



**Transcript of IMF podcast:**

## **Raghuram Rajan: Climate Action and Continued Globalization Joined at the Hip (2022 Per Jacobsson Lecture)**

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Raghuram Rajan:

So as we embark on a battle against climate degradation, which may determine the nature of our existence, we have to preserve that minimum cooperation. We have to get along. We are stuck here for a while. Let's try to work it out.

Bruce Edwards:

While there are growing calls to deglobalize the economy, Raghuram Rajan says, "Not so fast." In this episode we hear Rajan's Per Jacobsson lecture, *Joined at the Hip: Why Continued Globalization Offers us the Best Chance of Addressing Climate Change*.

Raghuram Rajan:

Per Jacobsson played a vital role in strengthening the rules-based system that encouraged international cooperation and globalization at a time when, like today, trust was in very short supply. And while climate change was not a burning issue at that time, I think the theme of my talk today would be very much to his liking.

Bruce Edwards:

Raghuram Rajan is a distinguished professor of finance at the University of Chicago. He was the 23rd governor of the Reserve Bank of India between 2013 and 2016, and also a former chief economist at the IMF where he was invited to deliver his Per Jacobsson lecture.

Raghuram Rajan:

So we have broad agreement, with a few holdouts, that we have an existential threat with climate change. We are already behind and likely have lost the battle to keep temperatures below 1.5 degrees centigrade. Now we are saying maybe we can keep it below two over the pre-industrial levels of temperatures. Now certainly there seems to be more desire to act. Of course, we are still reshuffling the

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deck chairs on the Titanic at this point. At some point we will act for sure given the buildup in at least purpose. But at the same time, we seem much less worried about the ongoing deglobalization, which is happening through a mix of old-fashioned protectionism and emerging new geopolitical concerns. And often people couch this as we need to be pragmatic. We need to worry about what works and not be idealistic about a globalized world. And by globalized I mean a world which has strong trade and goods and services, a cross-border flow of capital, technology, and information, and some migration of people.

Now, even before the pandemic, trade was coming down since the global financial crisis. If you look at protectionist measures, you will see a big ramp up in protectionist measures during the pandemic relative to liberalizing measures. So people say, "Well, let's put all our capital on climate change. That's the real problem." And for sure it is the real problem. But I would argue that we do need globalization also, because deglobalization will make climate action much more difficult, and that's why the title of the talk, Climate Action and Continued Globalization, are joined at the hip. So what I want to talk about today very quickly given time, is why climate action needs globalization. Let me try and make that point to you. Some of you will be convinced, it's the unconvinced that I need to focus on. But even after I make that point, we have to ask why is there a pushback on globalization? Why is globalization unpopular?

And then lastly, can we sort of meld the actions that we need to take on climate to fit in with an environment where we respect people's concerns about globalization? Can we do the two together in a much more respectful way than we have done so far? So let me talk about climate action first. And think about the three elements of climate action. First, mitigation, which is reducing emissions. Second, adaptation, which is if we aren't able to reduce emissions enough to prevent serious climate change, and almost surely that is the case, then countries have to adapt, possibly by moving away from certain kinds of activities, possibly by moving away from certain kinds of regions. But if you fail on both mitigation and adaptation, what is left is migration. And already people are talking of enormous numbers of people who will have to migrate from South Asia, who will have to migrate from sub-Saharan Africa into the less climate-affected North.

If you think about it historically, migration has always been the solution to climate change in this world. It happened 5,000 years ago, 10,000 years ago, but it's always been the solution. Today it's much less of a solution because we have political borders. And therefore we have to work much harder on the first two, which is mitigation and adaptation, keeping in mind that ultimately if we fail on all those, the only solution will be mass migration. So let's talk about mitigation, why that needs global action. Well, clearly we need a global agreement on mitigation. We are not anywhere close to such a kind of agreement. And if you think about the basics of negotiation theory, the more bargaining chips each side has, the easier it is to make a deal. Global flows of any kind, whether it's investment capital, financing or trade, offers a variety of chips.

Here's a technology transfer in exchange for more emission cuts. Here's easier financing if you promise to cut down on coal. Those are the kinds of bargains we need. In a more isolated world, those bargains

become harder. That's the obvious point. Less obvious, dialogue and exchange increases information and reduces misunderstanding. How much do we know about North Korea? Nothing, because we don't have that much exchange. We do need information. When we have global agreements, we need information for monitoring. Monitoring people's climate actions will be an enormous undertaking. And that will require open societies where you can actually check on factories. How do we get that if we isolate each other? Now, I do note that today we're talking about the dangers of being dependent on each other, right? Germany can point to the dangers of dependence on Russia. Buying gas and being totally dependent on it is a problem. That is indeed true. You don't want total dependence.

