2023 TPI Aspen Forum
Chips, China, and the New Frontier of Industrial Policy

Scott Wallsten:

All right, welcome back. So we're going to start this, start with our panel CHIPS, China and new industrial policy. So let me give sort of a little bit of a different kind of introduction to this. I have trouble putting a framework on how to think about this particular issue. On the one hand, the economist in me sees the protectionist nature of the CHIPS Act, which we'll talk about more and the way companies try to exploit it for their own benefits, sort of sometimes tinged with jingoism and worse, that's part of this. But then on the other hand, we know that the national security threats are real.

We don't want equipment that the Chinese government has access to in our networks. And then there are human rights issues. This is a country that does not do good things to people like the Uyghurs and so on. And so trying to figure out how to think about this in a coherent framework is difficult and hopefully we'll sort of unwrap some of that here. But just sort of a very quick introduction. So the CHIPS Act, which CHIPS actually stands for creating helpful incentives to produce semiconductors. And hopefully someday we can stop with these cutesy titles for acts. They really drive me bonkers.

So you can see on this chart, this is a global supply chain pressure index and semiconductors make up a decent share of this. And you could see when CHIPS was introduced, the supply chain pressures were huge. There were huge supply chain problems. You can take this index back, I think it goes back 20 more years and it really never deviated much from the line. And so there were all these pressures, but then by the time the act actually passed and export controls were enacted, these pressures were sort of going away and now they're more or less gone, right?

So that was to some extent some of the reasons for the act had disappeared by the time it happened. Now this is the act itself and it's close to $230 billion total. The part that we normally hear about is the manufacturing component, the subsidies towards semiconductor manufacturing. And the numbers we hear sometimes people say 53 billion, but the total, once you add everything up, it comes to more around 65 billion.

And then there's this huge workforce development component, $200 billion. And there's lots of ways that could be spent. And then there's just a big smorgasbord of other stuff in there. Some of it probably really useful, some of it may be not, but there's a lot of stuff going on in this act. Now, we of course don't operate, we aren't in a vacuum. And so other countries have reacted to the CHIPS Act and they also subsidized, created subsidies.

So it's here's a list, don't use these numbers without fact checking them more carefully than I did. But the general point is right, other countries passed huge subsidies also to promote semiconductor manufacturing, including China. And so then the question is if everybody is subsidizing, what is the real difference other than governments paying for the FABs? And obviously the relative amounts make a big difference, but this is one implication of it and what does that mean?

And then finally, sort of a new thing and we'll talk about now is that now China is also playing a game here too, and they blocked Intel's bid to buy this Israeli chip maker under various laws. And what does that mean now? How much control does China have over Western company's

decisions on what to buy and what to build. Anyway, so we're going to talk about all of that on this panel. Let me quickly introduce the panelists who all know far more than I do.

So we have Theresa Fallon, who's the founder and director of the Center for Russia, Europe, Asia Studies in Brussels. Xiaomeng Lu who's the director of geotechnology practice at the Eurasia Group. Christine McDaniel, who's the senior research fellow at Mercatus. And Roger Noll, who is a professor of economics emeritus at Stanford University, also my PhD advisor. So we'll see how that goes here. So maybe let's start from how people see this from the other side of one of the oceans at least, or maybe both. Theresa, tell us what's the reaction to the CHIPS Act around the world?

Theresa Fallon:

Thank you so much. I'm delighted to be here. I think we should also keep in mind that the CHIPS Act was in response to China's made in 2025. So I think that there are these actions that are taking place. So we saw in Europe they have their own CHIPS Act. We saw that great graphic by Scott. And what additionally galvanized European attention was Covid.

They were really in distress because they had such a lack of computer chips, I think of semiconductors. But this is causing a lot of tensions in transatlantic relations. We tend to think like it's saving private Ryan, Europe and the US are together. China's strategy is always to drive wedges in the transatlantic relationship. But one of the elephants in the room is the war in Ukraine. So this is something, this kind of China, Russia, no limits relationship has caused a lot of blow-back.

So it depends where you are in Europe. There's not one European voice on this. There are four regions I would say how they perceive China. But I would say that overall the view of after the no limits announcement, right before, 20 days before the invasion of Ukraine, central Eastern Europeans see Russia and China in the same basket. Germany and France have a little more complicated nuanced approach because of all their investments in China and their ability to play on the geopolitical stage.

