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Flagship Seminar

Envisioning 2060 – opportunities and risks for emerging markets

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Know More Details: https://csep.org/fc3fAEQ

Watch the full event video here: https://www.youtube.com/watch?v=G_gPGfCzlqo

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PROCEEDINGS

Rakesh Mohan: Welcome to everyone from CSEP. The Centre for social and economic progress. I am Rakesh Mohan, President of CSEP. We are delighted to have this opportunity of showcasing this very important and gigantic piece of work. It is called 'Envisioning 2060 – Opportunities and risks for emerging markets'. Here is the book. It is edited by Harinder Kohli, Rajat Nag and Leva Vilkelyte. It is amazing how this book has been compiled. It is very comprehensive, detailed and scholarly. Of course the task of compiling such a study was almost an impossible task and presenting it such a comprehensive study in one and half hour webinar is equally daunting. However just to let you know, the book was launched at a three day meeting in Paris in the middle of June which unfortunately I was not able to attend due to covid. Unfortunately covid had reared its ugly head again. So we were not able to hold the webinar in hybrid fashion since we had to close office last week. We had almost forgotten for six months that we had to do these things. But it was common for a year and half before that. Let me just say a couple of words on the 'emerging markets forum'. It was founded I understand in 2005 by Harinder Kohli who is a former World Bank senior official. In cooperation with other distinguished former senior staff members of the IMF, the World Bank, ADB and others. They have to by my understanding had annual and regional meetings ever since. These meetings are amazingly well attended by former heads of state, central bank governors, finance ministers, former finance ministers, former World Bank and IMF heads like presidents and managing directors. They have published a number of books. I think the distinguishing feature of the work is they have always been focusing on the future. Just for some examples, 'Mexico – 2042', 'Asia – 2050', 'Latin America – 2040', 'India – 2039'. So now in some sense Harinder has expanded his vision to 2060. So he has come out now with his colleagues 'envisioning 2060 – opportunities and risks for emerging markets'. The book has 20 chapters plus an epilog by Michel Camdessus, former managing director of the IMF. As I said earlier it is very comprehensive, very scholarly, in depth articles on almost everything affecting our future. Just to give example of the topics, population, urbanization, climate change, technical progress, productivity, governance, inequality and then some regional focus on Africa, Latin America and Asia. And also particular focus on the future of multilateralism. That is just a very broad introduction and you can imagine from this for 17 years Harinder has been spending his considerable energies in organizing these excellent meetings. I have been privileged to attend some of them. And of course to go around the world then communicating the books that he has compiled. The plan of the afternoon is, first I will ask Harinder Kohli to give an overall presentation of the book. Then I will ask his colleague Rajat Nag who is a coeditor of the book to talk about basically inequality. Then I will ask Montek Ahluwalia our distinguished fellow at CSEP to talk about the future in some sense of large countries in particular among emerging markets particularly India and on climate change on which he has contributed a chapter in the book. Then I will ask Amita Bhatra, professor at JNU to talk about trade in particular, future of trade. We will have time for question answers from the zoom audience and you can send your questions through Q&A through the chat which I will look at. So let me now introduce the lead author Harinder Kohli. As I said he is the founding director and chief executive, 'Emerging markets forum', as well as, founding director, CEO and a largest shareholder of the 'Centennial Group international'. Both are based in Washington DC. He has written extensively the emergence of Asia, Latin America and Africa and the emerging market economies, financial development and infrastructure. He has led centennial group teams that have helped the Asian development bank, the Development Bank of Latin America develop their long term strategies. He is also an author and co-author of some 15 books. I just mentioned a few. Published by international publishing houses the ADB, the World Bank and japan international cooperation agency. So Harinder, you have 20 minutes to present this massive labour of love of over 450 pages.

