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A new vision for American infrastructure
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DOLLAR: Hi, I'm David Dollar, host of the Brookings trade podcast Dollar and Sense. This is infrastructure week for our podcast. President Biden has proposed more than $2 trillion of new spending to address a variety of weaknesses in infrastructure—that includes traditional things like roads, bridges, and water pipes—but we also have a lot of new needs because of the changing world. So joining me is Adie Tomer, a Brookings fellow who leads the Metropolitan Infrastructure Initiative here. We are going to dive into these infrastructure issues. So welcome to the show.

TOMER: Always nice to be with you, David. Thanks for having me.

DOLLAR: So in terms of new issues, let's start with climate resilience. This is a big theme in President Biden's proposal. What do we need to do with infrastructure to mitigate and adapt to climate change? What is in President Biden's proposal?

TOMER: Yeah, this is the place to start. Where our infrastructure debate was even back when Obama first went into office and we were debating what should be in the American Recovery Act—[there is] a really different national tone around this. I've got some numbers for you and for other folks to kind of put in perspective why this matters so much.

In the 1980s, we had 2.9 natural disasters per year. Each one on average cost $17.8 billion. By the 2010s, we were seeing 12 a year—so a six-times increase—and the average annual cost went up to $81 billion. So it's actually more like a five-times increase, right? These acute climate shocks are significant, but what they mask is actually the even more threatening chronic climate shocks that we see.

By 2050, the number of high tide flooding days that could occur will most likely be 15 [times higher]—around 75 days a year. We can expect to see high tide flooding days, of course, in markets that experience high tide flooding. We see the counties receiving failing grades for all three major air quality pollution measures—ozone, short-term, and year-round pollution—are home to over 14 million people of color and three million people experiencing poverty. So every day, no matter if there is a disaster happening, there are these chronic climate problems that are really hurting people's lives and really impacting our quality of life.

The Biden plan is sweeping. It wants to invest in lead pipe removal for our drinking and even our wastewater systems across the country. It wants to dramatically remake the fuels we put into our transportation equipment, specifically by electrifying household vehicles but also the fleets and larger trucks, too. There is a really, really serious thought process about how we address environmental injustice in many of those communities of color or those who have income-based disadvantages.

It's sweeping—it's a completely different approach to what kind of outcomes we want to get out of our infrastructure investments—but it's also like learning a new language. We are really not used to this, and critical—this is what my colleagues and I have been working on, including colleagues who we didn't just author this big recent paper with—is how are we going to use the market-based principles to help get us to respond to these climate signals? All we have as evidence over the last anywhere from two to five decades, whatever you want to claim, is that Americans don't really respond much. Unless it's acid rain or something else, we are not really good at changing our ways of life, and we are going to have to do that. It can't just be changing the fuels that go into our power plants, which I didn't list because that was kind of just so obvious. We are going to switch to renewables. That the market is doing the work on, but there is so much more we have to do.

DOLLAR: Another new issue that's come up is broadband Internet. Basically, this didn't even exist a few decades ago. So when we talk about infrastructure, it's often just kind of tacked on as a poor relation. What do we need to do in that domain? With the lockdown, that's just revealed how critical this is for working and living—having good access to the Internet.

TOMER: Yeah, totally. It's been really, David, like a transformative set of years. I think these are the two big ones: climate and digitalization. Again, ten years ago, climate, we knew how important it was [but] it was really hard to rally people around it. Digitalization, it was tough to convince people it wasn't a luxury; it was actually an essential utility, if you will. Climate has changed in a more gradual way that I think it's just impossible to ignore anymore. To your point, Covid was just a sweeping moment where everyone's like, "oh, right, yeah, everyone needs to have broadband connection in their home and a broadband connection on the go."

We can see the upside to that. To give one example, over just the last 20 years pre-Covid, e-commerce grew from one percent of national retail to 16 percent. Then, in Q2 2020, one year longer, e-commerce of all retail sales went from 16 percent to 32 percent. So we basically just supercharged. It was like a big accelerant on where this trend line was going anyways.

