

**Tim Phillips [00:00:00]:**

Today on VoxTalk's Economics, South Korea's objection to the Inflation Reduction Act and what that tells us about trade in clean energy tech. Welcome to VoxTalk's Economics and a Centre for Economic Policy Research. My name is Tim Phillips. Now, every week we bring you the best new research in economics. So remember, subscribe, follow us on Instagram as well. You'll find us at VoxTalks Economics. The Inflation Reduction Act of 2022 provided \$350,000,000,000 in tax credits and other incentives for clean energy technologies in the US. So how did American policymakers respond when South Korean government officials undiplomatically declared that this was a betrayal? To find out, we turn to Global Trade's greatest living storyteller of the Peterson Institutes, also presenter of trade talks and the author of a new discussion paper that investigates this story, Chad Bown.

**Tim Phillips [00:01:11]:**

Welcome back to VoxTalks Economics.

**Chad Bown [00:01:13]:**

Thanks for having me, Tim.

**Tim Phillips [00:01:14]:**

I went quite big on your introduction there, Chad. I hope you didn't mind.

**Chad Bown [00:01:17]:**

It's all good.

Tim Phillips [00:01:18]:

Let's get straight into it, Chad. What was the Inflation Reduction Act? The strangely named Inflation Reduction Act. What was its intention?

**Chad Bown [00:01:26]:**

The intention of the Inflation Reduction Act, or IRA as it's become known eventually. Well, actually had a lot of different objectives, most of which had nothing to do with reducing inflation. There were provisions of the law to try to tackle drug prices and things like that, but for climate purposes it was to get the United States back in the game. When it comes to climate mitigation exercises, you have to remember that under the prior administration, president Trump had withdrawn the United States from the Paris Agreement. And while President Biden had reinserted the United States into that process, the United States really hadn't done a whole heck

of a lot to up its game. And the US is the second biggest emitter of greenhouse gasses overall globally, and it just has a lot to do to reduce its emissions. And so there was a lot of tax incentives sprinkled throughout this piece of legislation to try to make contributions in that area. The biggest one, politically at least, was the story for electric vehicles. Transportation is a big part of American emissions. Something like 38% of American emissions can be tied to the transportation sector. About 58% of that is personal vehicles. So things that you or I would drive around the roads and tax credits for consumers to try to convince them to get out of their internal combustion engine vehicles and into electric vehicles were a big part of this law.

**Tim Phillips [00:02:55]:**

So is it fair to say that one of the direct intentions of this was to help the US domestic auto industry?

**Chad Bown [00:03:04]:**

Yes. In addition to fighting climate change, the specific provision, the main provision for the consumer tax credits for electric vehicles, said that they were only eligible for vehicles that were assembled in North America. Now, there are lots of different car companies assembling vehicles in North America. So it's not just General Motors and Ford. It's also German automakers, you know, Volkswagen, BMW. They assemble vehicles here, and Korean automakers obviously assemble vehicles here. But it was very much a part of this law, was to try to encourage local production in the United States and jobs here in the United States as well.

**Tim Phillips [00:03:44]:**

So which Korean companies are going to end up at a disadvantage from this? How big are the stakes for them?

**Chad Bown [00:03:52]:**

Major Korean automotive companies are under this group called Hyundai, and that includes multiple brands, models and the like. So Hyundai is obviously one of them. But it also includes Genesis, is their luxury brand, and also Kia as well. And the concern for them was they had made promises and commitments to ultimately build factories to assemble electric vehicles in North America, and they'd made commitments of \$5 billion factories or so. But those weren't going to come online until 2025. And again, this law was passed in 2022. And so what they were hoping in the meantime was to be able to sell their electric vehicles into the US market from what they were producing at home in Korea, to be able to export them. So get access to US consumers and these tax credits through international trade. That's what they were hoping. But unfortunately, this North American assembly provision that was suddenly in this law thwarted those hopes and made them quite upset.

**Tim Phillips [00:04:52]:**

But nevertheless, we get this language from South Korean officials. Betrayal is a very strong word to use. Why were the policymakers so upset? I can understand why the auto industry CEOs would be, but why the policymakers as well?

**Chad Bown [00:05:09]:**

Well, partly it is because the automobile industry in South Korea is incredibly important. It's one of its biggest industries, and there's a lot of jobs in Korea tied up with this, and it's a big chunk of its exports. But politically, this was very important because President Biden had made South Korea a priority when he came into office. He made a state visit to South Korea in May of 2022. In fact, it was his first foreign visit outside of Europe. He went to visit South Korea before he went to Japan, before he went to Canada, even. This was a major coup for the South Korean government to have the new American president show up. And during his visit, he did a big public event with the Chief Executive of Hyundai, in which the chief executive of Hyundai made a surprise announcement.

