DOLLAR & SENSE: THE BROOKINGS TRADE PODCAST

"HOW THREE BIG BILLS IN CONGRESS WILL SPUR INNOVATION AND COMPETITIVENESS"

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Episode Summary:

Adie Tomer, senior fellow in Brookings Metro, unpacks three significant pieces of legislation either passed by or pending in Congress—the 2021 infrastructure measure, the CHIPS Act, and the Inflation Reduction Act—and their impact on infrastructure, innovation, and U.S. competitiveness on the global stage.

DOLLAR: Hi, I'm David Dollar, host of the Brookings trade podcast Dollar and Sense. Today, we're going to talk infrastructure. And my guest is Adie Tomer, senior fellow in the Brookings Metro program. After years of inaction at the federal level, we now have three pieces of legislation relating to infrastructure passed within one year. We have the infrastructure bill already under implementation. But now Congress has approved the CHIPS Act, which President Biden will sign. We also have a deal between Chuck Schumer and Joe Manchin on a third piece of legislation. They're calling it the Inflation Reduction Act because it reduces the federal budget deficit slightly over ten years. But it's primarily a climate change and health care bill.

So, Adie, I think we've got a really interesting situation now with these with these three infrastructure bills or three bills that have some relation to infrastructure. So, let's start with the big picture. How do you see the division of labor among these different pieces of legislation? How are they going to interact?

TOMER: Yeah, first of all, nice to be with you again, David, and thanks for having me. Yeah, it's kind of bill-a-rama week in Washington. All the, all the tropes about Washington doesn't get anything done are now dead for at least anywhere from one week to five months of press, you know, or something like that. So, there's a lot happening between these three bills.

I would argue, even from a built environment perspective that I tend to focus on—but you know this too, David, I mean, we have scholars all over the institution that focus on single components or universal components of this—I think the common through line to boil down to a word is competitiveness, specifically economic competitiveness.

So, if I could kind of phase in the bills, in some ways CHIPS kind of intellectually is the first one in line. It's really about building out American expertise or, again, competitiveness in advanced industries. Some of those are focused on digital tech. And quite literally in the bill's acronym, right, fabrication of computer chips has gotten a lot of the headlines. As we're recording today, I'm at my physical home in Cleveland, Ohio, so the state of Ohio is poised to benefit tremendously from this because of a set of both state and federal incentives for a new, massive fabrication plant in Columbus, Ohio, built by Intel. So, I say that just as an example for listeners so they know what we're talking about.

But it's more than just the proverbial digital technologies. It's also a general investment in the innovative capacity of American energy industry and other kind of advanced industrial processes that would happen at a regional scale. And I think we'll probably touch on the regional elements of CHIPs a little bit more.

Then you've got phasing in the Senate reconciliation bill or the Inflation Reduction Act. That is also focused explicitly from an infrastructure perspective on the long-term competitiveness of both our energy industry and then what the outcomes are that we all share in the natural environment based on how we consume energy. So, in theory if CHIPS helps invest in the energy innovation potential, the Senate reconciliation bill doubles down on that, both in terms of more innovation within companies, but actually to help invest in actual facilities as well as making it cheaper for everything from building out certain facility and the components, to permitting reform for long distance transmission lines of electricity, because we're going to switching to significantly more electricity consumption relative to coal and natural gas right now.

And then on top of it, the kind of third component of the infrastructure bill is to help build out even more of the actual physical assets we'll all be using. So, some of those are energy related. Some of them are roads and transit systems where those electric vehicles that are invested in the

reconciliation bill would be improved both in terms of purchasing and manufacturing. I could go on, you can hear this.

This is what happens when you pass—I don't know what the aggregate total is, we're going to get close to $2 trillion here and that's a lot of money in a short period of time. But there is an intellectual focus here. And what I like the most is that this is an investment in our future. So this is about our kids and grandkids actually living in an even more competitive America than maybe where we're sitting today.

DOLLAR: There's also interesting issues about where a lot of this investment takes place, and I was fascinated that the CHIPS Act includes $10 billion for the Commerce Department to create 20 regional technology hubs that would aim to link research universities and private industry in an effort to create many Silicon Valleys in areas that have been hollowed out by globalization. So, can we hear a little bit more about this? Are those 20 already pre-identified or is the Commerce Department going to figure that out? Because there's certainly going to be a lot of competition for that kind of support.

