

## TRANSCRIPT

### Environmental Insights Episode #5, 2024

**Guest:** Robert Lawrence

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**Robert Lawrence:** Raising the price of CO<sub>2</sub> emissions proved to be impractical within the American political system, and so we got what I think of a second-best approach, but nonetheless, it is an approach moving us in the right direction.

**Rob Stavins:** Welcome to [Environmental Insights](#), a podcast from the [Harvard Environmental Economics Program](#). I'm your host, [Rob Stavins](#), a professor here at the [Harvard Kennedy School](#) and director of the program. I've had the pleasure of including in these podcast conversations over the past five years now, a significant number of outstanding economists who have carried out important work that's been relevant for environmental, energy, and resource policy, including by serving in important government positions. And today is no exception, because I'm joined by [Robert Lawrence](#), who is the Albert Williams Professor of International Trade and Investment at the [Kennedy School of Government](#) at Harvard, and he served as a member of President Clinton's Council of Economic Advisers. Welcome, Robert.

**Robert Lawrence:** Thank you very much. It's a pleasure to be with you, Rob.

**Rob Stavins:** So, before we talk about your research and your current thinking about trade policy and interactions with climate change issues, let's go back to how you came to be where you are, which our listeners always find of interest, and I think will be particularly the case for you. So, where did you grow up?

**Robert Lawrence:** I grew up in South Africa, in Johannesburg, and as I became of age and aware politically I decided South Africa, because of its apartheid system, wasn't a place I'd like to live.

**Rob Stavins:** So, before you left though, was primary and high school in South Africa?

**Robert Lawrence:** I did college. I did a BA in Johannesburg.

**Rob Stavins:** Oh, okay. And then did you move directly to the United States, or to Europe, or where'd you go?

**Robert Lawrence:** I went to graduate school at Yale.

**Rob Stavins:** Where you studied for a PhD in economics?

**Robert Lawrence:** Well, my original interest was international relations, and I did a master's in that, and then I did a PhD in economics.

**Rob Stavins:** Oh. Now for your PhD, what was your dissertation topic and who was on your committee?

**Robert Lawrence:** Well, it was on the synchronization of the international business cycle. I was a macroeconomist at the time, and my advisors included James Tobin, who later won the Nobel Prize for economics, and Richard Cooper, who was an international economist.

**Rob Stavins:** Who subsequently, of course, came to Harvard.

**Robert Lawrence:** Yes.

**Rob Stavins:** So, that's a stellar committee. And with that, what was your first position that you took on out of graduate school?

**Robert Lawrence:** So, I actually got a fellowship to finish my PhD at the Brookings Institution, and there I worked on the dissertation for a year, and then I got a job as the assistant editor of the [Brookings Papers on Economic Activity](#), and that was a fantastic opportunity. George Perry and Arthur Okun ran those meetings, and just a remarkable number of today's economists and Nobel Prize winners would come and talk about policy issues. The whole strategy was the younger people would present papers and they had senior advisors who would participate in the discussions.

**Rob Stavins:** So, that's fascinating. I've never heard of something like going to another institution, not an academic teaching institution, but a research institution to finish your dissertation. So, does that mean that you were just resident there or did you actually have advisors who were Brookings senior staff?

**Robert Lawrence:** No, I retained my advisors. Richard Cooper was my primary advisor, and there were others who had similar fellowships. So, there was six of us in economic studies who had that opportunity to be at Brookings.

**Rob Stavins:** Is that a program that Brookings maintains today, do you know?

**Robert Lawrence:** I believe so, yes.

**Rob Stavins:** That's interesting. Now, you've stayed at Brookings for quite a while. Tell me about the various stages. What did you go through at Brookings?

**Robert Lawrence:** So, for two years, I was the assistant editor, and I had the opportunity to present papers to these meetings of the Brookings panel and they resulted in publications in the Brookings Papers, and I assisted with the editorial work there. And then I became a research associate at Brookings and I started to

work on, actually, commodity prices. And I did that for a while, and I wrote a book called [Commodity Prices and the New Inflation](#). It was looking at the impact of commodities on the price level, actually, in the 1970s.