**[Voiceover] [00:06:11]:**

Yesterday we announced an investment of \$5.5 billion in the state of Georgia to establish our first dedicated EV and battery cell manufacturing plant. Today, I like to highlight an additional investment related to our future business. Hyundai Motor Group plans to invest on an additional 5 billion through 2025. I humbly ask for the Biden administration's continued support of our US operations.

**Chad Bown [00:06:53]:**

They're sitting there in Seoul, in Korea, side by side, and the Chief Executive says, we're planning to build this electric vehicle factory in Georgia, in the United States. It'll come online in 2025. The initial investment was going to be for \$5 billion. We're going to make it a \$10 billion investment. And so perhaps even more jobs being created there in the United States.

**[Voiceover] [00:07:18]:**

It's great to be here to announce more than \$10 billion new investment in American manufacturing, this new commitment that's going to create more than 8000 new American jobs.

**Chad Bown [00:07:38]:**

This is great for the American president, but you could imagine from the South Korean public's perspective and South Korean politicians perspective, this is one of their flagship companies saying, hey, we're going to do more over there. There's going to be probably fewer exports in

the future because we're going to be doing this domestically in the United States. And so when the Inflation Reduction Act then came along, despite this announcement that eventually this South Korean company would be doing lots of investment and creating lots of jobs in the United States and making lots of cars here, when they were cut off so suddenly from the American tax credits with very short notice, the Korean politicians themselves got very upset and stood up for, effectively, the company, at least in the short run, because they were going to lose, they thought, access to these tax credits. And it's \$7,500 per vehicle, so it's not a small amount of money. And this was threatening their exports almost immediately.

**Tim Phillips [00:08:28]:**

Oops, awkward. I get that. But practically what bad outcomes could there possibly have been for the Biden administration from this row? These arguments blow up all the time.

**Chad Bown [00:08:42]:**

The potentially bad outcomes could have ranged along a number of different dimensions. One is the trade dimension. So it could have been that the South Koreans retaliated. In the old days what used to happen when these sorts of trade disputes would emerge is countries would file a dispute at the WTO in Geneva, and it would be litigated for a couple of years. And then if the US refused to get rid of the policy, South Korea might be authorized to retaliate, hurting US exports of some other products. So that's one potential outcome. There's a concern that the South Korean government might do the same thing and change their consumer tax credits in ways that would benefit only vehicles being assembled in Korea and not vehicles being assembled in the United States or anywhere else. Or it could threaten cooperation in other areas. The American South Korean relationship is complicated, but it's very, very intertwined, not only economically so. There's a lot of policy coordination going on outside of automobiles in sectors like semiconductors, with export controls impacting China, Russia after the invasion of Ukraine, but also lots of joint concerns over national security issues. So you've got North Korea out there that the United States and South Korea constantly trying to work together to deal with, the increased aggression from China, and then, obviously, what Russia has been doing as well. So this had the possibility of putting a lot at risk, in addition to just the trade relationship between the two countries.

**Tim Phillips [00:10:04]:**

But Chad, this was a flagship piece of legislation. Hundreds of lawyers would have been involved in the drafting of it. It was debated extensively. Why did nobody see this coming?

**Chad Bown [00:10:20]:**

While all of that may be true, it was actually a surprise that we got any legislation on climate at all in the summer of 2022. There was a feeling here in Washington that it really wasn't going to

happen. And it really came together at the last minute, very quietly. Most of us weren't expecting there to actually be a deal. And it was really hashed out between just a couple of people, the Senate Majority Leader, Chuck Schumer, and a very important, very politically important anyway, an influential senator from West Virginia, a coal producing state here in the United States, Joe Manchin. It's unclear exactly what happened, but there are stories to suggest that some of the details might have gotten missed. At the end of the day, some of the I's, know forgotten, to be dotted or T's, forgotten to be crossed. But also, I think it was very much the intention of some of the legislators here in the United States to make this a piece of legislation that was designed to help American industry and American workers, even if it did hurt trading partners, as we saw in this instance.

**[Voiceover] [00:11:30]:**

In April 2021, we spoke to Chad about the US pivot to economic nationalism. Check out our episode; Making Sense of the US China Trade War. And in May 2019, we talked about the problems of the dispute resolution system for trade conflicts. Listen to the episode called, The End of the WTO.

**Tim Phillips [00:11:58]:**

We have an escalating diplomatic row. This has turned into a big problem. After that furious response from South Korea, how did the US government respond to this?