But as long as a war continues, I think that this will be far more difficult and the US will put more and more pressure so they can convince, they will persuade the Europeans where they can and maybe use coercion where they can't persuade the Europeans. So we see the ASML in the Netherlands. The US has kind of persuaded the Netherlands not to export these machinery to China, but I think that extraterritorial the US is going to increase.

We've seen the Biden administration, it's starting, but it's juicing it up. And I think that the Europeans, as we saw with Macron's visit to Beijing, I called it peace wash. He got on a plane. He said he was going to talk to Xi Jinping about helping to end the war in Ukraine and he left with a bumper sticker saying we don't want to be a vassal of the United States. And before that he actually sold planes, fine, but helicopters which are dual use, and I think that's not going to go through.

There are American chips in those helicopters and I think that you can already see some tensions in US European relations. Overall, the trajectory, they're moving in the same direction. But I see some frictions and I imagine that as time goes by, the US will have to tighten that. And today at the same time we saw the G7 come out with really strong statements. But today in South Africa, there's the BRICS meeting, president Putin can't travel there.

Xi Jinping will be the main guy on the stage. 20 other countries want to join this grouping. And so we're kind of seeing a bifurcation in the international system and how this will play out because Europe tends to want to sit on the fence, hedge their bets. Whenever there's US China tensions, they like to arbitrage the difference and benefit from that. So it's getting more and more difficult for Europe to do that.

Scott WallstenScott Wallsten:

Do you think the act then is, what will it do to semiconductor manufacturing? Is this pitting the US against Europe in a maybe positive way? Or is this not [inaudible] as they call it? What's happening?

Theresa Fallon:

Well, I think it's really positive because they call it Saxony, Silicon Valley and Saxony. So, it's Eastern Germany is where the load is really going. So TSMC recently announced a contract there. Intel is also there. There's two other projects in the pipeline. Some people I've spoken to told me that they're worried about oversupply, but governments don't care. They want the security of the chips.

So even if they're channeling all this money, they want oversupply just because of what happened during Covid. In addition to that, the Europeans aren't going to say this out loud, but they see three challengers. So Russia, China, and the US. So they've done research on their dependencies and they don't want to be overly dependent on the US either. So I think that's part of the chip narrative as well. And the German car industry really needs these chips. And TSMC will not be cutting edge technology, it will not be. The TSMC always wants to be five, six years ahead.

I was just in Taiwan a few weeks ago. I got every visit that I asked for except TSMC, I guess everyone and their grandma wants to visit there. But I guess in regard to deterrence, I don't know if it's true, but the narrative is that the whole TSMC is mined. So if there should be an invasion, which I don't know, this is a form of deterrence. But the people I interviewed in Taiwan, they said it's not just TSMC, it's the whole ecosystem connected to that.

So even if they took out TSMC, there's a whole other area that they would need. So I think Europe has really woken up to these challenges. They have been asleep for a long time and I think that it's slow. We saw 2021 Ursula von der Leyen, president of the European Commission first announced this, so it was during Covid release. So I think that Europe is moving ahead, but it's always a bit of a laggard and this is important that they are moving ahead

Scott Wallsten:

Xiaomeng.

Xiaomeng Lu:

If I may touch also on the point of potential oversupply, because you just showed the chart of supply chain pressure because the semiconductor industry goes through these natural industry cycles. Every few years they go through a downturn and a spike and a downturn down and spike. During Covid, it was overlapped, the crisis was overlapped with a spiking industry demand.

And now we are in the downturn cycle, to the extent that I think if you look at the price of Intel stocks these days, it has hit rock bottom. If you look at the second tier suppliers in the industry, whether they're designers or equipment makers, some of them have stopped production basically because the more they produce, the more money they will lose. That's how dire the industry has been. And then you look at the forward-looking perspective, US putting in the 60 billion, 52 billion, however you calculate, and Europe has 43 billion euros I think, and including Germany's 20 billion.