Harinder Kohli: Thank you Rakesh. Thank you very much indeed for your introduction. I am really honoured. I also want to thank your centre. Centre for social and economic progress for hosting this book launch of ours in India. Let me say a few things before I describe what the book contains. The book went to the publishers before the tragic events in Ukraine. Therefore, it doesn't touch the events in Ukraine and their impact on the global economy and particularly emerging markets. While it is not clear as to how and when the conflict will end, whether and how Russia will re-join global economy as before, we believe the current events are unlikely to fundamentally alter the trajectory of the global economy as portrayed in the book. The same could be true about the recent rise in tensions between China and the G7 countries. But that is more debatable. That may somewhat alter some of the things which the book is discussing. So that is the point I wanted to mention. I should also incidentally say that in the immediate aftermath of the hostilities in Ukraine, as you well know, the commodity prices spiked. But in the last couple of weeks almost all commodity prices like wheat, fertilisers and now oil, the commodity prices are almost back to pre-hostility levels. Hopefully they will stay there, but one is never sure. But the sanction on Russia still stay and they are not back to be members of the global community. The second point as the background, I should mention that this book is a product of 20 authors from around the world as Rakesh hinted. Only three of us are here today. I hope some 60 people who are with us right now will have the time to read the book. We will be sending to the centre copies of the book as a compliment and I think you can reach out to the centre to get your copies if you are interested. Please take time to read it. I hope you will find it interesting. The book is about 500 pages long. As Rakesh said there are 19 chapters. And as you can imagine is impossible to summarise the book and the chapters in 20 minutes that I have at this morning. But let me make the following points before requesting my colleague Rajat Nag to talk about one of the issues which particularly concern us and which is a global issue. The points I want to mention are the following. The book highlights one finding that the post pandemic world will be very different than where we were in 2019. This will be not only because of the changes brought about by the pandemic itself, but because pandemic has brought into sharper relief or accelerated a number of underlying trends which were already underway by 2019. Let me give you a few examples. Widespread dissatisfaction of globalisation, a move towards sourcing closer to home, digitisation, impact of technological changes on how we work and the outdated governance and inability of multilateral institutions to address the new global problems like climate change, inequality and technological changes. The second point I would like to highlight is that the book looks at the longer term opportunities and risks facing the emerging economies and not at the short term. Rakesh already mentioned that. It discusses ten global mega trends. I will come back to that towards the end of my remarks. It discusses key issues that you touched on like governance inequality, climate change, global monetary system, productivity and presents prospects of three regions of the world, Africa, Latin America and emerging Asia. It also presents a number of scenarios of how the world economy may evolve between now and 2060, hundred different assumptions. I should emphasise that we are not making projections. But we are presenting different scenarios based on an in house model of the world economy that we have. Third, overall we have a fairly optimistic view of where the world could be in 2060. In our view the world economy will be driven by technological developments and innovations and by what will happen in emerging and developing economies particularly in Asia. The book presents two very different contrasting scenarios. An optimistic and a pessimistic scenario amongst the various scenarios that I mentioned. Perhaps we can now show you two slides showing how different these two scenarios are in terms of outcomes. Now you will see that dramatic difference between the optimistic scenarios and the pessimistic scenarios, both in terms of total global GDP as well as Per Capita GDP at the level of world as a whole and different regions of the world. Most dramatic difference is not in advanced economies, but basically in sub-Sahara Africa and in Asia. At the global level the difference is 2 ½ times. And in case of Africa is more than 3 times. The next slide. So it will make a huge difference not only in terms of per capita income, but in terms of living standards, how many people are middle class, how many people are upper middle class and how many people will remain poor. It is dramatically different. We can come back to this later on. The biggest difference will be what happens to productivity in terms of both scenarios. Of the many issues the book discusses, our bottom line is that three issues will make the most difference as to which of these scenarios will come to pass. The issue which is very difficult to quantify, but at the end probably is the most important to the world as a whole is climate change on which Montek has written a chapter. I really urge you to focus on that and I hope in his remarks Montek will have time to touch on that. The second issue hugely important, socially, economically and politically is inequality. Inequalities within countries which are rising. The trend started in the mid-eighties in the US. Spread to some other developed countries and now is a global phenomenon in China, in India, in Brazil, in South Africa, in Mexico and in almost every developing countries. There is a fascinating chapter in the book and we requested Rajat to talk about it. He is very passionate on that subject. And third as I mentioned what happens to the productivity curve both at the global level and the national level. Having said that, we are most worried about three lagging regions of the world. It is my term – lagging regions. All three are commodity exporting regions. Everybody probably recognises that Africa is one of these regions. But if you look at productivity and if you look at the long term trends, there are two other regions which join Africa in that. One is Latin America, you may be surprised by that and the second is the Middle East. If you make the long term scenarios, if the current productivity trends continue, current being the last 15 – 20 years, then all three regions will be left behind. And what we will see is two worlds. One world will be Asia, certainly East Asia, but perhaps joined by some of the countries in South Asia becoming developed reaching per capita income levels of where much of Southern Europe is today. And that will be about 6 billion people, all of the developed countries today joined by much of East Asia and parts of South Asia including India, they will have per capita incomes of today's developed countries. And then roughly four will billion people in much of Africa, sub-Sahara Africa, many countries in Latin America and even many countries in Middle East will be stagnant and the worst case will be Africa because they are growing in terms of population and there will not be jobs and people will be dejected. With that worrisome trend things need to be reversed on those. Let me end by talking quickly about the fundamentals which in our view will drive the world. These are ten mega trends. I will go through them quickly. So that you can understand what is the basis of our analysis. I will not spend too much time going through it. We do have a power point which we can share with you later on. The first one is demographics population. The basic trend in population is, the global population growth is slowing dramatically and is aging. The only exception to that is Africa as I hinted. Africa continues to grow. Their share of global population will continue to rise. And it will be the only region with young population by 2050. The most dramatic thing you should know about demographics is by 2050 already, just in 30 years, the total fertility rate in as many as 151 countries in the world will be below the replacement level. And by year 2100, the number of such countries will rise to 183 countries. That global population will peak in the year 2064 at 906 billion people according to a study published by Lancet. Lancet study by the way is more pessimistic or less optimistic as you may define it, in terms of population growth. Lancet study funded by Gates foundation, believes that population will peak sooner than the UN number suggests. That is the first mega trend. The second is urbanisation. Today already 56% of global population is urban. Latin America is now the most urbanised region in the world after Europe and North America. By 2060 global population, urban population is expected to rise 72% of total. And 78% of increase in urban population will be in Sub Sahara Africa, South Asia and East Asia. So as a result the world is becoming more and more urban. The third mega trend is that there is a rapid rise in the middle class. We are going to have a dominance of the consumer classes. By 2060 according to our model 80% of world population will be either middle class or upper middle class as defined by the World Bank today. Much of North America, Europe, Oceania, East Asia, almost all of the population in these regions will have middle class or upper middle class. Africa will be the only region which will be an exception and there will be lots of poor even in 2060. I will just mention the next because Rajat will be talking about it in some length, inequality or inequities are a major issue globally. While inter country inequalities are gradually declining, inequalities within countries are rising. Not only in developing countries but also developed countries. As I said, it is a major issue in our view, it needs tackling and need urgent attention. So Rajat will discuss that further. The fifth issue is global and is becoming more and more urgent is climate change. Again I hope Montek will talk about it. He has written a fascinating paper and it is in the book. International trade, you will hear about it and again this is a problem. There is unfortunately a slowing down in growth of international trade after its steady rise since the 1960s. And this is because more and more countries are becoming inwards. The recent tensions between G7 countries and China are not helping this aspect and people are becoming suspicious of WTO. I hope our second discussion will take this issue on. Technological progress is one generally positive development. It could be a solution to many of the issues that the world faces including climate change. It would help in health care, in inclusive finance, but it also has a flipside in terms of crime. Overall the pace of technological change is increasing. And it touches all aspects of our life. Future of work and jobs, the book has a chapter on that and it is changing everybody's life including the way we meet, the way our children will work, our grandchildren will work and what I say to people is – this is one chapter that every parent should be reading. Because it will affect their lives. In what they study, how they study and how they will work, where they live. Global cooperation are again under threat. It is not working right now in our view. We had a fascinating session in Paris about it. In my view at least there is need for reforms of all multilateral institutions including the institutions that Montek, Rakesh and I work for. World Bank, IMF, Asian development banks so that they are more effective in solving today's problems and not yesterday's problems. Finally social media are a big thing not only for children but all of us and they could be helpful in improving governance. But they could also be a source for disturbance in governance of economy and they could make political forces uneasy. But at the same time they can create crisis in the world. So those are the ten mega trends which will affect all countries to bigger extent or smaller extent. One thing I just want to say before I finish. These trends they don't operate in isolation. They are not vertical cylinders. They operate within the context of each other. In many cases they reinforce each other. But sometimes they may offset each other. Of course, beyond these ten mega trends there will always be 'black swan' events like Ukraine or like the pandemic. So we have to be aware of that. Thank you Rakesh.

Rakesh Mohan: Thank you Harinder. I am really impressed that you took exactly 20 minutes. I don't know how you manage these things. Must be your management skills you had learnt earlier in your life. Thank you very much. It is always a heroic act to do the kind of projections economists are used to doing. My own thesis was projecting up to about 15 years. But projecting up to 2060 is truly heroic. I must say that the kind of issues that you have focused on are really the kind of issues that I think all of us need to be thinking about greatly. Of those of course the first one that will have a little bit of detail on is by Rajat Nag, our next speaker. He is of course is one of the co-editors of the book. He is currently a distinguished fellow both at India's national council of applied economic research. I also headed the NCAER in the late 90s. Rajat. He is also a distinguished fellow of the emerging markets forum of which Harinder is the head. He has been a visiting professor at the graduate school of development management, the Asian institute of management in Manila. He currently does serve as a distinguished professor at the emerging markets situated in Beijing Normal University in China. And he is also an advisor and board member of several organisations. In some sense most importantly he was managing director general of the Asian development bank during 2006 to 2013. Rajat, welcome and you have ten minutes.