And then I turned and I was given the assignment to design a program for Brookings on international trade policy, and it had to be useful to policy makers. And for the first time in my life, I actually went out and spoke to policy makers. And what I found was that they had a perception of what was happening in American manufacturing that didn't quite accord with mine. And so I designed that program, but then I wrote a book called [Can America Compete?](#), in which I talked about American de-industrialization, which was already a concern in the early 1980s.

**Rob Stavins:** Right.

**Robert Lawrence:** Then after that, I've used trade in order to study a whole range of issues. I was interested in Europe and I participated in a book on impediments to European economic growth. I was interested in Japan and the debates in the 80s were whether their markets were opened or closed. So, I worked on the Japanese system, I worked on Sweden. So, I had various opportunities to study different countries and to learn about new economic subjects.

**Rob Stavins:** Then eventually you became a senior fellow or whatever the equivalent is at Brookings?

**Robert Lawrence:** Yeah, so I became a senior fellow at Brookings, and I was very happy there. Then the Kennedy School was looking to fill a position in international trade and investment, and to my astonishment they offered me the position.

**Rob Stavins:** To the great wisdom of Harvard.

**Robert Lawrence:** So, I came to Harvard in '91 and enjoyed that tremendously, too. And at the time, I became very interested in income inequality and what role trade had played in that. So, I did quite a bit of work on that. Then later, Janet Yellen actually invited me to join the [Council of Economic Advisers](#), and that was in the last two years of the Clinton administration.

**Rob Stavins:** Speaking of that, can you tell me of your time in Washington at CEA? What was the high point of that experience, if you can remember just one? And also, I'd really be interested in what was the low point?

**Robert Lawrence:** I would say I just loved learning about new challenges. The thing about being an academic is that you're very supply-driven. You have to think about what you have to think about. When you're in government, they tell you what to think about. The things I had to think about were things that were coming completely from left field.

**Rob Stavins:** And have it ready by four o'clock this afternoon, too.

**Robert Lawrence:** Yeah. And actually, in one of those, happened to be the negotiations on climate change, and I ended up in, I guess, the last time for a while that the US participated in the negotiations. There was a COP meeting in the Netherlands that I attended. I suppose the sense of having to leave that particular institution and agreement at the time could be thought of as a low point, but I enjoyed my time in Washington tremendously, dealing with these new issues that I hadn't thought about a lot.

**Rob Stavins:** And probably that time in Washington also has influenced your subsequent research to some degree. So, that prompts me to ask you... And I know this is unfair. It's like asking you to name your favorite child, which I wouldn't ask you. But what's the product of yours, the academic product, whether it's a book or a paper, that you're most proud of?

**Robert Lawrence:** Well, actually, it's the one I've just completed. It's a new book. It's called [\*Behind the Curve: Can Manufacturing Still Provide Inclusive Growth?\*](#)

**Rob Stavins:** And who's the publisher of that book so we can make sure people can get it?

**Robert Lawrence:** The [Peterson Institute for International Economics](#) is going to be publishing the book. And basically, the first part of the book is a general theory about the role of manufacturing employment as economies develop. Everybody knows that the share of agriculture declines when you become more developed as an economy, and everybody knows that the share in employment and services increases. But what's the share in manufacturing? Well, it turns out, it follows a hump, and once you reach a certain level of development, after that, the share declines and it doesn't really matter whether you run trade surpluses or trade deficits.

So, the first part of the book spells out exactly why this occurs. And then the second part uses the United States experience as an example, and studies the role of how manufacturing contributed to more inclusion, particularly of people without college degrees up until about 1975, 1980. And then, however, since then, associated with the decline in manufacturing, but not only because of it, workers who don't have a college degree have done poorly in the economy.