We know that had some destructive effects, but it also absolutely taps enormous economic opportunity in regions. We saw tele-health visits jumped 50 percent. We saw, of course, so many of us switch to work and school online. The problem is, as of last measure, 16.7 million American households—so that's a much bigger number of total population—do not have broadband of any kind. The number almost doubles if you look for people who only have one either wireline in their house or wireless on the go. And again, to use economic parlance, those are not substitutable goods; they are complimentary goods. You need both of them. There are probably people listening to this at home and listening as they are going to work or just taking a walk around their neighborhood on their headphones, on their smartphone. They both have utility.

What we are going to have to figure out—and there's a really great metaphor here—is it is almost 100 years ago with rural electrification and telephone service through the New Deal. Same idea. Something that felt kind of like a luxury that you kind of knew, and I say this having read the history books on this, folks were like, "well, it's an advantage for urban and cutting-edge firms, but I don't know if everyone needs it." It became very clear by the time the New Deal was enacted that, in fact, everyone needs to be electrified. Everyone needs to have that kind of telephone connection. It's as important for rural farms and rural manufacturers as it is for the households. We are in that moment with broadband right now.

I want to leave you at this point, though: it is going to cost about 80 billion dollars to connect, physically connect, all the communities that are disconnected right now. The vast majority of that 80 billion is to connect just the last two percent of households, and even once we connect them, there is no measure right now that shows they have the local subscription base to maintain those networks. So we have a huge reckoning as a country here to figure out how important is this national equity, and I mean that in a social sense. I genuinely believe this is a rallying point for the country to say, "no, this is essential infrastructure. We need to cover everyone and we need to develop a system that, yeah, there's some places that can barely afford to maintain their own networks, but it's important as common citizens, if you will, constituents, together, to do it." [[There is actually really good alignment from the Dems and Republicans on the Hill on this, so I think we will see some movement on it, but it's going to be expensive.

DOLLAR: Adie, as an aside, I would mention that I saw New York City announced that there will be no more snow days. So in the future, if you have the kind of day where snow would prevent easy travel, schools will close but kids will be expected to log in online. So I feel a little bit sorry for the kids who get no more snow days, but it definitely raises this equity issue. Obviously, if that's what we are moving toward, and if your family doesn't have decent connectivity, then of course you are basically disadvantaged in terms of schooling.

TOMER: Absolutely. And look, it's tough for the parents of those New York City kids when this announcement was made that can't work from home or they don't have the extra care around. I think we took on this expectation during the pandemic that parents can do double duty. And again, to put my own cards on the table, I got three under eight. So we were living that nightmare. It's really hard, and we had almost every advantage you could.

I think there's probably a reason, historically, we have snow days, and maybe we can handle—with the American entrepreneurial spirit we can handle an extra day off in the snow belt or the markets that get hit by it. That's with a smile, but I mean, there's some real reasons below it for equity that we probably should, too.

DOLLAR: Well, you mentioned that just the broadband side of this could cost $80 billion. Obviously, there is a big over $2 trillion price tag on the whole infrastructure proposal. So, how do we pay for this?

TOMER: In media parlance, I would actually answer with we don't. What that means—and this is a massive debate to flag for you and everyone listening that's going to be sussed out a little bit over the coming months. Get ready for it. I say we don't pay for it because myself and much more esteemed company that I'm not technically in—Jason

Furman, our old Brookings colleague is on this side, too—which is borrow. Look, both macro- and microeconomics come together here on this. I mean that in an applied way, not like in your textbook. If you are going to borrow against the future, make sure it's an investment.

Effectively everything in the Biden proposal—we can put the care economy stuff to the side where there's a whole brewing debate about definitions—but everything in there per budgetary accounting at the federal level is investment grade. So that's capital investments; that's the obvious stuff. Research and development, that's categorized as investment. Workforce programs, that's also categorized as investment by the federal government. That's huge, right? So, what we have to ask ourselves is, should we be having the economic actors of today, whether those are drivers—so that's gas taxes, where the Republican stands, like "user fees." Then you have the corporations of today in a given year. That's, of course, the corporate tax increase that the Democrats have put on the table. You can have the people today paying for the investments of tomorrow, or you could say, actually, we can effectively borrow at an almost limitless rate. T Bills [Treasury bill], it's basically the best paper you can get. So, at those rates, based on the ROI we know from really conservative federal accounting here on what you would get from those three categories of investment, this will more than pay for itself. And what I love about the idea of paying for it on debt, which I don't like on most others to be clear, is that yeah, $2 trillion is a big number, but it's over 10 years. So you are talking about $200 billion. This is not a large chunk of what we borrow every year anyway. We are going to do borrowing anyways, let's make sure we are at least getting some investment out of it and actually delivering on things that are going to benefit our kids and future generations even more so than the people who are doing it right now.