It's equally true you don't want total isolation like North Korea. What you want is a certain amount of interdependence with flexibility. The flexibility to enhance ties if you want to reward the relationship, the flexibility to reduce ties if you want to reduce the relationship. And a variety of relationships so that you're not dependent on only one friend, that you can essentially coexist in a globalized world where everybody doesn't think or behave like you. So I would argue that aspect of mitigation needs continued globalization. Think next about the implementation of globalization. We need enormous quantities of production of new climate-friendly capital stock. We need significant amounts of investment and huge quantities of financing, and of course innovation. Think for example of batteries. We already have capacity constraints on battery manufacturing. Some of the biggest elements in battery manufacturing, lithium, nickel, cobalt, rare earths, these are not found in friendly places in the world. They're found in places which are more remote.

They're refined in places that may not be the friendliest to you at this point. I mean, think about the mining of many of these, a lot of it gets done in the Democratic Republic of Congo, a country which is to some extent conflict-ridden in parts. And of course, much of it is refined in China and Russia. And so how much would global battery production be constrained, even hit, if the sourcing for these commodities could only be domestic or from some friendly neighboring country? Of course, people will say we can make those investments. We need to make those investments. Obviously we do. But think about making all those investments in addition to all the new investments we need to make in order to combat climate change. Wouldn't it be easier if we kept some modicum of global ties so that these global supply chains could survive?

Put differently, deep globalization will increase our costs of any kind of climate action. The threat of deglobalization through friend shoring, after all, who's a friend? Friend today, may not be a friend tomorrow. If you need to make long-term investments, the threat of deglobalization, the threat of sanctions, limits investments seriously. And as a result, that investment is not going to be made, especially in poor developing countries where government stability cannot be taken for granted. And as a result, what we will have is much less cross-border investment if that happens. Think next about livelihoods. Agriculture is going to be seriously impacted. You just have to look at Pakistan to see crops underwater for three months. How are those farmers going to survive another one of those events? The buffers that people have in poor countries is very, very limited. It doesn't allow you to survive.

And the government doesn't have the resources. As we know, the government is talking to the IMF. It doesn't have the resources to help its people survive these climatic effects. So the point here is that there will be tremendous amounts of investment and financing required to enable people to adapt in agriculture itself. To new kinds of crops, to irrigation, to technologies that allow less dependence in the climate. A colleague of mine, Rodney Ramcharan and I did a study of the great Texas drought in the 1950s. That was a drought that hit Midwest, the middle part of the United States, and lasted for about eight years. And what we found was that communities which were richer, and communities which had access to financing could invest more in technologies like tractors and irrigation, had higher productivity, and most important for the sequence I'm talking about, had much less out migration during that period than communities which were poorer, which didn't have access to financing.

Broader point is climate adaptation would require financing for poor countries, much of it will be from outside. And again, deglobalization prevents investment because we don't know what's going to happen, it prevents financing. And of course, many will have to move out of agriculture. If you don't want them to move country, you want them to move to more productive areas within the economy, which means manufacturing, which means services. And today, the single most important way out of agriculture into manufacturing and services is of course export-led growth. And it'll become even more important because the stable source of demand will be in that less climate affected north than the climate affected south. So if you want those countries to move out and to have sensible livelihoods other than agriculture, you have to keep the globalization lifeline open. Otherwise, they simply cannot climb out of poverty. And the only thing they will do is head north in other ways.

So that's as far as livelihoods go. We also need, we have all this talk about supply chains becoming more fragile, have to be resilient to climate risk. Well think about the best way to render a supply chain immune to climate risk. It is geographic diversification. Don't put all your supplies in one country. So the answer is not friend shoring. The answer is not home shoring or near shoring. The answer is global diversification so that you can raise production in other parts of the world when some parts of the world are climate affected. One example of this geographic diversification, the merits of it, comes from our reaction to the pandemic. Remember in spring of 2020, the one country that was unaffected by the pandemic was China. And China could ramp up production when the rest of the world was shutting down, could ramp up production of face masks. It increased the production from 10 million masks per day in March, 2020 to a hundred million by May, 2020. In the spring of 2020 it exported more than three times the number of masks that had been made in the entire world in 2019.