And then the final part of the book looks at the new challenges. I think both the Biden Administration and the Trump Administration for that matter, get it wrong 'cause they don't understand the reality of this hump, and they think you could restore the middle class by restoring manufacturing's role in the economy, and I think basically we're way past the peak where this is feasible. It's not that manufacturing isn't important. It has a role to play in providing us with the hardware for de-carbonization, for digital economy, but it's not a driver of the opportunity that it once was for people who're relatively less skilled.

**Rob Stavins:** It's interesting, that pattern that you describe of the changes in the composition of the US economy and other economies for that matter, of manufacturing becoming increasingly important up to a point and then beginning to decline, relatively speaking, in importance, is perfectly consistent with what's referred to as the environmental Kuznets curve of simple societies, pre-manufacturing societies, a large degree, the importance of agriculture, low levels of pollutant emissions. Manufacturing takes off and pollutant emissions max out, usually at a per capita income approximately that of Mexico. And then after that, per capita emissions begin to decline as economies are more dominated by services sectors and the like.

**Robert Lawrence:** Yeah. So I think there is a loose connection between those two phenomena.

**Rob Stavins:** So, I wanted to ask you, if I could, to tell me if I have it right. Is it right to characterize you as an enthusiastic supporter of free trade? And if I'm right, why are you an enthusiastic supporter, and are there limits to your enthusiasm?

**Robert Lawrence:** Well, I don't believe that a country should automatically and instantaneously move to remove all its trade barriers and open up to international trade. But I do believe that there is a very strong argument for an open trading economy and an open trading system. At the same time, I also think, and increasingly we're aware, there are different kinds of risks. One increasingly is that we live in a geopolitically uncertain world, and so we need to take that into account.

And the other is there's an optimal pace of change from a political standpoint. Even if eventually a country would be better off putting its workers in areas where it can compete, the transition requires paying attention to some of the political consequences of doing that. And so, a lot of my work has been devoted to thinking about how you can move towards freer trade, but also deal with the labor market consequences of doing that.

**Rob Stavins:** So, that prompts me to ask you, turning to current times, many countries in the world, including the United States, are moving towards more protectionist policies. Is that trend just part and parcel of the rise of populism, which we're also seeing in many countries of the world including this one? Or are there other factors that are at play?

**Robert Lawrence:** Well, I would say certainly the political, the populism, is a dominant force. But I also think there's the real challenge of absorbing the rise of China with its different economic system in the same market and system as traditional market economies. And so that's also caused a lot of friction and a lot of problems in coming up with a common set of rules for countries who have such very different economic systems. And then, overlaid on this intrinsically economic problem, are our geopolitical tensions.

And I think also, if you go back seven years or so, we took the rules of the game as given, and actually, a lot of countries paid attention to the rules and we were

moving to a more open system. Increasingly, particularly with Trump, the United States in particular is no longer playing at the role of leading in a multilateral trading system. In fact, we're the biggest breaker of the rules in that system with the possible exception of China. So, I think the two of us, the two largest trading nations not adhering to the rules, has created a lot of problems in getting a functioning multilateral system.

However, I would say that enthusiasm for free trade continues to be very strong in many parts of the world. So, we see within Asia, numerous trading agreements. The CPTPP, when the United States withdrew from the Trans-Pacific partnership, the other countries said, "Sorry, well, we believe in what we signed," and they've gone ahead and implemented it and it expanded its membership. If you look at Africa, you see countries at a different level of development, but also committing to a continental free trade agreement. So, I think while at the global level, we're seeing protectionism. At regional levels, we continue to see considerable amounts of integration.

**Rob Stavins:** I remember when Hillary Clinton was running against Donald Trump, that during the campaign, I don't remember if it was early in the campaign or late in the campaign, but despite the fact that as Secretary of State in the Obama Administration, she of course had been a great supporter of, and I assume had worked on, the Trans-Pacific partnership, she came out against it in the campaign, which was, I thought, quite astounding.

**Robert Lawrence:** Yeah. And that basically was reflective of her need for labor union support.

**Rob Stavins:** I see.

**Robert Lawrence:** But we did have a presidential election in which Bernie Sanders was against the Trans-Pacific partnership. She was, and of course Donald Trump withdrew the first day he became president.