To say nothing of the people who tend to hold that debt. I mean, it's large, institutional investors and many foreign parties. So we actually would be making sure, in terms of where we are getting the capital for it, it really would be kind of a unique way to fundraise on this.

I don't see the capacity in our system to come up with $2 trillion in a mix of user fees, gas taxes, other utility-based fees which we really don't have the federal level. I'm not really sure if there's enough buy-in on the corporate tax rate increase. I don't think 28 percent is going to get us there. And I don't know why we necessarily need to push that so hard when we have other avenues to invest.

DOLLAR: You mentioned already a somewhat different Republican approach, particularly to the pay side of this, but just more generally we have this partisan divide. We've got the Biden proposal and pretty broad Democratic Party support behind that. What are the Republicans proposing? And just more generally, what's the difference between the two parties in the approach to infrastructure?

TOMER: It's a great question. So, there's a couple nuanced things happening that are happening out in the open but they are not being reported on so much. So, I'm really glad you asked this. Number one, the Republicans are proposing—none of this is really written down, which is also the nightmare. So it's not like you could react to a bill. You are kind of reacting to a mix of talking points and one-pagers.

The Republicans are effectively proposing around $550-600 billion in spending. But this is what's key: they want to stack it on top of already expected spending. So, keeping current levels where they are. Well, we spend over $300 billion over that same time period, roughly, give or take. Most of it is in surface transportation, and most of it is in highways to be even more specific. So what the Republicans are really proposing, let's be nice and say it's $300 billion in new spending. The Biden plan, every single drop of it is intended to be new additional spending. So the gap is not $550 billion to about $2 trillion, right? It's even bigger than that. It's $300 billion to $2 trillion. $1.7 trillion dollars—I don't know if that's a negotiable difference.

This is where that reconciliation parliamentary maneuver comes into play, because I really don't—I'm saying this on the record, obviously, talking to reporters about this too. This, to me, sends a really important signal that the Republicans are really telling the Democrats: we know you can do this on your own, why don't you just do it on your own because we are not going to put ourselves out there. Probably more focused on your last question on the paid-for side, we don't want to justify it. So we would rather come in with a crazy low number that we could potentially pay for through a mix of a little bit gas tax increases, some other shenanigans [...]. But let the Dems do it and we'll see how the chips fall where they may.

So what I would have people walking away with knowing, we are talking about mid-May here, right now the Republicans are not trying to make too serious of a proposal. It will be interesting to see how they negotiate behind the scenes, because as long as the Democrats get Sinema, Manchin, and other folks who might be on the fence on their team, they really don't need Republican votes to get some big infrastructure legislation over the finish line.

DOLLAR: So would I be correct that your most likely scenario is the Democrats do a significant bill through reconciliation, might be scaled down slightly from $2.3 trillion but will be in that 2 trillion ballpark, and probably some of that proposed corporate tax increase will be rolled back in a sense? I mean, Joe Manchin has said he can accept a 25 percent corporate tax rate compared to the current 21 percent, but you probably end up financing more of it through deficit spending than the original proposal.

TOMER: You nailed it, David. That's where I am. The one potential disruptor I'd throw in is just before we were talking this week, Joe Biden said I want to pay for every drop of it, basically. Now, that is not the same thing that they said earlier. And again, reconciliation does not require them to do it either. In the way they have structured the infrastructure spending side of the package—again, putting care stuff to the side—on the pure capital, R&D, workforce, which is about $2 trillion, that ends at 10 years. How long does reconciliation last? 10 years.

I mean, they knew what they wanted the maneuver to be. This is why that Senate parliamentarian's decision was so important, because to allow a second reconciliation bill after they have already done the American Recovery Plan through that method was huge. So now the limitation is can they get their self in policy alignment. It's really optics about the spending side. We have enough space to deficit finance here, it's just a question of what they want.

DOLLAR: Let's turn to the jobs side of this. President Biden sees this whole infrastructure push as something that creates jobs. As I see it, both the construction of the infrastructure and then, assuming it's good infrastructure, this more efficient economy. So what does this mean for the labor market? And do we have the human resources to do this, or is there an important effort to build up the human resources as part of this?