Rajat Nag: Thanks very much Rakesh for your kind introduction. And thanks very much also for hosting this event. Much appreciated. So let me pick on one factor that Harinder noted is a crucial mega trend. That is rising inequalities. We believe that this could be an existential challenge for the world going forward. And how well we deal with it will be a major factor in determining how we evolve as societies both globally and nationally. I will cover three issues very broadly. First, the profile of income rising inequality. Second the consequences of inequality. And third, in a way the most important, is what we do about it. So first profile of inequality. Since World War Two, the world has experienced unparalleled economic prosperity and social conditions have improved as well. I think there is no reservation that the world today is richer, healthier and more literate than it was a generation back. But simultaneously it has also become more unequal. And getting worse. These are the two faces of development of the world. Rising incomes, but also rising within country inequalities. Marred by still very high social deprivations in many places. Now if we look at the within country inequalities as both Rakesh and Harinder have already referred, we see that the within country inequality declined somewhat starting in the 50s. More dramatically in China, but in all countries inequality decreased. But then from late 70s and 80s it started rising again. And that is the story now worldwide. Be it US, be it China or India, Brazil or Mexico. Within country inequalities have been rising. This trend which I mentioned on the GD is confirmed by various other measures such as the share of the top ten percent of incomes or one percent or whatever. Now several factors, all of them sort of reinforcing each other in a way. One of course is technological change which has negatively impacted the lower skilled workers and benefitted the high skilled. Financial sector reforms which again has involved a major transformation. Decreased share of labour as part of GDP, as wages have not kept up with GDP. Greater returns to capital over time rather than labour. And within labour to high skilled labour. Fiscal policies in most countries have become less progressive including reductions in income tax progressivity and safety nets. Harinder eluded to it, the international competition due to globalisation, whereas of course it has benefitted consumers all over the world, it has also kept wages low, particularly for the lower skilled. And of course the recent pandemic has accelerated this issue. Now, when we talk about inequality I think it is important that we distinguish between good inequality and bad inequality. Don't club them together. Good inequality I would say is a result of hard work or your skills or your human capital experience. In a way that should be celebrated not be mourned. But bad inequality which is what one is concerned about more, which is really inequality of access. And that arises due to circumstances of birth, discrimination on the basis of gender or race or religion or sexual orientation. And society needs to make obviously special efforts to aggressively address this bad inequality. Another observation which again both Rakesh and Harinder referred to is, when I am talking about inequality we are more concerned with within country. Because between countries, inter country equality has actually remained fairly stable and then declined as the rate of growth of the emerging economies has been higher, faster than that of the advanced economies. Basically that is the profile of inequality, rising income inequalities within countries and getting serious and that obviously results in several consequences. That is my second issue. Now, in a fundamental sense one could argue that look society should be concerned about inequality because it is not good. It is not desirable in its own right which of course what is called the intrinsic value of inequality. This is not a new insight. As far back as 1776, Adam Smith put it, who is the father of capitalism, wrote no society can surely be flourishing and happy of which the far greater part of the members are poor and miserable. But even if we put aside the moral and ethical considerations and I don't think we should as a society, but even if we do, what concerns us is that income inequality has a significant attenuating impact on income growth, it diminishes social capital, it creates a greater sense of social injustice and therefore consequently greater social and political instability. So inequality is multifaceted in terms of the damage it does to a social fabric. So quickly, how does inequality affect economic growth? Principally through resulting in lower human capital. Education and health. On education for example, a child of a top quartile by income distribution, in many countries study shows that, in average has a 45% points more likely to finish college compared to those in the lowest quarter. That itself is a huge build-up of human capital which inequality makes difficult for people in the lower end to achieve. Health, similarly, health problems be it obesity, mental illnesses, child conflict, drug use etc. etc. poor social infrastructure, social indicators like life expectancy, maternal mortality, educational problems etc. all of them higher inequality, worse the indicators. And overall social capital, we find again several studies, these are all empirically verified across the world, that people are more likely to trust each other in more equal societies. Some very interesting exciting studies like Putnam going back to the 50s and 60s saw this very dramatically in the US. 50s and 60s there was much more social capital and a greater sense of community when inequality was low. And as the inequality increased in the US the opposite started to happen. For example, economic inequality leads to a distrust between business and government. Basically between various actors in the society. Not very sure what the other person will do. And of course all of this then results in political outcomes which are undesirable. It leads to polarisation. It leads to significant barriers to good institutions, I call it as schooling. And diminishes a sense of civic participation. Voter turnout is less in societies which have higher income inequalities. And more insidious, higher inequality enables relatively better off to start capturing institutions through democratic means. The voting process is still followed. So we can say this person was elected by regular process of elections. But the process itself can be fairly marred by people who have the power which is of course then connected to inequality. Again now these factors are not in isolation. As Harinder said not in vertical cylinders. They all interact but the worrisome thing is that they are mutually reinforcing. Unfortunately none of these factors negate each other. They just reinforce each other. Now again there will be very little disagreement on what I have just said, the consequence of inequality. The more challenging thing is what does one do about it which is my third point. Now, there are essentially three policy approaches. You can take what is called the equalising opportunity approach. Basically you say - look, I want to have an equal opportunity of access. I will focus therefore on let us say education. But after that I won't do anything else. The other one is saying – well, that is not good enough. You have got to really look at the outcomes. So you do the equalising of outcomes and that is where you got income transfers, redistribution and all of that. Now the first one is probably more a conservative approach. The second one is more liberal. But we believe in the work that we have done, you really have to combine the two. Like everything else middle path is better. It fuses concerns about access and outcomes. As I said, bad inequality which is primarily from access obviously has to be attacked. But societies cannot be too Darwinian either. Okay – so I have given you the opportunity to go to school. If you flunk that is your problem. You didn't do hard work. But people may have inherent limitations of whatever challenges and society has to think of safety nets to provide that help to give a bit of a booster. So given that we follow this equality of outcomes and opportunities approach, three buckets again of potential policies. First is building human capital. You have to make sure that people in a society are well enough and are you therefore healthy and skilled enough are you therefore educated and trained to participate in the growth process. You don't want a situation when they are passive recipients of government's decisions. That doesn't work. You want them to be productive, but for them to be productive you have to focus on education and health. Invest in early childhood, invest in primary health care systems. The second bucket would be – make it inclusive. As I said you make sure that opportunities are available to all. But more specifically we believe that society has to look at gender issues. So providing gender equity in access to education and labour is obviously very important. Again, these are no longer issues or views of conjecture. These are evidence based that greater gender equity and increased female economic participation are associated with higher growth and more favourable developmental outcomes and lower income inequality. In India for example the female labour force participation is 20%. In advanced economies 60%. If nothing else changes and we are able to improve and enhance the labour force part in women that itself will be a big boost to our growth potential. Though I specifically mention gender, because that is a very relevant point, I should add that this point applies equally well to all forms of discrimination. Be it on gender, race or religion, sexual orientation, because any discrimination is, again leaving aside the moral and ethics part which we should consider, even if we leave it aside, any discrimination essentially is a diminution of human capability and if developing this capability as same has been arguing all the time, then we have to take steps so that each member of the society can contribute meaningfully to the whole society. If not, ultimately that loss is as much as a loss to the society as to the individual. Part of this inclusiveness is of course ensuring financial inclusion, micro finance making sure women have access to credit, individuals, the small and medium enterprises have access to credit and not dependent only on banks for example, that is important as well. But one thing we have learnt from our experience is be it in Africa or be it in East Asia where it was a success or be it Latin America where it was a failure, or Africa where it was a failure, that you cannot spend money to get yourself out of this problem of inequality. So the third one a very important one is promoting macro-economic stability and structure reforms. I find that many times when Harinder and I have talked about inequality people have said – you are bleeding liberals. A – We are. B – More importantly it has to be anchored in macro-economic stability. So you can't get away from the fact that governments have to worry about fiscal deficits, they have to worry about the economic stability, they got to worry about inflation, because at the end you have to worry about affordability. While many of these equality or inequality reducing or equality enhancing measures will require fiscal resources, we believe strongly based again on evidence that it has to be matched by corresponding either better management of expenditures or enhanced revenues from higher taxes, but more importantly a combination. It can't be either or. Prudential financial regulations, supervision of financial institutions etc. So talking about inequality is not somewhere outside the mainstream of neo classical economics. We believe that is a very important part of it. And therefore among the mega trends that are in it as we mentioned, we put inequality as a very important one because it tears the social fabric and not only it is wrong, it is also ultimately very damaging to economic growth itself if that is the only thing for. Of course we are not. Rakesh I will stop there. That is my overall very quick summary.