**Rob Stavins:** You were talking about US and China, now who are loggerheads, it seems, on so many issues. Relations between these two countries, it seems to me, have been downhill since the end of the Obama Administration. First with Trump's America First policy, and more recently with what we might characterize as Biden's manufacturing-first approach. Is that characterization fair? We've seen it on a number of issues, but particularly on international trade.

**Robert Lawrence:** Yeah, I think it's fair. It's interesting. Biden came back to support the multilateral climate system and rejoined it. He has not done that with equal enthusiasm when it comes to the multilateral trading system, and if anything, the Biden Administration has doubled down on the Trump approach, certainly to China, but also done very little to revitalize the World Trade Organization.

**Rob Stavins:** So, as you said, the Biden Administration on at least climate change has been very different than the previous Trump Administration was, and its major piece

of legislation, the largest legislation in history on climate change, particularly if you count it in terms of the budgetary dollars involved, is the [Inflation Reduction Act](#), which strikingly uses carrots, that is subsidies, not sticks, constraints, in order to achieve its objectives. What's your reaction to that?

**Robert Lawrence:** Well, yes. The IRA, in using subsidies, is essentially dealing with a political reality that the first best, in the minds of most economists, raising the price of CO<sub>2</sub> emissions proved to be impractical within the American political system. And so, we got what I think is of a second-best approach, but nonetheless, it is an approach moving us in the right direction. And so, I think we see the constraints of politics leading us to do what's feasible in our political system.

**Rob Stavins:** Although to connect it with what you were talking about just previously, from the point of view of the Chinese, and for that matter, the point of view of our European allies, the subsidies in the Inflation Reduction Act are protectionist or anti-competitive.

**Robert Lawrence:** Yes. And it's not just a pure subsidy policy that we've imposed or implemented in the IRA. It's a discriminatory one.

**Rob Stavins:** Right.

**Robert Lawrence:** There are special benefits if you use US content in what you produce. There are special incentives when you buy electric vehicles that satisfy certain production criteria which relate to local production. So, I think Biden has used the climate policy as part of his drift towards becoming even more protectionist.

**Rob Stavins:** So, in that regard, I would love it if you could comment on the tariffs the US imposes on imports of electric vehicles manufactured in China, and for that matter, tariffs on imported solar panels. In particular, what are the effects on US manufacturers or US business more broadly? What are the effects on consumers? And then finally, if you can, what are the effects on CO<sub>2</sub> emissions?

**Robert Lawrence:** As part of our trade war with China, we imposed a 25 percent tariff on electric vehicles. We already have a two and a half percent tariff on automobiles. So, that's a 27 and a half percent tariff on electric vehicles. And that was before Biden has now raised those tariffs even further to 50 percent. So, in effect, we've closed the US market for electric vehicles and have taken similar measures when it comes to solar panels.

By the way, we also have broad tariffs on steel and aluminum, which are key inputs if you want to make wind turbines. So, what we've done is in the name of, I guess, national security, and also to have our own domestic production of these products, is to severely, in my view, slow down the pace of de-carbonization. From that standpoint, if you had a subsidy policy that applied to the use, no matter where these products came from, you would have a much more rapid de-carbonization.

Solar panels today are extremely cheap. The Chinese have overproduced them, and the question is, is that an appropriate area in which we should try to become self-sufficient? And you could say, "Well, what motives would you have?" One would be employment. But actually, there are far more jobs in the installation of solar panels than there are in the manufacture.

**Rob Stavins:** Absolutely.

**Robert Lawrence:** The jobs one moves in the opposite direction as national security. And that's where I think the dependence on imports of solar panels hasn't been properly thought through. Because unlike oil, if a foreign country refuses suddenly to sell you oil and puts on an embargo, your motor cars stop running. If a foreign country who happened to be a dominant supplier suddenly refused to sell you, for whatever reason, solar panels, well, your de-carbonization process would just occur a little more slowly. And in effect, your power stations would continue to use natural gas for a while.