TOMER: So the number I want to start with on this, which is really important for folks to keep in mind. Right now, as of last measure—which again, transparently, at the national level is pre-Covid, but that's probably knock-on-wood soon to be our reality again here in a couple quarters even though jobs numbers don't look great—17.2 million people work in infrastructure. Basically, 10 percent of the labor force. It's massive. It's more than finance, it's more than a whole bunch of other super sectors, but we don't talk about infrastructure in that way because, to be kind of nerdy about it, it actually sits in different industry and occupation categories. But if you actually think about who's working on infrastructure, it's 10 percent of the labor force. So that's today.

Now the problem, as you bring up, is all of a sudden you are going to be juicing the market with this immense amount of public spending. Now, that's going to go immediately to the private sector. That's what's really important. There's not a lot of public sector construction crews; they always contract out. That's why the irony of this debate about public-private-partnerships: everything in infrastructure is a public-private-partnership. So, we will make sure that we will get more privately employed labor here on the construction sites, into research and development labs, and even into workforce development programs. But we have had some challenges in the sector in the past. It's old. By far, the median age across all of those occupations is older than the average median age worker across the rest of the economy. It is very white, and the rates are especially low among Blacks in those occupations. It is higher among the gaps among Hispanics. That's mostly because there's a high share of Hispanics in construction occupations. But there are gaps for Hispanics and Blacks and even Asians across a huge tranche of those occupations in the 17 million.

Then, both tragically or you can say an opportunity, over 80 percent of those occupations are filled by men. What we have seen during Covid, we have had the flip of the Great Recession, which was a "man-cession." We have now seen a "she-section," if you will, during this past year plus for all the obvious care-related kinds of issues. So we really want to make sure that we get people into these jobs, because not only has the market going to be juiced, infrastructure occupations have low barriers to entry. They tend to not require a four-year degree. They often don't even require a two-year degree.

They will provide extensive on the job training in really transferable, if not credentialed, skills. So this is your skill trades. They also pay above the median. These are really the new blue collar jobs, right? Many of us grew up with the idea that was archetypally a man, working on an assembly line, comes home. The whole Leave it to Beaver style thing, right? I mean, that world is basically gone, as you know through your own work. But we actually have seen an increase in these kind of blue collar jobs which can have family or household sustaining wages.

We have got to solve though those three big problems. We've got to get younger people into it. We've got to make sure it looks like the rest of the country, which means more diverse, and we've got to recruit women. It's a massive missed opportunity for both sides.

This is why we are so enthused by the workforce programing, also by the kind of legislation that folks like Senator Tim Kaine out of Virginia put forward. Republicans are on this, too. I mean, there are such great opportunities and concepts like apprenticeships, work-based learning. There are some really cool programing, frankly, that my colleague Joe Kane and my other colleague Annelies Goger work on that can be put into play right away. So, the short here is the Biden team is right to push on this. It's scored as investment. The opportunity is there. If we can do these things in concert, we can not just build a better country, but we can actually get people into really cool, durable careers at the same time.

DOLLAR: So we have talked about finance, we have talked about human resources. I want to talk a little bit about the regulatory environment. It seems to take us a long time to do major infrastructure projects. There are lots of classic examples; 10 years to develop a new metro line. When I was living in Beijing during the global financial crisis, we came home one summer to the U.S. and when we went back to Beijing, they had built a new subway line through my neighborhood. Now, we don't necessarily want to move with that kind of speed, but are there important regulatory reforms that are needed in conjunction with this whole program?

TOMER: Yeah, totally. Permitting is a mess in the U.S. It's just a mess. And to be clear, when I say it's a mess, it's a mess for both political sides. No one's winning right now. Sometimes you will get the most extreme examples like the Keystone pipeline, right, where it's off, then it's on, then it's off again. I mean, that's just a nightmare for business. I can't speak for them, but I imagine if I was a businessperson there I would say just decide upfront whatever it's going to be and we can figure it out.