**Chad Bown [00:12:11]:**

In the fall of 2022, the South Korean government sent lots of officials to Washington. Almost every week there was somebody here visiting administration officials. My job here at a think tank is sometimes they stop by and chat with me as well. And it was mainly to complain, to complain about the Inflation Reduction Act. Eventually what happened is the regulations had to be written to actually put the law into practice and the US government agency in charge of writing those regulations because this is part of the tax code. This is the US treasury. And at the very end of December of 2022, the US Treasury released its regulations. And what they said was the following: look, there is this provision about these consumer tax credits that South Korea is very upset about. That's called Section 30 D. But there's a separate provision in the same law for electric vehicle tax credits for something called commercial vehicles. Now, normally we might think of commercial vehicles as big, giant tractor trailer trucks, lorries, as you call them, or delivery vans. Amazon might drive around, things like that. Well, what treasury said is, for the purposes of this law, we're going to consider leased vehicles. So not a vehicle that you would buy, but one that you essentially rent for two years or so, a leased vehicle as qualifying for a tax credit under this separate provision called section 45 W. Why does that matter? Well, under the separate provision, that requirement that the vehicle had to be assembled in North America to be eligible for the tax credit, it didn't exist. And so suddenly, provided the South Korean companies could figure out how to convince American consumers to lease their Hyundai's or

Kias or whatever, they could get access to the tax credit after all.

**Tim Phillips [00:13:59]:**

A glorious fudge.

**Chad Bown [00:14:00]:**

Amazing.

**Tim Phillips [00:14:09]:**

Given that what's the trade outcome been for Korean EVs?

**Chad Bown [00:14:13]:**

Initially, the Korean companies were a little bit skeptical about this. And when I got a hold of the data about leasing rates for various automakers and in 2022, it turns out that really only about 2% of the Korean electric vehicles coming out of the US market were leased. So 98% of them were being bought outright by American consumers. This announcement is made on December 29th. That rate starts to go up as the companies quickly figured it out and are convincing consumers in their storerooms that come in and say, hey, I want to buy a new Hyundai Ayana. They say, well, you know what? You don't actually want to buy this thing. You know what you want to do? You want to lease it. Because if you lease it, you get access to this extra tax credit. And so three or four months later, by April, already about 40% of the Korean electric vehicles coming out of the US market were being leased as opposed to bought. So they quickly figured it out. And then you look in the trade data, and there's no evidence whatsoever that there's been a negative impact on Korean exports of electric vehicles into the US market, you know, they just continue to grow and grow and grow as if the North American assembly provision had never happened.

**Tim Phillips [00:15:18]:**

The political outcome of this has the temperature cooled? Is there a reproachment between Korea and the US?

**Chad Bown [00:15:27]:**

Definitely tensions have cooled between the two governments, and I can speak to that firsthand because South Korean government officials have stopped dropping by my office to complain, and so they definitely moved on to other things. I think a separate question, though, is what's happened domestically in terms of the political situations in the two countries? And the challenge for the South Korean government, this was such a huge issue for them domestically,

politically, right. There was a lot of outrage in Seoul amongst those politicians. There was no gotcha moment that says, ah, we've won this dispute. The United States has caved. They're now know whatever it is that we want, they ultimately got what they want in terms of continued exports of these Korean electric vehicles. But it was done quietly through a treasury regulation that was announced in the week between Christmas and New Year's that nobody was really paying attention to.

**Tim Phillips [00:16:19]:**

In the small print, wasn't it?

**[Voiceover] [00:16:20]:**

Yeah. So it's not clear the domestic political situation in South Korea has changed all that much. Even though the economics for them have turned out okay. On the US side, there has been some pushback. So this senator, who was very instrumental at the last minute in writing the legislation, senator Joe Manchin has complained to the US administration and publicly about how they have interpreted certain aspects of the Inflation Reduction Act, including this one. It's not as beneficial toward things being produced in the United States, american jobs and those kinds of things. So there are political costs here domestically in the United States as well.

**Tim Phillips [00:16:52]:**

I note there does seem to be some political clear up. There was a visit from South Korea's president wasn't there a few months ago where you had that strange spectacle of him singing Bye Bye, Miss American Pie at a state dinner.

**[Voiceover] [00:17:11]:**

A long, long time ago, I can still remember how that music used to make me smile. And now I knew if I had my chains that I can make those people dance and maybe they'd be happy for a while.

**Chad Bown [00:17:34]:**

And we've had a very important visit by the South Korean leader and the Japanese leader when Japan and South Korea have a lot of political tensions of their own here in Washington, where they got together with President Biden at Camp David and made all kinds of positive statements about how the three of them are going to cooperate, which is probably pretty good news as well. So I think it's diplomatically between the United States and Korea, things have improved, and this problem at least seems to have been solved.

**Tim Phillips [00:18:06]:**

Can we declare winners and losers from this very odd dispute?