Rakesh Mohan: Thank you very much Rajat. As I expected being an economist you are not as disciplined as Harinder.

Rajat Nag: I will take less time when I answer questions.

Rakesh Mohan: You went over the time that you had. Nonetheless I don't regret that because you made some really important points very glad indeed actually. In these days in some sense it is unfashionable to talk about inequality. So I am very happy you are focusing on it. Just two points I will make before asking Montek. One a very interesting thing in India as far as gender inequality is concerned among many things is, whereas you are absolutely right, we are among the lowest labour force participation rates of women in any country in the world. But what is encouraging is now that just about 50% or more actually of college students are now women. And some of the results we see in the media that they are doing usually better than the men in terms of results from colleges. It is still the case that we don't have equality in terms of registration or attendance in IITs and IIMs. That is also increasing a lot. The second comment is about your last point. There has been tendency across the world to reduce taxes particularly on capital. Again there has been some kind of agreement on this. Argument is that if you reduce the corporate tax it will give them an incentive to invest. I have often asked when I was teaching at Yale my macro colleagues there, are there any studies that actually show that reduction in corporate tax led to investments. The answer I got from them was no. So I think that is a very important issue that needs attention. Let me now introduce Montek Singh Ahluwalia of course his greatest achievement is that we have selected him as a distinguished fellow at CSEP. But before that he was a notable figure or a leader in Indian economy reforms from the early 1980s onwards. He has previously served as deputy chairman of planning commission for 10 years. Finance secretary in the ministry of finance, I think in both places he probably holds a record of having been the longest finance secretary and also the longest as deputy chairman of planning commission. Then of course he wouldn't be surpassed since the planning commission no longer exists. He was also the first director of the independent evaluation of the IMF. All his achievements have been recognised for public service and getting the second highest civilian award in India. Padma Vibhushan. He has written a fascinating book 'Backstage – the story behind India's growth years'. It gives us a window into policy thinking during these very important epochal times in Indian policy making for the previous 30 years. So Montek, all yours. I am told you are going to talk about focused a little more on the largest countries including India and on climate change.