I think for that type of investment it's largely focused on mature nodes versus the US at least ostensibly is more on the advanced chips. And then you look at China's reaction, right? These

days they realize that the two phase of national IC fund over $50 billion in the two phases of investment was the original impetus that stoked the global race for semiconductor subsidies. So they're very careful what they're doing and what they put out in the public eye. They're doing stepped up investment in this area too.

If you look at Bloomberg articles, some say it's a trillion dollar in the next five or 10 years, but there's no official data what they're doing. But there's no doubt they're going to give an even more ramped up support to their domestic national champions because they no longer have access to the critical technology components supplied by US supplier given the recent technology restrictions. So you look at China also focus on mature nodes, which is the only thing available to them on the market.

And then European also double down on mature nodes. And if you look at Japan's support program, I think they throw around about two billion so far in the past two years or so under the National Economic Security Act. They also focus on mature nodes. I think that you will see a lot of government incentive to produce more mature notes in the future and whether the market will digest that, whether you are going to hit the hike of the cycle or the bottom of the cycle, we don't know. So how this is going to play out in the market, there's a lot of uncertainty out there.

Scott Wallsten:

Let's follow up on that just for a second. I mean, it's a fool's errand to try to explain stock prices, but I'll be the fool. All the chip manufacturers except for Nvidia, have really done terribly since the CHIPS Act was passed. And is it because the CHIPS Act in the context of the industry really doesn't matter for their revenues? Is it because there's a glut now? Is it because of the export controls their markets have shrunk? What do you think? Or is it just all noise? I mean that's an answer too.

Xiaomeng Lu:

I think number one driver I would say is a natural industry cycle. Number two, it's a technology restriction commerce department placed, US suppliers played a role in this as well. I see Bank of America's analysts saying that their quantitative analysis shows that US semiconductor industry permanently lost 5% of their revenue due to last October's restriction.

And there are more potentially coming. And that's after the Huawei ban. I also saw, I think during the pandemic, some people estimate that the Huawei ban contributed to 20% global supply shortage. So these two numbers adds up and we'll see more and more of those coming. I think the trajectory is hard to turn around at this point.

Scott Wallsten:

Christine?

Christine McDaniel:

Thank you so much, Scott. Thank you for the invitation to be here and thanks all for joining us. So I guess big picture, I think it's worth just stepping back a moment and taking stock of industrial policy, the history of industrial policy in the United States, although Professor Noll is definitely a better place to discuss that. But in effect, I mean we have a pretty poor track record of government R and D programs. There are a few highlights out there, like DARPA for instance, a few others, but mostly on net there's more failures than successes. So there's that going against it. And this is really hard, right? It's really hard to do despite all the good intentions.

The bigger question here is there some market failure that is causing inefficient R and D and investment decisions by the private sector? That is the big question that you guys should all be thinking about when you're thinking about the CHIPS Act and should we be doing this or not? And then you can get to the pretty easy to say, well, to the extent that we are underpricing the geopolitical risk, we're underpricing the risk of putting all of our eggs in one basket in Taiwan, and to the extent that US ideas and innovation and resources are going into chips that are being used against us and our allies militarily, then yes, that is arguably a market failure.

And why isn't the market pricing that in? Well, China is just so humongous and this is a very globally connected industry, and the risk of bad stuff happening is just not big enough for private actors on their own to make those changes. So when people in the government explain to me what the big picture goal here is, it's like two-pronged. One is run faster and one is keep away. And so they want the industry to move faster. And I think that's a lot where the CHIPS Act comes in.

Workforce development, throwing some R and D money at it, big picture, 50 even 65 billion, is not that much as Xiaomeng was saying. I mean we're looking at a trillion dollars going into this industry at least in terms of manufacturing and company subsidies. But keep away, that's the export controls, the investment controls. So you've got these two prongs that they're trying to do. And for an economist, what I worry a lot about is the negative productivity effects down the road, and that's 50, 65 billion of chips, to the extent it's going to reallocate resources in this industry in a way that's really going to come back to bite us later.

That's what's very concerning to economists here, and we just know that this stuff is really hard to do. And I mean already look at Intel who early will be getting the lion's share of this money, as Scott was just saying, and Theresa was commenting on their bid to buy Tower largely for market access, their client base and their expertise in manufacturing fell through because China blocked it. Apparently there was some provisions in Tower's bylaws that any client that had at least 15% of sales could block the sale. And of course China has at least 15% of Tower sales. So this is going to be a hard road upwards.