That is the benefit of globalization. There's some place which is unaffected, which can ramp up production when the rest of the world is affected. Of course, China's making a mistake now by not taking the vaccines that were developed in the West to vaccinate its population and is suffering from its protectionism. Again, another example why globalization makes sense. Now, of course markets also. It's not just supply chains, it's markets. The most resilient markets are global markets. They're the ones that are going to be least affected by some kind of small-term supply shock here or there. Think about what's happening in Europe. What's the market that's not resilient? The market for gas, because that's a

narrow market. What's the market that's much more resilient? The market for oil, because that's a global market and Europe can tap into that.

You can make the same kind of example for food. Trying to make it local, trying to make it regional is a losing game there. Having a global market is the way to make it more resilient to short-term supply shocks. Let me turn finally to migration. Remember, mitigation if it doesn't work, adaptation if it doesn't work, migration. Canada, Greenland, Siberia, large empty places in the world, will become much more attractive to inhabit as we get global warming. Now, if we have uncoordinated migration as it has been so far, we are going to have a lot of pushback. Climate refugees will move to the richest welcoming country until that rich welcoming country becomes welcoming no more because it's overwhelmed by people coming there.

And this will result in much more hostility. It will be a poor way of doing migration. What we need is much more coordination in migration. We know where the climate refugees will start coming from. We need to start paying attention. What kinds of skills do they have? What kind of skills do they need? What kind of places are they going to be most acceptable? And I want to argue that there's a demand in rich aging countries for people, but people of the "right kind," people who can come in and provide sort of contributions to the labor force, et cetera. Why not start that market now in preparation for the climate refugees that'll come 20 years, 30 years from now? Create a global market in people to serve the aging Germanys of the world, to serve the aging South Korea of the world, to serve the aging China of the world, and start creating some self-interest to getting people from outside to keep your economy going.

Down the line, you are prepared for a market which will be necessary. You can't erect border walls to keep out climate refugees. The kind of horrible future they will have, itself will create a moral compulsion to lower those walls. But over and above that, they're not going to stay outside. They will find every which way to scale the walls. So this sense that- somehow we will manage, we aren't going to be mightily affected, but we'll keep out the rest of the world which is severely affected, that's a pipe dream. It's not going to happen. And so we should start preparing for it. I can see people smiling when I talk about a global labor market. It is our future. We have to keep in mind, that's going to happen. Yes, we have parties in every country which say no immigrants, et cetera, et cetera. That's the reaction right now. But we have to imagine a world, not now, 20 years from now.

But again, I want to say migration is the last result. Let's try and do mitigation and adaptation in a serious way before, knowing the consequences if we can't do it. So let's go to why globalization is unpopular, and then let me try and give you a few ideas on how we can do climate action without sort of violating some of these rules. So one of the reasons globalization is unpopular is because we have a lot of global rules in order to create a uniform, global integrated market. And of course people cry that this violates democracy. Think about the European Union. Brexit was a cry to take back control. Why? There was a sense that Brussels was imposing a huge amount of rules, including on migration, which the people in the UK didn't actually like. In fact, some of it was angst directed at Brussels. Some of it was

angst directed at London. London is too big and too controlling in the UK, which is why the conservative party came back with leveling up and so on.

But uniform global rules diminish democracy. That's one concern against globalization. And of course acknowledging already that globalization creates winners and losers, and we've done an awful job in helping the losers. We need to do a better job. Some countries do it well. The Scandinavian countries for example. We need to do a better job everywhere. Apart from that, there is this very real concern that it diminishes democracy. It also increases inequality, because if the losers aren't helped and they stay in some parts of the country, in the US, it's the semi-urban areas, their communities decline. And interestingly, that inequality becomes much more entrenched than in the past because today you need good skills to be able to take part in the global labor market. And if you have this problem that your schools are not good because there's no economic activity, the local neighborhood is plagued with drugs, with crime, you're not going to come out of that and have any chance in the comparative global world.

So globalization has also increased inequality by killing the small town manufacturing while enhancing the quality of big town services. It's not only that today work is very differentiated, work will be very differentiated for your children because your children will grow up in these small towns which don't have adequate services versus the people who are growing up in Boston and Washington. The third of course, is globalization relied on Pax Americana, which is the Soviet Union during its time was out of this globalized world. Today, we have a world where one of the biggest sort of globalizers is China, which is inside this world. And therefore we have to think about what the future will look like with two strategic rivals within the globalized world. So I'm going to talk about four things in the remaining six minutes that I have, and try and do this relatively fast.

