. Because I think one of the things that I used to at least think when I was on the other side, how are we saying everything is solved if we do XYZ? I mean there had to be something. So, to me actually, this is very satisfying. Just one clarification and one question. The question is I am not sure by adding the empowerment lens, what are we adding to the debate if we are already asking the growth question? Because the growth ambition of let us say India, at 8 or 9. We have Mr Ahluwalia and Dr Mohan. Those plans and the growth objectives are keeping some societal objectives in mind with respect to poverty and empowerment etc. So, aren't those already embedded? So, if you can grow fast medium growth ambition with climate change, transition that is that not good enough? So, that is just one question. One clarification is maybe I missed that. What are the key levers that are needed from the base case to the accelerated case?

Sven Smit:

First institution of course. Without institutional frameworks on this… my country used to have 128 people looking after the economic integration of the energy system that it works physically and everything was ready and at the moment that is much less. Strangely enough, while the challenge is larger. So, lots of these institutional knowledge bases and so on do not exist which actually means that these puzzles are not easy to plan and, in a way, … I think there is a call out for institutional mechanisms for permitting, institutional mechanisms for rules setting and I mean there is a lot of stuff. If you want to solve this question for real that is what you have to do. To me if you have them or not is actually a test of whether you are serious because if you don't have them, it is not going to work. We are running a shortage of chargers, we are running out of chargers for this and that, this doesn't work, that can't be installed… which is just like a world catching up. Now the real reality why that is, is that the last ten years of transformation were very slow. We are at one or two percent renewable energy capacity of the total energy mix over a decade. Which is 0.15 per year. For the next 30 years doing the remaining 90, it is 20 times faster rate and then these problems of institution become super important. Just wanted to say this. I actually think the empowerment thing is far more fundamental than your suggestion. It is for three reasons. If you forget the empowerment we could easily say – please all meet 2050 and then go to sub-Saharan Africa or India and say you know, just pay for it and it doesn't matter what it does to the empowerment of people in India and South Africa. That is, of course, the discussion on the north-south on climate. Because of this thing is, the transition is, very expensive. Capex intense, cash intense, materials intense, innovation intense, and one of the inequities actually to talk about is that you have economies that have developed already and economies that need to develop where the burden as a percentage of GDP is completely skewed. If you were to just say, go do it, and not take the empowerment conversation into account actually and we think the empowerment discussion is an elegant way to not just talk about financial transfers, about climate money. But to actually talk about why you do that. The why of the transfers is only a climate why. So, if you say the north let's pay this much to the south of whatever funds, that is a climate why. The real why is the development of these countries. And not discussing that these countries should develop to a much higher next level is actually… There are models that I have read that basically assume that the south does not grow to solve climate. I am serious. And so that to me, making it explicit that we are trying to solve a world of broad-based prosperity for a broad-based sense of humanity with this other 4.8 billion people is essential to this conversation to keep it balanced. And just the growth, and sustainability discussion is not enough for that. Because the sustainability discussion itself can be incredibly inequitable across geography. There are other inequities that go into that which I very much agree with. I actually like that we say that it is not solved because I actually think the world could realize it is not solved. If it were solved, we would have done it already, the transformation speed of the last decade shows you this is not solved. And many people say ok, let's just get on with it. Okay, what did you exactly mean? Which of these things that we discussed did you mean let us just get on with it? Where is that train going to go? Where is the train going to end? To me, it is a very fundamental question. If we don't raise it collectively, we have had episodes in our economic history where the train goes off track because we just get on with it. I don't that is responsible.

Anu Madgavkar:

I will take this specific question on the empowerment. I will just address that in terms of how we did it. So, what we showed you in terms of the mix is meant to be illustrative. We didn't focus on the mix in a bottom-up sense to say – ok, line item by line item. What does it cost? We drew on a few different sources of literature, research, and data to build this. So, one fundamental concept was this idea of 12 dollars PPP per person per day being the threshold that is sufficient to allow or minimize, or reduce the vulnerability of slipping back into poverty. And that is established in one body of academic literature, enough to meet sufficient needs and start being able to save and have a little bit of discretionary consumption. So, there is sort of one body of literature that supports the 12 dollars. Then there is another body of literature that suggests very strongly that this threshold does depend on societal considerations, cost of living, what local services might cost in different parts of the world, and also real norms that might actually be different. A cold country requires heating, but a warm country may not. So, costs do differ based on that as well. We also leveraged wage indicators data. Wage indicator is a large database spanning a hundred plus countries where they sample the cost of living based on all the elements for different locations within countries and come up with a sort of level which the better performing or the more responsible companies then think about as an input to their wage setting strategies. And that is actually broken up line item by line item. So, we calibrated the 12 dollars PPP floor, for higher-income countries we looked at wage data and then we also calibrated the 12 dollars with wage data for lower-income countries to make sure that that total made sense. But we are not normative about the composition. We looked at this fascinating database called 'gap minder' which has these actual photographs of real-life people and we said for somebody for example in Nigeria who lives at the empowerment line, that family had a car that was in their photo but the wage indicator data only had budgeted for I think two-wheelers. So, that is the choice that the household had made and it is not our business to recommend whether that choice was valid or not. It is just one example of saying it is an overall level that gives the household choices about how they want to spend their money.