And the closest thing we have to look back on is Semitech, of course, which even in the best light did not overall according to a National Academy of Sciences report, did not overall lead to increased R and D investment. If anything, it just let companies invest less because the government was investing more. And it did increase US market share a little bit compared to Japan, but then after a while that all went away and now Taiwan has a lion's share. So there's a lot of, despite good intentions, the CHIPS Act has a lot of uphill battles.

Scott Wallsten:

You mentioned Semitech, and it's interesting that almost nobody ever does mention Semitech in the context of chips. In fact, a commerce department, I guess it was an inspector general, said in a hearing that CHIPS is unlike any other program that the federal government actually, she said this undertaking right now. So technically that's right, but Semitech just doesn't come up in the conversations even though it was very, very similar. I don't know, Roger, if you want to take it from there and talk about what the history of these programs and then how it leads into CHIPS and what CHIPS maybe was supposed to do versus what it will.

Roger Noll:

Semitech is actually fairly unimportant in the grand scheme of things in the sense that it wasn't very big and it wasn't very ambitious and lo and behold it didn't accomplish much. So that's not a big surprise, but I think it's important as Christine began her talk to say to figure out what's the

set of reasonable rationales that one might have for a policy that went beyond simply support for research and development and support for education in techie fields, right?

Because there's good economic arguments having to do with the benefit of a public transparent research program that allows diffusion of new ideas and diffusion of technologies to occur at the maximal rate. That's a reasonably good argument for having some support for basic research long before you get to the commercialization stage. The problem comes in in trying to go beyond that. And there's a bunch of reasons for it. First, notice that when we talk about the CHIPS Act, we're talking about the current challenge from abroad. There's always a foreign challenge, and this time it's China. The last time it was Japan, the time before that it was Russia and the Soviet Union.

The interesting fact about this is that when people claim a national security reason, they're really claiming two kinds of things. The first is it's not R and D and products where the purpose of the government is transparency and diffusion. It's exactly the opposite. And secondly, in order to prevent all that, it all has to be to some degree in the dark. It can't be public knowledge. And that means from a political standpoint, if people are making decisions politically, not just in Congress about what to support, but who to vote for in terms of their policies, they don't really know what the facts are about the nature of the threat. And hence, policy isn't going to be informed.

It's not. The standards of evidence for an argument are going to be low because they have to be because most of the information isn't public. Now what this all means is that enter the person who has knowledge. And if you have a largely in the dark system for developing and commercializing new technologies, it's going to be some combination of the government mainly in the Department of Defense, secondarily in some other places and the industry itself, which means there is this propensity to eliminate competition, to cause not just you're fighting the market economics of international trade and comparative advantage, but you're also making things less competitive.

You're causing the world to move into a state in which rather than compete on product quality as the mechanism for having improved performance, it's going to be done by committee. And I think that's what Christine was referring to about what one of the problems with Semitech was that it became essentially a cartel. And when it did that, it didn't do much. So interestingly enough, it turned backwards to let's jointly support research in the people who produce the machinery that we use to make semiconductors.

Rather than focus on the semiconductors themselves, let's focus on the semiconductor manufacturing process industry. And to the extent they had successes, that's where they had successes because they didn't want to cartelize their suppliers. So they encouraged a competitive process. And indeed that's where most of the progress took place that came about from Semitech. So it seems to me that when we think about the quote, China threat, we really have to divide it into segments.

Segment number one consists of the pure national security component where we don't want the Chinese manufacturing the chips that guide the ICBMs. And there's no way in any economics argument about comparative advantage and efficiency in the virtues of competition is going to overcome that argument about the national security imperative. And any economist who tries to make that argument doesn't understand the policy process, even if it were right, you're not going to win it.

Then there's the second part of it, which is the we need to be in leading edge part because of all the high productivity occupations that really depend upon us being the best in the world at it. And that mainly is a story about education and research and development. It's not a story about building factories in Rochester, New York or something like that. And then there's the third component, which I think is crucial here and here I'm going to go beyond the CHIPS Act.