TOMER: No, they have not figure them out, and yes, there's going to be intense competition for them. It's really important here for me to give dap to my colleague Mark Muro in the Brookings Metro program. The work that he did along with a gentleman, Rob Atkinson, and our colleague Jacob Whiton within Brookings, to say nothing of others like Bill Galston, too, over years now directly inform this piece of work. So, all of us at the Institution are really proud of this component of it because it's built on solid academic findings that we have got to distribute.

The regional nature of innovation, where it takes place, there's some natural scale economies. We see that within industry. What we've learned over time is that the scale economies show up in place, too. So it's not just New Yorks and San Franciscos. It's actually in the global environment, too. They're experiencing the same problems in their specific digital tech hubs. So, this is really to help spread it around, that that $10 billion program.

And there's actually another nearly, it's short of 5 billion, but it's north of zero, if you will, of other investments that are focused on regionalization of innovation. So, yes, there's going to be intense competition, and it is specifically focused on those places that don't yet have a foothold in the digital tech economy, but likely have the ingredients, everything from financing and venture capital flows to most critically, the workforce, right, that can really help, help these industries go with a little bit of a jumpstart from the public sector side.

DOLLAR: So, this seems potentially very important and positive. It also strikes me as somewhat risky. You know, if you try to create a regional technology hub in some location where you really don't have, say, a preexisting university, you don't have high tech industry, you don't have the labor force, it seems like, you know, that that can be quite a hopeless effort. So, do we have some lessons from other countries? Do we have some good ideas about how to organize this competition?

TOMER: David, you just nailed it. It's basically like, how do we make sure that the places have the best set of inputs? And again, I'm not trying to punt. It's actually just credit to my colleagues who have done more of this work. So I really would push listeners, basically just Google "Mark Muro regional innovation," those four words and you'll, you'll find everything you need and more.

The part I will comment on, which is I feel kind of more safe pontificating on even if it's not my typical line of work, is effectively you nailed it that this is inherently risky. Risk—the word itself often denotes downside I think to a more lay audience. On the financing side, they tend to think in an upside fashion. Right. That's where your greatest ROI often is going to be. And we in America,

as we start to find, I think, our footing in a 21st-century approach to industrial policy, that is what these, at least these not the infrastructure bill as much as both CHIPS and the Senate reconciliation bill's approach to energy, call them whatever else you want, this is industrial policy, but it's an American stamp on it that we should feel good about.

There is riskiness in it. That means we need to be willing to stomach—and I'll say, all right, the four letter word here is "Solyndra"-style downsides. But for every Solyndra we are having an incredible American record of success with firms that also are a non-four letter word like Tesla. Right. And that story has been well told.

But I just want to emphasize, some of this, let's say we make 20, 20 bets, I'm just making a number up. Let's say 18 of them relatively succeed, some of them fabulously. Two just don't work. Those are great odds and actually make the bill more than pay for itself for those upfront investments. So, we just need to be ready for that.

Look, we are a country built on competition in the market. Whether we're talking about restaurants or manufacturing or something else, not every business can succeed. The point, though, is to keep trying and trying. In the long run, if not the short run, too, you get positive growth and that's what I think we're set up for here.

DOLLAR: Yeah, I think that's a really important point. We have to be willing to accept some failure if, you know, if you seed 20 technology hubs and they all work, then you were probably not really taking any risk. You probably weren't in any really difficult environments and you may mostly be doing things that were going to happen anyway. So, finding that balance. And of course if 20 out of 20 fail that that's going to be a tough one to sell to the taxpayers.

Though, when I worked in the World Bank, I always emphasized to my staff that we can learn from failure. You know, there can be very powerful benefits from failure. If you're carefully documenting and collecting evidence and then you understand where the failure came from, then that can lead to future success. So a notion that, you, you can't accept any failure, that's a bad attitude to bring in economic policy or development.

So, let's talk a little bit about the Manchin-Schumer deal. And, you know, what you correctly pointed out is the reconciliation bill titled Inflation Reduction Act. And a lot of this is aimed at energy issues and it ends up being a mix of brown and green, in a sense, and that it's definitely aimed at supporting a certain amount of oil and gas production, as I see it, particularly through deregulation. But then there's a lot to incentivize renewable energy, electric vehicles, things for the future. So, is there a contradiction in these two different approaches, or is this a practical approach to the energy transition?