Montek Singh Ahluwalia: Thanks very much Rakesh. I will try and keep within the time limit although I am an economist. I just want to make a couple of comments on the projections side. Kind of try to relate them to the Indian assessments which might be of interest to the audience. Then I will focus a bit on climate change which is really the substantive subject that I have been asked to talk about. As far as the projections are concerned Harinder has already given a fairly solid kind of explanation that these are not projections so much as scenarios. So let us look at them as scenarios which is also useful. The important thing that comes out is there are no country specific projections or scenarios. But for groups of countries that we happen to be in the group that is the Central and South Asia group in which India probably dominates. The interesting thing about the projections is that this group under all the scenarios of strong policy reform, central tendencies, and poor policy reform comes out as the pretty much the fastest except Sub-Sahara Africa which begins quite low and therefore is said to accelerate. Now the interesting thing is that the South Asian growth projection under a strong policy reform it comes out to be about six percent. It is anybody's guess what India's would be. Maybe it would be a teeny bit above the 6% but not that much more. Remember this is up to 2060. So those who think that our growth prospects in the near future are 7 or 7 plus which I have often said they are also, should recognise that you can't maintain that growth for such a long time. So the 6% average is not unreasonable. Important question is that we are always thinking about where will this get us? Most recently the target has been set. I think the Prime Minister in his independence day speech said that we should have a target that by 2047 India should become a developed country. You know this depends on what you mean by developed country. There is no uniform definition of it. If you go by the World Bank definition of a sort of high income country, that is over 12000 dollars per capita and starting at about 2000 or something just below that. Then on these scenario projections even on a strong assumption we don't cross that 12000 limit. In the strong policy scenario we get to about 9600. Pretty good in my view. On the central scenario we only get to 7500. I mean those are significant improvements from the present level. But I think we need to be a little realistic on what exactly can be achieved in this period given the growth rates that are possible. Of course it is quite possible that if somebody projects that India can grow at 8% or something like that then maybe the target would become feasible. But on these projections not so. Let me come back to the critical area which is climate change. The projections in this book are based on assumptions about good policy and there is no question that climate change could be the biggest threat to growth rates and generally prosperity. Not only for the world but especially so for countries in the tropics and India would be one of the worst affected. Now the tragedy on that is that good policy here doesn't mean just good Indian policy. It means good policy for the world as a whole. So there is an ongoing international negotiation on what should be a good climate change outcome. I mean we have a pretty major breakthrough in COP26 last year in November when for the first time all developing countries including India agreed to bring the emissions down to zero. Now the point at which they reach zero varied. Some before, some later, India said 2070. China said 2060. Indonesia also said 2060. European countries have done even better said 2050. America is 2050. But the important question is that this will require a complete change from past experience. I will say a few things about that. However let me also mention that the available data that we have says that if all countries achieve what they have promised to achieve in COP26 we will not achieve the objective of limiting global warming to 1.5 degree centigrade above green industrial level. We will overshoot 2 degrees. According the IPCC this will have very serious negative effects. I won't go into all that. The important point is that somehow the negotiating process is going to move forward trying to persuade countries to do even better than what we have already promised to do. To do what we have promised to do requires a completely radical change in many dimensions. I think at the level of slogans there is a lot of support for action on climate change around the world. And around the world that support evaporates when it comes to making specific decisions on what you are going to do on policy. I think this is a big problem. We need to get over it somehow. The only way you can get over it is by taking a number of hard decisions. Let me just illustrate one or two areas. Number one, without doubt the single most important thing that we have to do is to decarbonise the generation of power. In other words instead of relying as much as we do on coal based power we have to switch to renewable sources of power which means solar and wind. Now the relative costs of these sources now have come down quite significantly. But the problem is these sources are intermittent. So if they are intermittent then they produce electricity quite cheaply when they are actually producing it, but then there are periods of the day when they don't produce the electricity. For that you need some other mechanism. If you had a low carbon method of ramping up electric supply for that period that is one solution. Pumped hydro storage would be one example. Grid scale battery storage would be another example. You produce a huge amount of electricity capacity but you manage to sort of even it out by storing most of the surface. All these things are going to cost money. And that is going to make the renewable electricity actually more expensive than conventional electricity until the cost of battery storage comes down. Which hopefully it will. In the meantime how do you get the huge amount of investment to generate the capacity that you need. It is very clear if you look at the resource situation that this has to come from the private sector, not from the government. The government has to do some things but it can't be putting all this capacity in. It is quite clear that the private sector is willing to do this, has the technical capacity to do this, but it will only do this if it can be paid for the electricity that it produces and that brings us to that big humongous hole in the bucket which is the loss making nature of our distribution companies. Now there has been a lot written in the newspapers and bottom line is the situation is actually worse than it seems and we have now been in the fourth round of trying to bring about reforms in the electricity distribution system. So far they have not been successful. Somehow or the other we have to bite that bullet. And frankly biting that bullet does mean that whatever subsidies are given have to be within the fiscal capacity of the state. There is absolutely nothing wrong with giving subsidies if you believe they are necessary and you can afford it. But you can't actually afford it and you are just running huge losses and not paying the people who are generating electricity there is no way that you are going to be able to decarbonise. This is doubly so because the second leg of the decarbonisation has to be in non-power generating areas moving away from the direct use of fossil fuel to electricity. For example the electrification of transport is one obvious example of saving petrol and diesel by using electricity. This is going to help with reducing emissions only if the electricity production becomes decarbonised. What it means is the scale of the decarbonisation that you need is very large because the scale of electrification is being expanded usually. I mention this not to overwhelm people with the sense of the problem. But that we have got to zero in on what is it that is critical and where is it that it can help. There is a lot of talk on EVs and there is a lot of talk on electrification of railway traction. I will just use one example there to illustrate the difficult choices that have to be made. There is no question that electric traction is extremely important. I think we are fortunate that we have had a fifteen year or so program for electrifying the network. So the railway network will be fully electrified in two year time. But electrifying the network is not the same thing as electrifying railway traction because the railways still have huge number of diesel engines and we even have at the moment a recently opened factory by GE Alstom which is producing diesel engines. We are committed to buying X thousands of them over the next ten years. Now these engines have a total life of something of the order of 25 years. So I am assuming that the railways must very quickly work out a program where they can phase out the diesel engines, bring in electric engines and convert the existing diesel engines factory into electric factory. So these are the granular details that are needed in order to become Net Zero by 2030. I just give that as one example. Now you go through the whole thing the essence in my view of what we should do is having set a 2070 target we cannot work out the details of everything up to 2070. After all technology may change and a lot of things will become feasible which at this moment are not feasible. But we can for the next ten years have a ten year target of seven or eight major sectoral areas where we do the decarbonisation with granular targets about what is going to happen in each of these areas. Now I am running out of time, so it is much better for me to stop and assume that all of you will read the chapter in the book and maybe ask questions so that I can clarify at that point. Thank you very much.

Rakesh Mohan: Thank you very much Montek for a very crisp rendition of your chapter and lot of the work that you have been doing with us for over a year. So I would apart from reading this particular chapter which is derived from a working paper from CSEP, there are actually three other working papers. We have come with changes in one of our key areas of work that we are doing and hopefully doing much more in the future. I will just mention three things that Montek said which were very important. The most important one is that this is one area where just domestic policy won't do. This is where Harinder's point on global cooperation becomes extremely important. But I would say that for mitigation you need global cooperation and adaptation most of it can be done domestically but possibly with need for external funding. Second I think very important thing you said Montek was that we need to do even more than what has been committed at COP 26. I think that is a very important point because even the commitments of COP 26 seem somewhat awesome. Thirdly, on the point on solar, wind storage battery etc. one of the key issues that is going to arise is availability of critical minerals and therefore one can expect a huge amount of exploration in the world. So the critical minerals will be the new oil of the world. Finally I think a very practical suggestion that goes not only for India but for other countries that – look 2070 is very far away. 2060 is very far away. Need to concentrate on making sure that we have practical plans for the next ten years on a very granular basis. Let me now come to last speaker Professor Amita Batra. She is professor of economics at the school of international studies and formerly in Jawaharlal Nehru University, former chairperson of centre for south Asian studies. She has been a visiting fellow at the University of Sydney and University of Edinburg and at the Indian institute of management at Ahmadabad. Currently she is also a member of the advisory group of the G20 finance track agenda. She has also just come out with a book 'India's trade policy in the 21st century'. So this fits in perfectly with the envisioning 2060. But she goes for the whole century actually. Maybe your next piece of work will be going for the whole century and we can have half the book written by Amita. So Amita all yours.