There's always been a proclivity in the US, which is bipartisan, it consists of some labor unions in the Democratic Party and some industry groups in the Republican Party who want to use the first category and the second category of arguments to get into a third category, which is how do we prevent competition, maybe competition on the international stage, maybe competition in restricting entry in the domestic part. And that part of it is alive and well in the debate about the semiconductor industry because it's been alive and well throughout the history of the United States.

We spend more of our time being protectionists than we do spend being free trade. Now in the full list of all the legislation that's been passed in the last five years, there are more than just the CHIPS Act and it's amazing how they all have some feature of trying to use government procurement as a mechanism to promote certain kinds of industries. The Inflation Reduction Act has this feature. The Infrastructure Act has this feature. Even the two Covid bailout bills had this feature.

They have domestic content requirements and expenditures. They have prohibitions against buying certain things from abroad. They have provisions that say the only people you can buy that count as domestic content are the US, Canada, Mexico, and any nation we have a free trade agreement with, which is basically a bunch of little countries in Latin America plus Korea and Singapore. And this is just part of decades and centuries of tension in economic policy.

And all we can do is just fall back on the last argument, which is exactly the one that's been made twice now, and I'll make it the third time, the cost is substituting for things that have higher productivity. And it is a sacrifice of GNP per capita to decide that you're going to build more low end or medium end semiconductor manufacturing in the US as a way to bring back high paying manufacturing jobs that, that is going to have a negative impact on overall per capita income in the US and productivity growth and economic growth.

And what we have to manage in the public sector, and we've done so reasonably successfully because overall we tend to be more towards openness, competition, and even reasonably, but not completely free trade, we tend to be in that place a lot in the post-war era. And it just requires overcoming the argument that somehow a full employment economy that has reasonably open borders in terms of international trade and that has a reasonably competitive market structure that seems to have worked well.

And as long as we have the burden and standard of proof of trying to defeat that be high, then we can prevent the other arguments about national security and openness of new information and diffusion of technology from spilling over and causing us to do stupid things.

Scott Wallsten:

I just want to emphasize one thing and then, Xiaomeng you can respond. The second point, Roger, that you made, that we always want to be the best at science and technology, be in the forefront of science and technology, this is sort of another thing kind of happening in here is that it looks like we're not going to renew the, was it the Science and Technology Act, the agreement with China for scientific exchange that's been in effect for 45 years. And again, it's one of those things, there may be good reasons for it, but that is also going to be a cost to us because we benefit from research from other people too, and that will take it away. So it's just another thing to think of. Xiaomeng.

Xiaomeng Lu:

Sure. I would like to add to the third point of Roger's analytical framework in terms of lawmakers on both sides are very keenly focused on blocking competition. But I will also add to that people in this room, a lot of constituencies in the industry have been adding pressure on that and they

have been putting an argument that we need to compete with China. China dropped so much subsidies into EV, AV industry, satellite industry, wireless mobile industry, chips industry. We have to do the same to be competitive.

I think that's a false analysis of the situation. China had a lot of policy failures. The IT minister who authorized a lot of this national IC fund into some domestic champions in the semiconductor has been arrested under corruption investigation, may be going to a prison soon. And that's the biggest cost in the Chinese system. You don't know how to assign these subsidies and there are a lot of corruption, a lot of inefficiencies in assigning these critical resources that everyone is competing against.

And the same for EV subsidies, solar panel subsidies. I think that's the pitfall that US policymaker should avoid, not follow. And I think some of these industry rhetoric is also captured the sentiment that China has been growing so fast, so soon and how can we be successful as well. But I think this type of revisiting of protectionism as reflecting problem with ourself, I think going back to the post-war US approach to Japan and China back then, we are the champion of free trade, right?

Free trade WTO system, a legal system that modeled upon US trade laws is a quintessential part of US foreign policy strategy. We use that on Japan and we say, forget about semiconductor subsidies. That's a wrong approach. Let's do trade policy. But 30 years later we try to use the same thing with China. Let's come to the WTO, let's do free trade, make you more like us, but somehow China in the process as it grows up and grow into its own, it realized that I don't need to follow your rule.