Sharath Rao:

Thank you. Wonderful presentation. I think one thing which I took back, a couple of things is that I think this was the 'angel's law' which said that if your household income is like you are spending 50% of your income on food then you are poor. I think this number shows 44.4% which is pretty close. My point is, I just want to make sure whether I understood this correctly. You have two gaps that you presented. An empowerment gap and the net zero gap. My point is why didn't you do that together as a whole? Because I am sure there are a lot of cross-pollination because I am sure the empowerment gap is also going to fill up or it is going to talk to the net zero gap. So, why this segregation part and why not as a whole? You know you can make the double a circular or whatever form of showing graph.

Sven Smit:

From a system's perspective that is what we did. But the growth is actually what fills up the empowerment. The empowerment and the growth add to the sustainability footprint. We just wanted to make sure that there are two stories to tell and that we are trying to solve. This thing is an integrated model, the integration of these models can get much better. Most macroeconomic models that we looked at in the climate are not fully balanced across all these dimensions that _. So, we opened ourselves to this discussion a bit more that our model should get better at integrating all these linkages, I said in one of our papers there are 15 of these linkages. We haven't modeled all 15 in this work. But I would welcome a much more decent modeling of these things where these interactions are. And there is this interaction of my experience in the Netherlands, once you get rich you can clean the Rhine is actually an important interaction. So, there is just a threshold level below which people are not going to spend political time on this issue.

Sharad Rao:

So, let me understand this. That was modeled in it together. Everything was modeled together. Okay. Thank you.

Rakesh Mohan:

Any more questions? Okay. Montek, all yours for your final comments. I don't think I need to introduce you.

Montek Singh Ahluwalia:

That is a waste of time. But do you want me to ask questions or do you want me to comment?

Rakesh Mohan:

Up to you.

Montek Singh Ahluwalia:

No. I think I will just make some comments. First of all, I share everybody's view that it is a very short paper, but it does raise in my mind a lot of relevant questions. If you look at the other literature that is floating around, different estimates of what it costs, and so on, it is in the mainstream. It is not inconsistent with what Nick Stern and Songwe have done and also, I think what the NK Singh, and Larry Summers people are doing in terms of what is it going to cost. But I wonder what… by the way, I totally agree with this business of broadening the concept to empowerment. Because you know, by definition if you adopt a fixed poverty line, then sooner or later poverty declines. And that doesn't suit anybody actually. It certainly does not suit the politicians because you cannot sort of say I am concerned about the poor who are only 4.5% of the population. I mean, the moment you say that then the chat will say, look I am not just concerned, I am concerned about a lot of the number of people. So, I either redefine that by saying the bottom 40% are always poor which is what was done way back in 1970, or something in the World Bank. Or you can go the German route and say whoever is at 30% of the mean consumption of the country or below is poor. But it is sort of a combination of an absolute and relative. The most important thing you have to remember is I think I am right, Jesus Christ is reported to have said – Blessed are the poor for they are always with us. From a political point of view that is what the politicians mean when they say they are pro-poor. They are always with us. Now if somebody were to pull the guy's sleeve and say, by the way, they are only 2%, he would say that is rubbish, right? So, whatever you call it, empowerment or… it is a good thing. I also agree that a certain amount of spillover benefit will come from the normal growth and then you say this humongous net zero business poses an additional challenge and then you quantify it. And I think your quantifications are more or less in line with what others have done and I don't mean to denigrate it, I am just complimenting you because I think when politicians find there are six different studies and somebody says McKinsey has a study, the first thing people will ask is whether are they saying something very different. Because if they are then it's controversial. Then no, no, it is a different way of doing things by just saying numbers are similar I think that is useful. But what I find… first of all, there was a time when I used to worry about global patterns. I don't worry about them at all. So, I am focusing entirely on India. This is understandable you are going to the B20. So, you are talking about the whole world. There might be quite a large part of the relevant world, so it is quite fair for us to say what does it mean for India. And then I personally feel that what we are missing, I don't mean you, but all of us and even in the other studies, we have studies that give a rather comfortable and internally rational picture. By that I mean that, look got to have more growth, you need more sort of mitigation effort, maybe some adaptation, that means more investments, how much more investment depends on innovation, productivity… in none of these things will anyone disagree. The real question though is that… by the way, if you think so, are you willing to do A, B, C, D and at least in the Indian context that is what I am focusing on and I find that whenever you make anything specific to highlight the difficult choice, people say, hang on a minute, I am entirely in favour of green growth but I never said I am in favour of this and that and the other. I think you had a throwaway line, it is an interesting line because you said – you don't want to emphasize the role of prices because prices go against empowerment. Now I guess that means that… there is a recent IMF paper that just literally just came out a couple of days ago which says that the global extent of subsidy, the explicit subsidy is 2% of GDP. Now, the first question that will come up to anyone trying to collect money is, people are going to say – Well, look you want 2%, you want 4% or whatever it is from the world, why don't you just get 2% by getting rid of all your subsidies. And immediately you lose all political support within the country from all political parties. How do you handle that in practice? I don't have an answer. But we need in our internal thinking we need to be clear even amongst academics, even in research institutions, you will not get support for the proposition that if you want to handle this problem you have to affect prices. That is economics 101, why are we bothered about cutting fossil fuels and why isn't it happening automatically? It is because the price of fossil fuels doesn't reflect the cost they impose on the society. If you go around any group and say let us endorse the following proposition. In India the proposition we use which is the core of our environmental policy, the polluter must pay. Most people don't know that it is there, but that is what it says. Now, if you are going to say the polluter must pay, then for the world as a whole, the implicit subsidy. That is the difference between the retail price and what would impact internalise all these costs. If I remember about 5% of GDP, now that is humongous. So, do we think that is the first question, whatever you want to do, do we think that we can bring about a change and make no difference whatsoever to the pricing issue? I personally think not. Secondly, when you are thinking about the environment, thinking about mitigation versus adaptation, it is pretty clear that particularly for a country that is now at the bottom of the middle income, we are not low income anymore, nobody will be willing to pay for adaptation for India. Because the benefits of adaptation are entirely internal. So, they will say, look the benefits are yours, why don't you pay for them. So, in terms of the internal allocation of resources, there will be a tendency to give more weight to adaptation and less weight to mitigation. A second, I can go on and on. But I think I made my point. I don't know what the solution is but it is a different point that I wanted to make. You made the point, a very good point I think that a lot of the changes that are necessary are actually as you call it 'in the money'. In other words, the market will do it. You know, how many of these changes are in the money without the pricing being resolved? That is point number one. Point number two, particularly in India, since I think somewhere you say that the big thing that needs to be done at least in the next ten years is power going renewable and the mobility going electric. Agree totally. Now, in the mobility going electric at the moment it isn't all in the money. I mean, China has got 29% of its passenger cars electric. India has 1%. Our target setters frequently say we have a target of 30% by 2030. But the present position is that even for two-wheelers it is only 4%. Now, I agree it can shoot up quite a lot. And of course, what the industry is saying is, look, if you want all of this give us more subsidies. We have the FAME one scheme, we have the FAME two scheme which about went. And lobbying has already begun to start a FAME three scheme. So, we are being pushed into a situation where we can't use prices to raise resources or discourage the wrong choice, but we are being pushed into a situation where we must subsidize, from the budget to encourage the right choice. Fiscally this is simply not going to be sustainable. So, what do we do? I think I am not suggesting that you should address these issues here. Certainly not on a celebrity occasion like the B20. But based on your paper I think somebody has to say, you know I think they have this in mind and we should think about it. And to my mind, one of the biggest problems is that we want to move away from coal-fired, coal-based thermal generation to renewable, solar, and wind. Wonderful. That is massively more capital intensive because it doesn't use any raw materials as it is free. And we wanted it to come from the private sector. That is also wonderful because otherwise, we don't have the money. And we want to electrify the system so the demand for electricity is going to move faster than it did in the past. And we are going to do all this in a situation where the distribution companies are broke. Now, I am not saying by the way that there is anything inherent in Indian culture that our distribution companies should be broken. But you know, before we go to Dubai and all these places we should have a plan, what is going to make the Indian distribution companies not broke. If you don't have a plan, you don't have a plan. So, I think, these are the things I feel that in the current debate, if you collect a group of 100 people who are in India, I am only talking about India while it is probably much better elsewhere. If you collect a group of 100 people who are agitated about climate change and you ask them, these are the targets we want. Do you agree? They absolutely agree. But if you raise the number of difficult things that they have to do, complete lack... not only a lack of agreement but not even the preliminary discussions on whether X is right or Y is right. For example, how about privatizing distribution? Not thought about, not talkable about and I am not talking about the central government. This is a purely state government matter. No state chief minister is willing to do this. So frankly, I feel that before we start demanding huge sums of money from the rest of the world which I mean I share the view quite honestly, the world is being very frank. They have made it quite plain that at least in the next couple of years don't expect anything. So, we should be planning on the assumption that we will be going to these conferences and working hard to find a form or phrase that is acceptable. They will be quite good at it but don't expect any money to come. In that case, what should we be doing? Personally, I think in the next three to four years we should be doing whatever is necessary to make all the investments that are 'in the money' potentially actually doable. I think it would be a good idea if you meet the Prime Minister or someone give him privately a list of these six things.