Amita Batra: Thank you Rakesh. Thank you CSEP for inviting me today as part of this panel. And giving me the opportunity to read this massive volume which spans across subjects, across topics, you see some of which I am not an expert on. I have tried to read the entire volume, not all of it in great detail. But some of it in detail. When Rajat had called me up to say you are part of this to discuss the structure of the discussion, he said you are the only outsider. So you are free to say whatever you wish to. And I am going to take that as the role of an outsider to look at this volume and point out basically four issues here. I just have very brief points. But these are I think important points in building scenarios when we are looking at 2060. I start with a smaller point anchored in what has been highlighted by Mr

Kohli as one of the aspects that the book looks at which is productivity analysis. There is a detailed chapter on productivity analysis in the book. What I find, if I may say so is my discomfort with the placing of East Asia and Pacific and South Asia together when you are expressing optimism in terms of renewal of productivity growth. More so my discomfort comes from the explanations that have been placed here in the context of both the regions which I think do not apply to South Asia. And certainly not and also not rather, to the lead economy in South Asia. You place productivity analysis and growth optimism, the renewal of productivity optimism in the fact a) as far as human development or human capital development in East Asia and Pacific is concerned, rates of growth being higher than even North America or reaching close to what North America has achieved. You place it in their trade and economic integration policies particularly with regional economies, I think there is a frequent reference of this across the book at many places. East Asia and Pacific both optimism and future as well as the past based on their policies of investment, export oriented growth strategy and how they have been able to benefit from the technology spill overs of being anchored in global value chains. You very specifically say cross specific value chains in the chapter. None of this really applies to South Asia. The lead economy India as well, marginal participation, very little participation that we have had relative to the East Asia and pacific as far as export oriented industrialisation is concerned and the participation in global value chain is concerned. Apart from Bangladesh which has been to a certain extent a part of the textiles and apparel, readymade garments value chain, we don't see this explanation fitting into South Asia. So when you say productivity growth and optimism as far as South Asia is concerned I think one needs a different kind of an explanation which perhaps you can offer to us here. My second point that derives from this, across the book I see this. East Asia and Pacific centred on trade, FDI, value chains. You make this reference very often whenever East Asia and Pacific region has been mentioned. One cannot avoid talking about China here. The centricity of China as far as global growth and global trade in the last two to two and half decades is concerned. I think we are all aware of that. But what is more important I think when we are building scenarios today is to consider how changes are happening within China and how that is going to impact the rest of the world. In terms of the global exposure to the Chinese economy and the Chinese economy that is limiting its exposure to the world. Both in terms of the reorientation rather the rebalancing of the economy that started some years ago but also more importantly the reorientation of the Chinese economy that has been evident more so in recent years. 2015 onwards starting with their Made in China 2025 and consolidated further in their 2020 dual circulation strategy. I think these aspects are very significant when we are talking about the changes in the global economy. Global economy is where you set your scenarios for the emerging market economies. So we can't avoid talking about these aspects. And we shouldn't avoid talking about the impact of these aspects on the rate of growth, global growth as such and how the external environment is going to change completely or very significantly as a consequence of the Chinese growth and change in Chinese growth strategy. My third point that is also derived from this is that the Chinese reorientation while it started with the rebalancing, in more recent times when we are talking about the reorientation of economy has much to do with geopolitics. Having started with the Obama presidency in terms of pivot to Asia consolidated or concretised in terms of the Trans-Pacific partnership and later by Trump in terms of US-China trade war, today what we are looking at in terms of aggravated hostilities towards China, not as a consequence, but partly also as a consequence of the Ukraine crisis. While you do say that this book went into publication before the Ukraine crisis which really came out of nowhere for all of us. But what is important here, one I think the economists tend to isolate scenario building and growth projections completely from the political aspects whereas in recent times we've seen the most explicit and overt expression of politics in economic instruments. Whether that is in terms of value chains, whether that is in terms of trade sanctions consequent upon Ukraine crisis or use of tariffs as has been evident in the US- China trade war here. The implication in economics that is or in economic terms that it is important both for productivity analysis as well as for scenario building is the impact that this is going to have on efficiency. On relocation of value chains which is again something that you've mentioned many times in the book, more and more large corporations are looking for safer, secure partners as far as value chains are concerned when they are rethinking or relocating. In this move towards friendly alliances or friendly partners as far as relocation is concerned the cost is going to be in terms of efficiency. Not all substitute trading partners or not all substitute import of inputs is going to be equally efficient as what we have today. Cost competitiveness that guided unbundling earlier is not what is going to guide the value chain relocation today. So in that context not to account for this, this is not something that is by the way only a consequence of Ukraine crisis, Ukraine of course in terms of critical elements etc. That started much before that as a consequence of the US-China trade war when large corporations have become more careful and more sceptical of continuing with additional facilities in China. This I think is very significant as far as scenario building is concerned. I wish we could have alternative scenarios in terms of what could emerge as possible political alliances impacting upon possible alliances as far as value chain relocations are concerned. And how that will impact upon efficiency, productivity, growth globally as well as in the regional context. My last point which is on the India story. All of us like to believe India has great potential and is going to be as you say close to the developed country levels of standards of living. My doubt that exists here or my question here is in terms of the three factors that you lay out. Which of course are positives as far as India is concerned. One of course infrastructure which I will not question. I don't have anything to say rightly so, physical infrastructure, huge strides that India has made. But in terms of the second where you talk about India's demographic dividend. I think we've talked about the demographic dividend for very long now. Recent studies have shown that as far as the demographic dividend is concerned we lack in the right kind of skills as far as our youth population is concerned. There has been for some time an evident mismatch between supply and demand as far as skills from industry is concerned. Two, very recent study, its only yesterday that one has seen this huge study by CMIE which shows that in India the workforce is becoming older and less educated. The younger are not entering into the workforce. While they are continuing to be for longer times in the education sector what kind of skills they are getting is another question altogether. So I think for the demographic dividend we need to make a more objective analysis of what is it that it has done so far. We have been in this position of a youth welch for long enough now to be able to make the right kind of assessment before we say this continues to be a positive forever for India. The second where you talk about the external trends that could favour India, reconfiguration of supply chains in response to geopolitical tensions involving China. As I said this has been evident. This process has been on for some time starting with the post global financial crisis 2008-09, the first phase was 2010 to 14. Very limited advantages or benefits to India. The second which was post US China or in the wake of US China trade war very, very marginal gains that India has been able to make except possibly in machinery sector. Marginal gains in that sector too. As a consequence of Ukraine crisis we hope that we will be able to have some relocation happening in India. But as you yourself show in your table 17.1, if you take a look at it, you see that there are only two large MNCs that are looking at alternative locations in India right now. The rest is all around Vietnam, Mexico and other South East Asian countries. How do we then in what context… you also go on in the next paragraph to talk about RCEP and the Regional training arrangements, how they have benefitted and how they could benefit as far as supply chain participation is concerned. If that is the case and if this is a trend that we've seen how is it that we are talking about… don't we need a more objective analysis of citing India as a possible potential emerging market economy that is going to reach the standards of the developed world of today's. I will stop here and thank you.