TOMER: Yeah, I would go even a step further than practical. I really, really like the energy provisions on this. And I think you'll find on energy Twitter—as it's often, I mean, that's a literal thing, but I mean, that's where a lot of the quickest commentary is coming out of, right—are huge fans of this deal. And I don't just think it's because the alternative was no deal. Right. This is actually a full-throated—I just noted the industrial approach of the 21st century, so that's where I'm going with this—a full-throated bet on using carrots in combination with market-based innovation, in this case on dramatically falling prices on production for both solar and wind energy generation in particular. Betting big on long distance transmission lines and modernizing the energy grid. It's a big, big bet on that. And that's a medium- and long-term investment.

In the short-term, not only will it help on the kind of, let's broadly call it construction, whether it's the infrastructure we think about, but including the power plants themselves. Right. We're going to

let the market start to do that work. It'll take some time to show itself. In the short-run, we are dealing with a very real shortage of certain kinds of fossil fuels in the global economy. And our peers—and of course, you know, there's some weird race stuff associated with that that I'm not trying to get to. But in particular, we have strong economic and historical ethnographic ties to Europe, and their physical freezing that is going to come up here in not very long, you know, just a couple of months it's going to start getting pretty cold already in parts of Central Europe—they are physically short of energy. And thinking about how we could potentially rapidly, if not get liquefied natural gas, which actually can't be exported this winter, certainly trying to get us prepared for the following winter has a direct relationship to about as heightened as you can be of geopolitical negotiations underway with our our peers in Russia.

So, this is a big deal bill. Let me kind of summarize with an example here really quick, David, that again, trying to give more dap around the institution. My friend Samantha Gross in Foreign Policy just put out a fantastic blog—we're recording today on on Friday or it was maybe it was yesterday, but for when folks listen to this I think on Monday that week, please go check it out. She cites a specific example that the modeling of this analysis finds that for every ton of fossil fuel emissions that come out of it, there will be 24 tons of emissions reductions. I will take any bill with those kind of odds or I mean, those kind of ratios. And we've also seen amazing modeling in particular from a group out of Princeton led by a gentleman named Jesse Jenkins, who's been all around. Rhodium found something similar. But basically what it adds up to is, we're going to get really close just through this federal bill to get to 50% reductions of 2005 emissions by 2030. So, we're going to get to at least 40 plus percent by this bill alone from where we are tracking right now. That's a big deal.

So, yes, we both have smart but naturally constrained investments in current fossil technology, but with some real geopolitical benefits to them in the short-term, coupled with really smart, again, modernized, industrialized policy approaches for our renewables energy that should deliver long-term, or medium- and long-term benefits, too.

DOLLAR: So, Adie, I was going to bring in international trade issues at the very end of our discussion, but it kind of naturally comes up right now. As you say, a lot of this is really aimed at making America more competitive. A lot of it is focused on manufacturing, you know, making sure that U.S. remains the preeminent manufacturing location, all of which I support. But you do run into these interesting contradictions with trade policy. And, solar energy, solar panels is a great example of this. We were getting most of our solar panels very inexpensively from China, but we decided, they had, you know, subsidized their industry in a way that we found offensive. So we put tariffs on that. And now the production has shifted to Southeast Asia and we import solar panels from Southeast Asia. And there's been some debate about putting tariffs on those in order to stimulate production in the U.S. But that's going to actually make the whole installation of solar much more expensive and work against the the environmental objective, basically. So, can you tell us a little bit more about that?

TOMER: Yeah. The honest answer is anyone who's got the global trade's relationship to domestic economic health and in particular at the regional level all figured out is lying to you. Right, you know, and I know you weren't just suggesting it either. To give dap to another David out there, David Autor has done amazing work on this that I know you've seen too, David, not to mix Davids, on, on you know, look, like global trade and globalization has delivered enormous benefits on the consumer, or the consumption side, if you will, of the U.S. economy. It has hollowed out old mill towns and other manufacturing sites that there is an easy—not easy, I mean, give credit to the researchers, they have made it now easy to see that through line. But anytime you look solely at a single manufacturing town, you're missing nationalized, if you will, prices for cheap TVs.