Find ways to reduce uncertainty and to keep minimum flows and dialogue going. What I worry about tremendously is we break up into regional blocs that don't talk to each other, and where people have to choose an East Asian bloc, a North American bloc, and maybe a European bloc in the middle. But countries in the south, the south Asias, the Africas, have to choose. Do I belong to the Chinese bloc, the East Asian bloc? Do I belong to the North American bloc? We need the world to remain connected so that a minimum level of dialogue flows, investment takes place. And I would argue to do this, let's do a few things. Follow subsidiary. Let's not impose too many decisions from the center. Let's do the minimum that is required so that there is a sense of democracy, of local control over many decisions.

Second, let's try and keep the minimum flowing. Let's not try now to impose rules on detailed trade agreements. Let's at least keep the world from stopping all these activities which are already going. Some minimum level of trade and investment, let's make sure that is protected. Third, let's look for new wins. I'm very firmly a believer in the bicycle theory of reform. If you stop, you fall off. You need to keep going. What is the new area which we haven't reformed? Services. Let's find ways to liberalize services to move forward. At the very least, you make the opponents of globalization go attack that, not the existing manufacturing. At the very best, it will create all sorts of new opportunities for us. And fourth,

which goes without saying, reform multilateral institutions, I'll refer you to a very good report by the Eminent Person's Group. There are lots of details there. So let me talk about the first three and skip the fourth.

What is subsidiarity? Subsidiarity is- decisions should be taken at the lowest level at which it can be taken. Okay, so you push it down at the lowest level at which it can be efficiently taken. Let me give you an example and offer a thought on that. We're talking about a global carbon tax. We need a global carbon tax. And it makes sense. All economists say it makes sense. But it's a one size fits all solution. It's impossible politically in the US today to do a carbon tax. It's also unfair. Why does Tanzania have to implement a global carbon tax at the same level as the United States when Tanzania emits 0.2 tons per capita of carbon while the US emits 16 tons? So fairness also comes in. So can we do better? And here's a scheme that is fair and can be decentralized.

So the world per capita emissions is 4.6 tons per capita. Let the over-emitters, those who are above the average, pay into a global fund. Let the under-emitters like Tanzania receive. So the US, which is an over-emitter, would pay 16, which is its average, minus 4.6, which is the global average. That's the excess that it does, times 325 million US people, times what I call the global carbon incentive. Let's set that at \$10 per ton. Think of that as equivalent to a global carbon tax. If that is the case, the US would pay 38 billion into this fund. And when you do the math, it turns out globally, the fund would get about a hundred billion. Why does the number resonate in your ears? That is a number that rich countries promised to pay poor countries to help them deal with climate change. Tanzania, an under-emitter, would receive around 2.4 billion by the same calculation. Completely self-financing mechanism.

But what is important is aside from incorporating fairness, which is the rich emitting countries pay into the fund the poor developing countries receive, and we do the hundred billion in financing, which can then be leveraged by private sector financing. Let's say nine to one leverage. That's not unthinkable. Nine to one leverage would get you close to a trillion a year. That's the kind of financing that starts making sense for the climate action we need. Okay, so that's one, fairness is incorporated. Two, its common incentives. What is nice about this is Tanzania has no incentive to increase emissions because it loses out on what it gets. In the same way as the US also wanted to reduce emissions, because that would reduce the amount it pays into the fund. Everybody has the same incentive. 10 may seem low. Over time, it can be raised, but let's start with 10.

It's decentralized. So Tanzania may say, "Look, I can't operate a carbon tax in my country. What I can do is ban coal. We will ban all coal emissions." That may be easier in Tanzania. Similarly, the US may say, "No carbon tax, our people will not stand for it. Let us do instead incentives," as they have done with the inflation reduction bill. Different strokes for different folk. All you need to do is make your payments at the national level. What you do domestically is your choice. But of course, the incentive is there to reduce emissions for everyone. And finally, why would the US pay? Well, the US is committed to already making those 100 billion in payments. But interestingly, this allocates responsibility to other countries.



One of the biggest problems of the 1992 Rio agreement, Common but Differentiated Responsibility, is nobody defined what differentiated was.

So in effect, nobody has any responsibility. What we need is a system of allocating property rights in emissions. This does it. It tells you we have a common budget. If you are eating into the budget, you pay. And you pay until you stop eating into the budget. So less is more. Let me go quickly through this. Can we, in this world of sanctions happening, left, right and center, preserve some global interaction? Can we keep some trade going in perhaps essentials? Food, medicines, energy. These are things that countries need to survive. They're not necessarily strategic, we're making strategic use of energy trade now, but there's a reason to ban that strategic use of trade. So can we put some shield around these activities, including on activities required for climate action? If we shield goes from any kind of sanction, that does leave ships, that does leave drones, all those things can be sanctioned.