I think I'm big enough and powerful enough, I can tweak the system. And some people will say they paralyzed the WTO system given their weight and in that process they find their own approach. I think that's the thing that US should focus on. What's your best strengths? What's your way? Don't just copy other's approach, right? I would say the US strengths is just the value system in free flow of data, information, talents, as well as capital. That's the core of our strengths. We should build our strengths around that, not just overly focused on blocking competition or becoming competition in the process, loss ourselves.

Scott Wallsten:

So CHIPS is following China and we're going to lose as a result. Is that kind of the-

Xiaomeng Lu:

Yeah. I feel like the US is this mature superpower that has a mid-age crisis. It's doing a soul-searching. What do we do next? And forget that in most of the critical technology and science field, it's still ahead of China. We are not falling behind in many of them. And we should figure out how do we get here and how do we emphasize that strength, not just finding whatever we can find to address the weakness in the wrong way.

Scott Wallsten:

Theresa, you've been scribbling like crazy. I want to know what you've written down.

Theresa Fallon:

Just a couple of points I want to pick up on. Roger, when you mentioned Japan, I should remind everybody they were one, an ally. Two, there's tensions now with Taiwan and three the South China Sea. So I think the Biden administration perceives an intensifying geopolitical

confrontation. So it's a very different situation than with an ally like Japan. And I would also add China's economy, gravity has hit China, it's not going to grow double-digit any longer.

All the low hanging fruit has been picked. And I mean what happened with Hong Kong, they kind of killed the golden goose. Hong Kong had rule of law, banking all went through Hong Kong and the Chinese Communist Party didn't seem to understand how that worked for their economy. So what's hitting China right now or the People's Republic of China, it's multi-pronged, there's many issues going on there, but I think that they're going to be really struggling with growth over ...

So this will change the view as well on how people approach the PRC. The floods have also affected many of the FABs in China. So who's going to rebuild those? That's another question. And I would say that during the Cold War, I'm old enough to remember the Cold War, the Intel 386 PC was banned from being sent to the Soviet Union. So I mean we've seen this throughout history, but I think that the Biden administration has talked about a small yard high wall.

So they don't want to cut off everything. They just want the top technology to kind of slow China down. There's no reason why they can't eventually get there, but I think the US wants to slow them down during this period of great concern maybe for the next decade, maybe until Xi Jinping leaves office, we don't know how long he's going to be around for. So I think that we are in a technological competition and that that's very key.

Europe doesn't see it this way. The US has been securitizing many things, but Europe is not securitizing these things. So there's a Mars, Venus division still with the US and Europe on these issues. I mean, when I first met Scott, I did an internship when I was in graduate school in Washington DC and Semitech was all the rage. And I was going to hearings because everyone was so concerned why the US was so dependent on Japan for chips for their military. And I used to go to these hearings and Al Gore, who was just a senator back then, I'm like, wow, he's so charismatic. That man's going to go somewhere. But I mean in a small room, he really did have a lot of charisma, but when he became vice president, he was a bit wooden. So it's interesting to see all these threads coming together. So I really appreciate that.

Christine McDaniel:

Real quickly, well first of all, I do remember being in high school. I was so excited about Semitech I did a paper on it. But yeah, well Theresa is absolutely right. China is not Japan, so there are important differences there. But just since I do trade, just think about a couple of things. One, okay, all this money being poured in by all these different countries, who are going to be the biggest winners from all this money? The supply curve, they're pushing the supply curve out. So all the importers of chips, happy days for them, cheaper chips for them. So just keep that in mind. And number two, once you start seeing anti-dumping countervailing duty cases being filed on imported computer chips, then the US industry is done.

Roger Noll:

If all we cared about was a national security and the difference between China and Japan being a military threat versus an ally, then the CHIPS Act would've been a no China content policy. Instead, it's a no content from anywhere in the whole world policy. And so the way you get from some sort of a competition with somebody in a political military sense to what the CHIPS Act is, is by worrying about the whole smear of things.

I was reminded as I was being lectured to, I was standing, I was in the gift shop at Dinosaur National Monument three days ago, and all the little dinosaur plastic things were made in China, and somebody actually commented about that. Somebody I was standing next to, I'm not going to buy these. These are all made in China. That is not about national security.