Maybe the better way is there's no black and white here. And, you know, twisting the dials in little ways does not just have effects on where you're twisting the dial, let's say, whether it's on the prices of solar, the actual solar generating pieces of equipment, right, to where we manufacture computer chips, right, and silicon where we're silicon-based tech. We have major investments in both the, again, the Senate reconciliation deal, the Inflation Reduction Act—I have trouble on which to call it.

Plus already on the books in the infrastructure bill investments in new battery technology. Right now we source a lot of that globally. There are rules inside the Senate bill that we can only effectively purchase—including batteries but I believe it's other products, too—where the raw minerals sourced within them are from effectively like compatriot countries. They sound like really nice dial twists. And I'm not saying I disagree with them. What I'm saying is I think it's hard to know exactly what the knock on effects are going to be.

To try to wrap this up, that's all just pretext to say clearly we are betting big on America can produce more domestically and we're betting that we have some unused capacity. I'm a believer in that. And again, living, even though I work in D.C. and I spend a lot of time there still, living in the proverbial an older industrial Midwest, there is a lot of ingenuity and willingness to work in facilities that is possible. And that doesn't mean it's necessarily just here. I'm saying, like I think too often if we either live and work in our kind of global governance hubs or innovation hubs or financial hubs where they specialize in that, there's a lot of towns that are really well ready to be major players in advanced manufacturing and advanced innovation.

It's also a bet in some ways back to where we were at the end of—and obviously you're well versed in this, David, so I'd love your thoughts—at the end of the Obama administration, right, with with TPP and where we were trying to go of hey, forge stronger partnerships with our friends globally. We're trying to bet big on that here, too.

So, we're trying to do a couple of really big things at once. Far beyond my capacities to predict, you know, I'm better predicting like are we going to get more vehicle congestion on highways. So, far beyond me to know how to predict, you know, how this is exactly going to work out, who's going to win or not. What I always like, though, in public policy—and I really mean this, it's back to what you and I were just talking about taking risks. Make a bet, you know, I'm a big sports fan it's kind of like have an agenda for your team on the management side and then let the string play out a little bit. But if you kind of just wait along, especially when we have the heft of the American economy, globally speaking, then that's a waste of resources. So, I like that we have a real position here and I genuinely like our odds, but it doesn't mean these bets are going to work in every which way we both predict or at the scale that we're hoping for.

DOLLAR: Yeah, I'm relatively content with the way these bills came out on the trade side because I think there was a risk, you know, that we'd take a very protectionist approach, that everything has to be made in America and that's going to be end up being expensive and unsuccessful. And it's, it's unfriendly to our partners. You know, we have a lot of good partners. So as I understand it, it's, you know, where we have some kind of trade agreement with another country, and so that would include a lot of key partners like South Korea, Japan, I think it includes the EU, Vietnam. We have a trade agreement with Vietnam. You know, so to say that where the trade is covered by some kind of agreement other than just the general WTO rules, that can be part of the procurement. And frankly, let's be honest, it's excluding China for the moment, but it also essentially creates an incentive for China to meet these standards that are in these modern agreements and that can evolve over time. So, I think we'll have to see how it plays out. But the U.S. is pretty practical. You know, like this the solar, we were heading down a bad road on the solar panels as far as I could see. And

then all of a sudden the White House announced, okay, for two years, we're just stopping talk about putting tariffs on panels from Southeast Asia.

TOMER: Yeah. And one other thing I'll add to that, that was great, David, is supply chain resilience, which neither of us kind of hit totally yet. I think COVID was a really good kind of think of like the insurance metaphor for all of us in our personal lives. Right? Like we need a little a little supply chain insurance. Like, that'd be helpful here. And I think all of these three bills combined, again, actually, they provide a maybe reasonable level of supply chain insurance that probably will will provide some benefits. It's easy to—my dad always told me great lessons like, you know, insurance is the worst, the problem is you always need it, right? So, you know, spending a little money on, you know, whether it's health care or, let's say, like your home insurance, which ideally you'll never have to tap in to, it's easy to look at the money per month or per year and say, why am I spending that, I didn't get anything for it. But it really is in case of emergency. So I think there's that added benefit to a lot of this investment, too.