Rakesh Mohan: Thank you very much Amita. Now if I can just go to the audience, virtual audience, I have some questions which I will start with. Then as I get them depending on the time available we will address them. The first question is actually something that Amita just said which is to do with how important will be the political environment. The question actually says, in emerging markets which are half free market economies, how big a role will the political environment play? Harinder can I ask you to address that?

Harinder Kohli: Let me link that question with Amita's comments. Let me say Amita your comments were excellent, well taken and the chapter on emerging Asia excluding China is actually an outlier in the book. And is written by somebody who knows both India and China very well. And he is very bullish on Indonesia, India, Vietnam and Malaysia. And it was after much debate that the editor Rajat and I and Leva decided to include that. So I'll come to that in a way in a minute. The big issue and I think Montek would agree with that in case of India, we intentionally have been silent in the rest of the book about prospects of India and you would have noticed in my introductory remarks I did make a comment about China and China's relationship with rest of the world and if the current tensions between China and G7 continue some of our trajectory will probably change. And things are getting worse with China between China and both Europe and US. And Europe used to be very sympathetic to China until a year ago. That is no longer true. I just spent a month in Europe and country after country is getting wary about China's aggressive behavior. I think they are burning their bridges unfortunately even economically in terms of economic relations. And that has global implications. But coming to India the question about politics, the question about India being open and joining ourselves other trade agreements or not joining ourselves with to me was a big opportunity. Is all political. It's political and it's a question of how open and willing is the Indian corporate sector to participate in global trade and is willing to compete and I think it was a missed opportunity for Indian corporate sector in not urging Delhi to join more actively regional trade agreements in Asia. And it is political. Unless the political leaders are willing to do what the Europeans have been doing or what Mexicans have done… by the way we are right now working with the business community in Mexico to do a repeat of Mexico study which we did ten years ago towards the next incoming Mexican administration to restart the process of reforms including to urge the current Mexican administration not to withdraw from the revised NAFTA that they are threatening to do. That is all political because the business community in Mexico wants to not only maintain their revised NAFTA deal with the new different name but go beyond that and they also want to open up with China. Because they see China as a huge market which is currently underused. In addition to a stronger deal with the European Union. So I think politics are very much intermingleable. Economics particularly when it comes to international trades. So if I may take Rakesh a minute on Amita's other comments. I agree with you that India is missing the opportunity in terms of value chains and there was an opportunity, there is still an opportunity to take advantage of tensions with China. But not only that, the wages are rising in China. A lot of companies for portfolio reasons but also rising wages in China want to move some of their production out of China. And right now they are going to Vietnam or even Indonesia. They would probably like to come to India. Like the I Phone manufacturers. And they have had difficulty expanding as much they would like to do. Tesla would love to come to India like they have gone to Germany and China itself. So lot of people like to come to India. India is now the fifth largest economy in the world or the sixth largest economy in the world. And India is now taking advantage in opening its domestic economy and participating in value chains. That is why the rest of the book except for that chapter is quite cautious about India's prospects. We don't have a direct chapter on India except for the chapter that you mentioned. You might recollect in my remarks as quite clear about our view about long term prospects of East Asia and I was more cautious in saying where would at the end South Asia land. We think long term prospects of East Asia is very good. We are pessimistic about Africa, Latin America and Middle East and frankly we are not sure where South Asia will go, mainly where India will go. Because productivity overall is lagging. It is not matching what is happening in East Asia. So your basic points are correct.

Rakesh Mohan: Thank you very much Harinder for the thoughtful response to many of the points made by Amita and also you implicitly answered the question that I asked you. Montek there are three questions or more for you. One is somewhat unconnected but let me just give all the three of them to you. One is how can we address the blind spots of transitioning to low carbon economy? How do you suggest we identify those questions which are unforeseen at the moment? This I thought was rather a good one. Then the general question which you addressed to some extent – how do you make our dis-coms better in terms of capacity and funding? How will the political situation be handled to transition to new low carbon economy? And finally what are your concerns regarding financing of climate change initiatives? I know that you are working on this. So if you could briefly address these as well as best as you can.

Montek Singh Ahluwalia: That is a lot of questions and we have very limited time. So I will just give you a few bullet answers. One, I think there is no uncertainty in my mind on what we need to do to trigger the movement towards decarbonized economy. Quite frankly the difficult part is, are we willing to take some of the tough steps that are needed. Some steps are actually quite easy. I think one of our research centers has proposed and one of the MPs mentioned this in parliament that we should just have two time zones in India. That would help in separating and evening out the peaks of demands across the country as a whole. So that doesn't take very long. We just do it. Second, when it comes to bringing in more renewable energy. I think the time has come that we stop making excuses. Why the public distribution system, the public electricity distribution system is inefficient. People will always say that there is nothing wrong with the people there. That is true. But what is wrong is that they are subject to political intervention. So the only way you can get around that is privatize the distribution system. Delhi distribution system is privatized. Ahmadabad is privatized. Surat is privatized. Bombay is privatized. So it is not some demonical idea which hasn't had any traction in India. I would actually suggest if somebody were to ask me there is top ten cities and industrial areas in India could be carved out as separate distribution zones and handed over to a private company. There would be a huge furor but frankly this lies entirely in the hands of chief ministers. It is not something that the central government can do. I think if the chief minister wanted to give a sense that he or she is really thinking of something different this would be a very good signal to me. Similarly I said on railway traction. We should prepare right now a granular ten year plan on how to make the railways net zero, if not by 2030, maybe by 2035. Now I mentioned to you that we already have an agreement with GE. They have set up a factory which they are operating which produces the diesel locomotives. And we have a contract with them to buy X thousand locomotives every year for the next ten years. Maybe eight years remain. We should simply renegotiate this contract and tell them – look, why don't you convert these into electric locomotives which I am sure they have the capacity to do. The only thing is renegotiating the contract. You will have to renegotiate the price. Somebody must be willing to sit down and decide whether this price is reasonable or not reasonable and that is going to require a lot of decision making capacity. But if you don't do that you will simply end up buying another 15000 or so diesel locomotives over the next five or six years which you won't be able to get rid of. So I can go through a list of these things and I do not at all agree that we don't know what to do. I do agree that we don't know to how to get to net zero by 2070. I mean after all if technology changes in the next two or three years to make let us say carbon capture, usage and storage economically viable, then we don't need to give up so easily on the coal fired station because we can capture the CO2. It is also true of some of the hard to abate areas. Those are long term things. For the next ten years I think we should decide when are we going to peak emissions, when are we going to start phasing out coal based plants. There are research studies that says it's economical to phase out 50 gigawatt worth of plants even today. I think we should definitely introduce a carbon tax. It is completely absurd to say that we are going to move from source A to source B because source A is polluting and refuse to price the pollution. If you price the pollution the economic incentive to move to source B would be enormous. I mean there is lots that can be done. We shouldn't fool ourselves into thinking. There is a different matter if somebody says does anyone have the political guts to do it. I mean as intellectuals or economists or think tanks or whatever we can only hope that somebody in the government whose job it is to advice the government picks up these ideas and try and persuade them internally. I don't know what are the other issues you have raised? I have kind of lost track of that.