There's also the fact that there's a very complicated supply chain when it comes to solar panels, and there are a variety of processes like the upstream production of ingots that are eventually made into the solar panels where the refining processes are all dominated by the Chinese. And so, even if we were to make our own solar panels, we'll still be dependent on them for these basic inputs that go into them.

So, I'm not totally convinced by the national security argument in that case at all. I think this protectionism is coming at the expense of de-carbonization and not really something we need for national security purposes.

**Rob Stavins:** In very simple terms, when politicians promote tariffs on imports, whether it's electric vehicles, steel, or anything else, they always characterize it as, for example in the case of China, as, "This is a tax on China," and then economists respond, "Wait, no, this is a tax on American consumers."

**Robert Lawrence:** Right.

**Rob Stavins:** Can you explain that?

**Robert Lawrence:** Well, actually, the economic theory suggests that in theory, either side could be right. In principle, look, if a foreign country needs to sell you the product and you then impose a tax on that product, then they are likely to absorb the tariff. They'll lower their prices. By contrast, if you impose a tariff on something where they could sell it to many other trading partners, you'll tend to pay the tariff. Technically, it depends on how elastic your demand is, and supply, as well as theirs.

**Rob Stavins:** It's the same as looking at the incidence of any tax.



**Robert Lawrence:** Exactly.

**Rob Stavins:** It's the relative elasticities that matter.

**Robert Lawrence:** Precisely. And it turns out, when we look at the empirical studies, that when it came to the tariffs that we imposed on China it was Americans who paid the tariff.

**Rob Stavins:** I see, I see.

**Robert Lawrence:** I think it's because, in a lot of cases, US firms were buying key inputs from China, and they had to buy them. Your iPhone, say, which has certain assembly services done in China, cannot adjust very easily to find some other place to do it. Gradually, it could be absorbed. So, what we've basically done in this instance is to raise the costs for American consumers and, indeed, other producers who use Chinese inputs and haven't really had the impact that President Trump and others said we'd have on the Chinese.

**Rob Stavins:** So, let's put this all together in the form of my final question, which is, in regard to global climate change and/or in regard to international trade, are you optimistic or pessimistic about the near future and we'll say the midterm and even long term as well? You can be honest now.

**Robert Lawrence:** No, I'm very troubled, let's put it this way, on both fronts. I'm troubled particularly in the trade area because of the systemic conflict which I see between the United States and Western countries and China. And I worry about the dangers of fragmenting the system. And I'm troubled, because of the experience that I've had in the trading area and seen how the dislocation that trade can cause gave rise to populism, I'm very worried that some of the dislocation in advanced countries that climate policies can cause, without adequate steps being taken. Although people like to talk about climate justice, I believe that the measures to help the communities who depend for their economic livelihoods on fossil fuels are going to be impeded, and that those costs are going to create political backlash.

So, that makes me troubled. And you can see signs in Europe where they've taken the steps to put prices on carbon. I see, in many countries, a growing resistance and antagonism towards that imposition. That's even before we start to talk about developing countries, who are the major emitters. And there too, that's seen by many as a threat to the sustaining of their economic growth. So, I think the challenges down the road are immense in both areas, and therein the political realm to persuade people to adapt policies in both cases.

**Rob Stavins:** Well, then your work is very much needed because sometimes it's been at the intersection of international trade and climate change issues. So, keep working at it, Robert.

**Robert Lawrence:** Well, thank you very much, Rob. It's a pleasure to talk to you about these questions, and I do think people who work on trade and people who work in climate have much to teach each other.

**Rob Stavins:** Indeed. Yeah, absolutely. My guest today has been [Robert Lawrence](#). He is the Albert Williams Professor of International Trade and Investment at the [John F. Kennedy School of Government](#) at Harvard University. Please join us again for the next episode of [Environmental Insights: Conversations on Policy and Practice](#) from the [Harvard Environmental Economics Program](#). I'm your host, [Rob Stavins](#). Thanks for listening.

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