But let us preserve a certain amount of trade and investment by saying if you violate this and start putting constraints on this, you will earn the wrath of the nations. The WTO rules will be violated. Can we form some basic rules of this kind? That certain amounts of trade and investment on critical commodities that are good for ordinary people, be protected from sanction regimes, unless we are in open war. That would keep a certain amount of globalization open. Let me mention that in this age of cynicism, it's easy to say no, that won't happen. Well think about what the US did on June 10th, 1963. President Kennedy, in the midst of the Cold War, announced a total ban on nuclear tests by the United States. And in justifying his decision, remember this was after the Bay of Pigs, this was when the US was locked in a cold War, he urged Americans not to see only a distorted and desperate view of the other side. Not to see conflict as inevitable, accommodation as impossible, and communication as nothing more than an exchange of threats.

I think that's worth remembering at this time. We don't need to go down this rabbit hole of fighting. Certainly I'm saying don't be overly trustful, but there is a middle ground whereby you can preserve a certain amount of globalization while taking the necessary reactions to protect yourself. And let me end with services. I would say if we want new ground for reform, services would be the right place to go. Because liberalizing manufacturing further, they're diminishing returns. It's already pretty liberalized, and of course there's a lot of political opposition to liberalizing manufacturing. But trade and services has not been liberalized even within many countries. I know the IMF keeps telling different countries you need to liberalize services.

If we took that as an objective, it would have so many positive effects. First, it's a big share of GDP in industrial countries. New technology allows us to provide services at a distance. You don't need to migrate to provide telemedicine services in other countries. Tele-education, entertainment, everybody listened to Korean pop, can we do more of that? But more of these services produced at a distance can do two things. One, it provides that livelihood at a distance, but it also reduces inequality. One of the biggest sources of inequalities is spread between high-quality services and manufacturing in industrial countries. If we liberalize services, it makes them more affordable for that worker that he can now find a



doctor in finite time, and that doctor is affordable. That's a good thing for industrial country societies as well as for emerging markets. For the climate, it's very beneficial because many of these services are weightless, have low climate impact.

Think about the damage done to the world if India followed China's export-led growth path on manufacturing. It's impossible. But think about India following a different path, a service-led export path. Possible India already exports 250 billion in services, but that could lift India out of low-income status very quickly without the damage to the world economy that would otherwise arise. So let me emphasize that we need liberalization services ranging from qualifications. We have too many qualifications within every industrial country. Even within the US. If you're a doctor in Massachusetts, you cannot practice in California. We need to break those barriers down. Have equivalence exams. If you think there's a different kind of medicine here, pass this exam. But make those exams widely available across the world so everybody can sit for those exams and be able to provide those services at a distance, whether it's in law, in medicine. Now, all this requires obviously an expansion of imagination.

You can't easily say, "No, this is not possible, not politically possible." We have to make it possible. We have to make it possible, thinking about the alternatives if we don't. Let me end, I mean the point about multilateral services was a very obvious one, which is as always, we've said this many times, reform is needed. But I think the biggest point in this world is it has to play an honest broker. It has to play an honest broker between warring parties. It's no longer driven by one hegemon. There are multiple polarities in this world, therefore multilateral institutions not only have to be honest broker, they also have to create the agenda because no longer is one party creating agenda which is credible to the other parties. It is better that independent multilateral institutions play that role.

So let me conclude by saying so much needs to be done on climate. We haven't even got to base one, but we cannot afford simultaneously to deglobalize. We cannot say we need political capital, globalization is an elite project, as is climate action, so let's dump globalization and focus on climate action. We need to spend capital on both. I want to end by saying, look, there's a larger truth. As we are being cynical, that's a larger truth that you tell us, there is no planet B. They keep saying that in the protests. And so let's get to some simple words.

And I want to repeat the words of Rodney King. Those of you who are a little older may remember who he was. He was the gentleman who was beaten up by the police in 1992, precipitating the Los Angeles riots. But he said something in a press conference, which was very moving. "Please, we can get along here. We can all get along. I mean, we are stuck here for a while. Let's try to work it out". So as we embark on a battle against climate degradation, which may determine the nature of our existence, we have to preserve that minimum cooperation. We have to get along. Even while hoping. As we get along, we learn to like each other a little better and do far more. Thank you.

Bruce Edwards:

Raghuram Rajan is a distinguished professor of finance at the University of Chicago. He is also the former head of India's Central Bank and a former IMF chief economist. You can watch the webcast of his Per Jacobsson lecture at [imf.org](http://imf.org). And look for other IMF podcasts on Apple Podcasts or wherever you listen. I'm Bruce Edwards. Thanks for listening.