Rakesh Mohan: I think we will go to the next questions for Rajat. Let me just say Montek once again thank you so much for answering these questions. And giving some wider view and tell the audience that if you go to the CSEP website you will find actually a number of papers on climate change including one on the impact on central finances. And also some estimates of what a carbon tax impact might look like. Now a few questions for Rajat. Let me just pull them up. Rajat, all of these things we are working on, we are also working a lot on human development and growth. So one question that has come is – you attributed within country income inequalities to lack of adequate human development with which the question entirely agrees. But the issue is how to break the vicious cycle as in most cases, though in many cases in adequate human development due to low economic growth which in turn results in low human development. So there is the issue of causation. Does low human development result in low economic development? And hence the vicious cycle gets worse or the other way around. Second is where do you see India in particular in terms of gender inequality. And what are we doing right and what is India getting wrong? If you can address those pretty general questions?

Rajat Nag: It is a vicious circle. Low human development causes low economic growth and the other way around. But there are some studies which have shown that you cannot grow first and then worry about human capital. If anything, you have to do human capital first, it has to be simultaneously, but if anything. I'll take the example of a family and many of us are in the same situation. We do walk in a situation where our parents had to make a choice between consumption and investment in human capital, their children's education and they did. Similarly for society. So I feel that societies have to decide on some public investments for basic education and basic health but they don't have to be and shouldn't be limited to only investment. Much more on the policy. So you are let in the private sector. But you got to let in the private sector with very specific performance contract almost what you will achieve. But the state cannot leave it also entirely to the private sector. So my feeling is that in the human development equation have to attack the building of the human capital as a first priority, growth will follow. You need physical infrastructure and all of that. But again these are now based on evidences around that if you have got to choose between social infrastructure and physical infrastructure and you can do only one, the bet should be on the human capital, the social infrastructure first. It is a difficult choice but can't be helped. But on the second one about gender, I hope very much and I think the trend is towards the situation being better in 2060, you mentioned Rakesh yourself about the greater sort of involvement of women in higher education and those are all positives. But I think it is not only a question of access to opportunities which is very important. It is also a political attitude towards gender. Of course in one sense one can be encouraged by the Prime Minister giving gender a very important place in his speech at the Independence Day. But how much of that is rhetoric and how much of is reality, time will tell. I think what is India doing right, I think India recognizes the need and that itself is a big progress. Because previously it was not recognized. I remember discussions in various forum where people basically said, what is the issue? I think the issue of very limited and low labor force participation, gender discrimination are now recognized. Maybe not much being done about it. I am optimistic, but I think there is a huge gap and there is a lot of progress to be made. You can't take our eyes off for the very simple fact that gender equity is not just for its intrinsic value which is important from a justice point of view or a moral point of view. But it is actually a very major contribution to economic progress. So if for no other reason we should talk about gender equity, labor force participation of women, more flexible rules and labor laws to encourage more women participation, better day care centers etc. I think those are all work in progress. I am hopeful. But so far I have to say if you have to have progress scorecard we don't do too well unfortunately.

Montek Singh Ahluwalia: So, Rakesh, if I could add, we dug deeper into this issue in Mexico, even though Mexico has a much higher per capita income. But they have a serious inequality issue and gender issue. However they spend much more per capita on human investment including on education. But what we found in case of Mexico is that even their per capita investment in human capital in public sector is quite high. But as Amita was saying the quality of education, the achievement levels are very poor. Because the teachers, they don't teach very well and they are not disciplined, they don't go to the schools to teach. So it's a question of quality education. So in that context if I may say so there is a very nice article in today's New York Times of all places on what Delhi is doing in terms of health and education. It is a very complimentary article on how there is a Delhi model now on schools which number of other states in India including incidentally Kerala is trying to emulate. So I would submit that health and education investments and not just money part of it but how do you reform schools, how do you clean schools, how do you train teachers, how do you make sure they go to schools and teach and the restrooms are clean and the schools are painted and there is good furniture so that students are encouraged to go. This article at least in New York Times is saying that now the pass rate of public schools in Delhi is 100%. A dramatic change compared to five years ago. So quality of education is important to address the issue that your question here has raised. So it is not just a question of just money.

Rakesh Mohan: Thank you very much Harinder. Once again if I may say that this is again an issue on which we have a large program of work at CSEP. Watch the space for it will take us two and half years more to get to the end of that program. But I've also been saying in the last two years that the one key area where we have all governments with us over five years have not given adequate attention is to health and education. But the good news is that the quantity has gone up tremendously in the last 20 years in education and let us hope that now that the quantity is there the quality will start improving. And that as some political parties are making a political issue on health and education, we can hope that it will spread because that is the political economy that is the most interesting. In the sense that to understand why there has not been a popular demand for better health and education provision in the country. Because I dare say you are probably among the most privatized health and education systems among the world. Among the most advertised. The kind of money that people have to spend out of pocket on health expenditures and of course in education is getting larger and larger as it gets more and more privatized. So, coming to the end we have only gone 15 minutes over time. This is not too bad. Given there were four economists on the show so that had to happen. Amita, as it happens there were no questions for you except for a compliment. Again, there were no questions because the compliments said your commentary was so incisive and impressive and therefore no questions came, I suppose that you covered the points that you made so well. So, thank you. All that remains for me to do is to thank everyone, Harinder Kohli and Rajat Nag for taking the time. I know that Harinder you've flown to India for this event. So very grateful that we can only apologize for not being able to do it in person which would have been much better. But nonetheless prior to six months back we were doing this in any case. So, I hope this will serve and I hope that our messages will go across. Those who have not been able to attend, it will be on our website in a couple of days. And thank you Rajat for helping us arrange this. And Montek seems to have disappeared but he is our own. So, I don't have to thank him. But I still would thank him because he is always very sporty and give his time for these sessions. Amita, thank you very much indeed for taking out your time and maybe you are the only person in the world apart from Rajat, Harinder and the coauthor who have actually read the whole book. So maybe they should get you to be one of the ambassadors wherever they are going next to promote the book. We on our part are very happy to have been able to do this. As I said we are doing a lot of work in many of these areas particularly climate change and health policy. Thank you and good evening and good night and good morning or good afternoon to wherever you are.