**[Voiceover] [00:18:11]:**

Yeah. As I sort of tally things up, I think that the clear winners here are probably the environment, you know, the idea that you're getting more consumers into cheaper electric vehicles more quickly is a positive step for tackling the climate problem, at least here in the United States. American consumers are going to be better off because now they get continued access to these vehicles, the tax credits, lower prices. The South Korean auto industry obviously is a big winner from this as well. Potential losers would be maybe the US auto industry or the other firms that might have faced less competition from imports had this leasing decision not been made. I guess I should say to their credit as well, this wasn't just done bilaterally between the United States only giving something to South Korea. The same leasing option is now available for European automakers. So also looking at the data, leases of German vehicles, for example, have also gone through the roof after this announcement. So it's not just the South Koreans that benefited. It's the Europeans as well. We expect the Japanese car companies are likely to benefit as well. So, yeah, I think there's mainly winners, at least in the short run, in this particular scenario.

**Tim Phillips [00:19:18]:**

Now, when we have sat down before, it has often been to lament the decline of the dispute resolution process of the World Trade Organization. As you mentioned at the beginning, this was not resolved through the WTO. Does that matter?

**Chad Bown [00:19:37]:**

Perhaps in this particular instance, not having a WTO dispute settlement process was perhaps a good thing. Right. In the past, what we might have seen, if it was fully functioning, the South Korean government filing a dispute, the lawyers get involved, but these cases take a long time. Maybe they resolve it 3/4/5/6 years off into the future. Here, because they knew that really wasn't an issue this time around, they came to a solution. They figured out a way to make everybody not get everything they want, but to make them better off than they probably would have been in the absence of this outcome. So arguably, in this instance, they got to an outcome quicker. And again, speed is important here. We're trying to save the planet from climate change and to try to get as many electric vehicles on the road and get internal combustion engine vehicles off the road as quickly as possible. Paradoxically, maybe this was one instance in which not having a trade dispute function actually may have worked in our favor.

**Tim Phillips [00:20:32]:**

There are a lot of other countries, not just South Korea, that are unhappy about some of the



provisions of the IRA. South Korea's response to make a huge fuss about this seems to have worked for them. Is it a good model for other countries?

**Chad Bown [00:20:49]:**

I should say that it was not only South Korean government officials who were leading the parade to Washington in the fall of 2022.

**Tim Phillips [00:20:57]:**

You had a very busy office at this.

**Chad Bown [00:20:59]:**

Yeah. No, it was challenging getting the ear full, including from European officials as well. They were very much following the same script. The outcome worked out in this instance. But to be fair, electric vehicles are only one part of the Inflation Reduction Act, even for climate change. There's a lot of other subsidies in there for wind and solar and carbon capture and lots of other technologies, and this leasing thing doesn't do anything to address any of those concerns. So other countries of the world, including many in Europe, continue to have challenges with the structure of the Inflation Reduction Act. From their point of view, the challenge is, well, the United States is, you're subsidizing clean energy, that's going to make energy cheaper in the United States, all else equal compared to the rest of the world. And so for energy using industries, things like steel and aluminum and chemicals, that's kind of an unfair advantage relative to what we're doing, say, in Europe that is thinking about carbon pricing, right? They're putting a tax on the dirty energy. All else equal, that's going to tend to raise the price of energy and make it more difficult for those energy intensive industries to compete. So that challenge hasn't gone away. The divergent approaches between how the US is tackling climate change and how Europe is tackling climate change, for example, haven't disappeared. So this, I don't think, is going to be the last dispute or source of frictions on the climate agenda.

**Tim Phillips [00:22:20]:**

And also we can note that the Inflation Reduction Act is being emulated in other countries, other trade blocks as well, similar types of policies, legislation going through. Have we got to the ironic situation where we are responding to perhaps the greatest ever global threat to humanity using isolationist industrial policies?

**Chad Bown [00:22:48]:**

I think that is a really big risk. And so some of it was walked back in this particular instance when it came to electric vehicles, the local content North American Assembly provisions were expanded. So that wasn't that bad there. But such provisions exist in other areas of IRA and

other countries, because they have now seen the United States doing it, are thinking about doing the same thing themselves. This isn't to say that subsidies are always bad. It's just making the subsidies contingent on locally produced inputs. That tends to raise the costs of tackling climate change. And this is going to be expensive enough to begin with. And so we're going to want to try to reduce as many of those costs as we possibly can and ensure as much cooperation internationally as we possibly can.

**Tim Phillips [00:23:34]:**

Chad, always great to talk to you. It's so interesting to hear about the unintended and intended, I suppose, consequences of this type of legislation. This story's not over, is it? Thank you for talking about it today.

**Chad Bown [00:23:46]:**

Thanks for having me, Tim.

**Tim Phillips [00:23:56]:**

The paper is called How the US Solved South Korea's problems with Electric Vehicle Subsidies under the Inflation Reduction Act. And the author you just heard from him, Chan Bown. It is discussion paper 18329 at CEPR.

**[Voiceover] [00:24:15]:**

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