DOLLAR: Right. And economists would say you got a lot from that. You got the security of knowing that you were protected. So, last question for you, Adie. A lot of this infrastructure investment is going to occur at the local level. So, I want to talk about whether there's a risk of poor coordination among the jurisdictions. I've seen this a lot, frankly, in my World Bank experience, you know, sometimes you get you get an expressway and a high speed rail running parallel. Nobody took the other one into account in planning. And then the end results are disappointing because you've overinvested. So, the question is, do we have a risk that poor coordination will undermine the value of some of this?

TOMER: Yeah. The short answer is, I don't know. The … I'll give a quick preview of some work we're about to publish. We did a scan of 50 cities, not the exact 50 largest, but all relatively larger markets in the U.S. Their decarbonization plans. And what we found is a mix of things. So again, bringing up my old colleague, Mark Muro, also his external colleague, who does a lot of work at Brookings, David Victor, and two Stanford experts published this piece showing that local climate pledges have not equated to actual reductions. What we've done is dived into these plans and figured out that, in fact, a lot of places are willing to make promises, they're not necessarily going through all the steps that they need to deliver results.

I don't mean to throw shade at these local leaders. We're actually seeing this as an opportunity, trying to motivate, too. But also a little bit of honest kind of critique here. One of the major constraints we found is that folks are trying to solve their infrastructure needs solely within their jurisdictional boundaries. And look, you know, we could have a whole separate two hour, like like, salon on American governance at the local level and its jurisdictional lines. Half the people who would tune in would fall asleep and the other half would say, just keep going. It's a really big philosophical debate.

The reality is, though, on infrastructure, we do not have the right scale of where our municipal lines start and end to our actual regional economies. And this is especially the case on energy infrastructure, which has been a big part of today's conversation and a common thread in these bills. Most energy that is consumed, whether currently via fossil fuels and in particular like natural gas, which actually flows, or electricity, is purchased, if you will, from power plants far beyond the municipal borders. These are naturally regional kind of energy markets. And, of course, our our utilities stand at a oftentimes multi-state level set of kind of jurisdictions. So, that's that's kind of one angle to this, is how do we kind of set up more regional coordination around our infrastructure investments.

To extend it beyond climate, though, too, I just want to stress this is where we are still so early in the process around seeing the implementation of the infrastructure bill, we don't yet know what places are going to do. We don't yet know what the Biden administration is going to do either. I want to be upfront with folks about this. They are, they being the administration, are really investing heavily in helping more cities, so single municipalities, apply for competitive grants from everything from redesigning their streets to new ways to kind of make sure that they can handle or invest in resilient infrastructure, let's say, in wastewater investments. There's a bunch to like here. That does not solve this regional coordination problem. And it's going to be fascinating to see which regions can step ahead. And we're going to continue to work at that.

But it's why, at the very least, for today's conversation, it's great to see what the federal government has done, kind of saying, look, we're going to try to electrify everything, get as much renewable electricity into that as possible. That inherently will overcome some of these jurisdictional fragmentation issues and let us potentially focus on some of the more stubborn problem, let's say, like coordinating transportation investments, modernizing building policies so they're all ideally zero emission if possible, and some of those other kind of vexing challenges. So, a lot more work to be done.

DOLLAR: I'm David Dollar, and I've been talking to my Brookings colleague Adie Tomer about these infrastructure bills, remarkable investment by our Congress. I like what you said, Adie, about, you know, we say Congress can't do anything, well, it's actually done some pretty extraordinary things with these different bills that really potentially could modernize infrastructure and have a very powerful effect on the U.S. economy. And I really appreciate you gave a nice shout out to several of our Brookings colleagues, because there are a lot of people working on related issues here. So, please, to the listeners, go to the website, a lot of interesting stuff appearing there.

Thanks a lot, Adie.

TOMER: Thank you.

DOLLAR: Thank you all for listening. We release new episodes of Dollar and Sense every other week. So, if you haven't already, follow us wherever you get your podcasts and stay tuned. It's made possible by support from producer Fred Dews, audio engineer Colin Cruickshank, and other Brookings colleagues. If you have questions about the show or episode suggestions, you can email us at podcasts at Brookings dot edu. Dollar and Sense is part of the Brookings Podcast Network. Find more Brookings podcasts on our website, Brookings dot edu slash Podcasts.

Until next time, I'm David Dollar and this has been Dollar and Sense.