Scott Wallsten:

I don't know. Dinosaurs turned into oil. So this panel has taken sort of a different direction and usually when people talk about CHIPS, they say this is the best thing ever. And we're kind of coming to the discussion is that this has gone ... CHIPS has really gone off the rails if there ever were rails to be on. First of all, we get to questions. If somebody wants to push back on that, please do.

Also, I think we probably are never going to get any contributions from chip companies. That's fine. So given that there are national security issues, would it ever have been possible to have a no China policy or was the no everybody policy the only politically feasible way to go about that? Anybody?

Theresa Fallon:

Repeat that please.

Scott Wallsten:

Oh yeah, I mean, so we have an anybody except the US policy when the justifiable one would've been just a no China policy for national security, but was there any politically feasible approach to make it just a no China policy? Yeah, Roger.

Roger Noll:

It seems to me that there are a number of ways to approach this other than subsidizing investment. The crucial thing about the CHIPS Act is that this is lost in the numbers you presented, the magnitude, first of all, the magnitude of the program is unknown because it's tax credits for the most part. And so how big it is depends on how much response there is, and thus far the response, there has been a lot, is nowhere near enough to produce the numbers that you produced.

But the second thing is the magnitude of the tax subsidy was calculated to be roughly 35% of the average cost of a chip, assuming things about scales of FABs, that is exactly the cost differential between making them in the US versus making them in Taiwan or Korea. And so this isn't about China, this is about rebuilding FABs in the US. If it were all about just protecting ourselves from high-end chips, especially manufactured in China and the military significance and natural security of that, it wouldn't be calculated in the way it is and it wouldn't.

Now it seems to me completely impossible to imagine a tax credit program that applied to investments in Korea and Singapore and Vietnam and anywhere else, Latin America, whatever. You'd have to do it in a different way. But there are ways you could do it. You could have a procurement program in the defense department where the exclusions in procurement weren't the entire world except for Canada and the US, it was the exclusion is China.

That didn't happen because the goal of it isn't just national security. The goal of it is to affect the terms of trade and to reallocate international trade. And you can't understand CHIPA without accepting that the political coalition that got CHIPS passed had to include people who just don't want free trade.

Xiaomeng Lu:

Yeah. Maybe I think that I will arrive at the same conclusion as Roger did, but I would just explain it from different perspective. When the Commerce Department looking at the threshold to impose technology restrictions to Chinese companies, I think last October they decided the

threshold is 14 to 16 nanometers, anything above that is high-end, is advanced. And that has a heavier implication for national security than mass market commodity chips.

And I think since then there are a lot of debate of when are we going to lower that threshold? At what point, which type of product categories can we put a lower threshold to further de-risk, decouple with China? But I think even officials arrive at that decision last October is fully aware that the economic consequence of that, because if you really want to push these tech restrictions to the extreme, you look at what type of technology sanctions that US has imposed on Russia since the beginning of Ukraine war.

That's somewhat to a certain extent, that's kind of a blanket ban of a lot of technology components to Ukraine. If you move that model to China, what's the impact of global supply chain? We went through the supply chain crisis during pandemic and do we want it again? Do we want it at bigger scale? Do we want it immediately within a few months? I think that's the ultimate question. And even for companies who have been lobbying for CHIPS Act and arguing for these national security propositions, I think these days even some of them have realized that some of these policy debate has gone too far. That wasn't their intended position.

Even for example, Intel CEO, we are talking about the Intel Tower deal. The CEO went to China twice this year to lobby for the approval of their deal. And when they come back, he come to White House and he came to Aspen and he reiterated his position twice. He said, "If you put more restrictions on my export to China, what is this chips money good for? The Ohio factor is meaningless because I don't have a customer." I think even the practitioners in that sector who may or may not contribute to this type of event in the future, I realize the practical challenge.

Scott Wallsten:

I think we allocated about three hours too little time to this discussion, but quickly to take a question. Yeah, no problem. And then actually ...

Audience Question:

Since you've decided to use a national security lens to frame this most of the discussion as opposed to a political economy or a business finance lens, let's look at just keeping to the national security line. There were three or four areas which were considered critical to national security, past, present, and future, past Huawei and telecom 5G, present semiconductors, future AI. So I'll ask you, could you compare the strategy vis-a-vis telecom and 5G versus the CHIPS Act? And I mean, how would you analyze and compare the parallels?