Sven Smit:

Just a quick reaction.

Montek Singh Ahluwalia:

If you want to respond, I am delighted.

Sven Smit:

I give you two responses.

Rakesh Mohan:

Are you finished or…?

Montek Singh Ahluwalia:

Yeah…

Sven Smit:

In the beauty of conversation, first of all, I will remember forever from this conversation that there is a far better argument for empowerment which is Jesus Christ and politicians. Politicians need 60% buckets which is by the way of course, right because politicians need to stand for the people and empowerment and for the people not just the extreme poverty. So, I am fully with you on that. I think the other thing on the price and maybe I didn't say this explicitly, you did it in many beautiful ways. There is ample research that says the following. For other consumers in rich and poor countries, you ask them what is your top 1, 2, and 3 priorities. They will put the economy, jobs, life, health, and climate change. It is in the top three. You add one dollar per month in a rich country it drops below 20. It is not a priority in that sense. So, the price, and that is why the politicians say, it is nice that Nobel prize winners say, you should put a price on it. Which is totally logical because it is externality and blah, blah, blah. But the price is so high the console I mean in my view my program will be very simple for India, do it in the money and make the money bigger. Which is some part facilitation of infrastructure ABCD but it will also partially stimulate innovation. I actually kind of would trickle down on the IRA-type stuff. Not the IRA per se, but what is the IRA equivalent for India? The subsidy of 300 billion to produce innovation that takes a trillion off the cost is far more productive than deploying stuff now that the people can't or are willing to. And are not willing to pay for it. I think we are trying to maybe it is too soft still to your point. Keep raising the bar on this discussion. We had a report on net zero two years ago that said this is this much of a step up and people were already saying you can't say that which actually made the investment levels transparent. Then this was in line with what others were starting to say. So, the world is starting to come to grips. Why is it? The last ten years were a 0.15 per year experiment. You don't notice. But once a year you do 3% per year for the whole world. You are going to meet it in lithium, you are going to meet it in steel, you are going to meet it within infrastructure, in the distribution companies, in the regulation. And all of a sudden you are doing a real transformation. The last decade was not a transformation. It was an experiment of 0.15 a year. The real transformation in 30 years is 3%, which is 20 times faster than what we did in the last 10 years. Then the rubber starts to hit the road. This thing suggests how big is the rubber but I am fully with you We need to start transacting the A B C D and that might have to include more adaptation because we will not get full mitigation at this cost done. And one thing to your point that we don't not do something for COP, we are actually doing a transition curve for the whole world country by country that says can you make this thing half the price? Can we make this half the price? So, do that easy stuff first, do the innovation first to bring the cost down and is that possible? The first calculations look at it, it could be cheaper. And it has different buckets. But we need to do the work to make this transition cheaper if you want to do this with the empowerment so that people are willing to pay the price. I almost forgot. We need 60% of the people to buy.

Montek Singh Ahluwalia:

I think a comment tributing this thing about Jesus Christ. It is due to Michael Lipton way back in the World Bank in 1968 or something. So, that's how old it is.

Sven Smit:

It was a privilege to be with you, thank you.

Rakesh Mohan:

Thank you, Sven. Jesus Christ or Montek?

Sven Smit:

Both. And your whole group.

Rakesh Mohan:

Thank you. Just remains for me to say thank you very much to Anu and Sven and Montek, Laveesh, and Renu, for this really very, very engaging discussion. Just I think of two things I hope you can carry away from here. From what our commentators said. One is pricing. Just look more at pricing. Even though it might be unpopular. But it some extent the question is, is there an alternative? And the other thing I would say is if I can gather from what Montek, Laveesh, and Renu said. More on how and not the what. More on how. What you just said, look these things can be done. Finally, one comment from me is that on the mitigation or adaptation issue, as far as India is concerned being a large emitter, we will have to do both. Mitigation and adaptation. The question is what is the sequence, all go together, how much, and so on. Finally talking about the celebrity occasion, the B20, you should have been there this morning to really get a sense of the celebrity occasion at the B20. Incredible celebration. Incredible celebration. As if the world really conquered everything in the world.

Sven Smit:

And particularly India by the way.

Rakesh Mohan:

Particularly India actually. So, thank you very much. Really it is very privileged for us to have you here and especially in a preview of what will be released at 11:30 tomorrow to the rest of the world. Thank you very much.