Scott Wallsten:

And let's take the second question also just to ... Oh, you've got. Okay, great. Excellent.

Denise Houston:

It's on? Okay, lovely. Hi, my name is Denise Houston. I work for the European delegation and I report to the European Commission. I would like to make a comment on the point that was made earlier that the EU does play both the US and China. And I would just like to say that I don't believe that's true by any means. If you look at Ursula von der Leyen's March 9th speech, he clearly outlines their policy to which he does clarify that China is both a competitor, but also we have to recognize that when we are dealing with global issues like climate change, they're also a partner.

So in that regards, given that we all live on the same planet, we do have to work with them in some capacity. And then the US is once again our biggest ally. And if you're not convinced, you

can count the number of military bases, look at our trade statistics or ask how many people in this room summered in Italy. And finally something that was not mentioned was the Trade and Technology Council. So on the topic of this panel, the new industrial policy, I think the Trade and Technology Council semiconductor working group actually does a really good job because we're working both on the working level on a very high level, on how to ensure that we are making the most out of both the EU and the US CHIPS Act not duplicating supply chains to make sure that we both have comparative advantage and also make sure that there's no subsidy race to the bottom.

Scott Wallsten:

And quick responses to either or both.

Theresa Fallon:

Well, I live in Brussels. I've been there for 20 years, so I kind of know what's going on on the ground. And Ursula von der Leyen made a policy speech. Charles Michel sided with Macron. There was a famous photo of Jens Stoltenberg of NATO holding their hands, and we were joking that he was trying to make peace between the two of them. So there's no unified voice on China, and I don't think we're even going to get there.

There's a lot of fragmentation in policymaking in the EU and the three basket approach, which was established in 2019 with the EU China paper, that is a competitor, systemic rival and partner in regard to climate change. So it's all three things at once. The US also uses the same approach, but I would say that Central Eastern Europeans clearly see this as I reiterated about Macron's visit, kind of throwing Taiwan under the bus, that was really, I was in Taiwan shortly afterwards, and they were like, oh my gosh, does he speak for Europe?

And so I would say there's a whole fragmentation of approach. He talks about strategic autonomy. The biggest believer in strategic autonomy is the Chinese Communist Party. They speak about it more than even Macron. So I would say that I hope the direction of travel looks good. TTC, we could sense some tensions yesterday at lunch. It was very nice, but you could see there's a little bit of friction. I think it's an excellent group that they can talk behind closed doors and get these things ironed out because the US can't do it alone.

They need Europe. And I think that's great that they are working together, but I hope it will continue in the same direction. And I also call it PTSD, post-Trump stress disorder. The Europeans are terrified. They don't know. I mean, Biden couldn't be more of a transatlanticist, but I think that they're just wondering what's going to be around the corner. So this is also informing their decisions and their position.

Scott Wallsten:

Anybody else? Very quickly, because we're running over. Xiaomeng.

Xiaomeng Lu:

On the Huawei versus Chip Act question, I think the three element Roger identified, I will place Huawei mostly in the security component of this, but the CHIPS Act can easily set across all three. You look at Huawei's case is somewhat unique. There's the ownership question, who really controls the company? And the FCC has deemed the company a national security threat given NSA's investigation for a long time.

And the company also violated US sanctions and lied about their behaviors there multiple times. So you can say there's a real trust and integrity problem with the company itself. But if you

expand the scope to say, AI company, quantum company, a wide range of semiconductor company, I think you are looking at the framing that Jig Sullivan put out last fall saying emerging technology, that's our goal. The goal is really to maintain two, three generations ahead of China in a wide range of critical sectors. I think the latter fits into the later narrative laid out by Jig Sullivan last year. But I do concern when you keep China three generations ahead, you are also keeping yourself two generations behind.

Scott Wallsten:

So we have to wrap up now. Also, I've taken a picture of the remaining questions on Slido because they're really good questions and we're going to answer them somehow. But thank you all very much. I really enjoyed this panel and thank the panelists. And we have next up, don't go anywhere. We have privacy is coming up. Shane is coming up here to moderate and I will hand it over to Shane. Everyone needs to stay put, except for the people who are on the panel, of course they need to get up here.