We know that some of our infrastructure projects are way too expensive due to other elements that aren't necessarily permanent. It's funny you mention Beijing. Our corollary to that, which is less DC because of how much smaller it is, but it’s New York. I mean, Shanghai and Beijing are only corollary to that, really. And the Second Avenue subway, it's been on the books since I think the 1930s or 1940s. I mean, they have wanted to do it forever. They finally got a portion of it open. It is the single most expensive intra-city subway line in the world per mile.

Now, our former colleague Rob Puentes who now runs a fantastic transportation policy shop, the Eno transportation foundation, they looked into this a bit. One of the biggest reasons for that project being so expensive: we made the stations too nice. And because no one in New York wants to deal with what's called cut and cover—basically the idea that you rip out Second Ave, leave it open, sidewalks are open. It's a mess, right? It's loud and it's dirty. It would have been a lot cheaper, and it would have been done faster. We wanted to make life a little bit easier for people over there, and I understand it, but that's the choice we made and so therefore it got a lot more expensive.

That tunnel might be most expensive per mile, but that's not unique. So we have this horrible combination of a permitting system that was designed in the late 1960s, 1970s. It goes by the acronym NEPA. It's the same law that can stop Chevy Chase, Maryland, from building what's called the purple light rail line. It can stop, for different reasons, projects in different places. It's completely antiquated for the moment we've got.

Then you have also have this kind of approach that's a mix of both labor, trying out new technology without scale to it, meaning we are not tunneling the same way every time across the country so we are building things new, and the net effect is projects take too long, costs go up, and it leaves people really unhappy.

We know how to build things faster here. Our European peers, who by all measures are much more environmentally sensitive and theoretically can run bigger public sector budgets as a percent of GDP than we do, they build so much faster than us and more cost efficient. So there's really no reason we can't do this. I have not seen any serious effort in this current infrastructure debate to tackle a lot of that, and that's okay, because the vast majority of infrastructure projects we actually do at the same cost efficiency as our global peers. It seems to be the mega projects and unique ones like tunneling where we really run into problems. That's the part that people are going to have to watch here.

Knock on wood, let's hope that we rebuild these tunnels underneath the Hudson River that were already on their way out and Hurricane Sandy pushed nearly over the edge. That's the most important trade corridor in the country. It's one of the most important trade corridors of people and ideas in the world. And again, for everyone who doesn't know, that's the Amtrak line that connects both Boston to New York as well as D.C. and Philly to New York, to say nothing of Baltimore and Providence, et cetera. Then all the New Jersey commuters. So, I mean, that line has to work, but if it's going to take us forever and cost three X, that's not a good use of money either. So we are going to need to get really wise on how we do this.

DOLLAR: Last question, Adie. Let's bring this back to international trade. So if we do a good job with this, how is this likely to affect U.S. global competitiveness?

TOMER: This is where I'm really hopeful we stay in the game. And I'd love your thoughts, David. I mean, this is your beat, especially toward China.

It's such an interesting combination. We have already seen some great global business reporting. The sensitivities of supply chains were really tested during Covid. Multinationals are already turning them back on. So, I don't see any permanent stoppage, if you will, to the globalization of our trade networks. That means the investment at our ports and our port facilities is really important. That's not just at sea ports like L.A. Long Beach, which is the biggest one in the hemisphere, but at airports like Hartsfield-Jackson or Miami International where more and more high-value, low-weight goods are going through.

Of course, we are going to need to figure out how to continue to accelerate high-value business travel through the air, which I really do think will be coming back. We have learned certain meetings don't need to be done, but for the proverbial handshake deals to get to that point you are going to need to still see people in person to build that trust. We are going to need to make sure that continues to work. So that's another part of our investment.

In that sense, especially for a China lens but really all of Pacific Asia, we work together there, but we also compete in the sense that, especially on digitalization and climate, who is going to invent these products? Who is going to be the location of the high-end services and knowledge part of that value chain? We are in a major competition, as you know too and other folks across the institution work on, not just on AI ethics, which is really important, but just AI high tech. I mean, who is going to own that? It's not a foregone conclusion because we were kind of the early stage digital leaders of the late-1990s through the 2000s that we will continue to be through the rest of this new century.

So, I think of these investments as really essential. When you are dropping $50 billion on the National Science Foundation to research climate tech, that might be too small. If we are talking about making more aggressive climate-based investments like Solyndra, high-risk investments that the government should be making because they really can have the most patient capital of all. They can be the highest risk takers, too. We need more Solyndras, and people have to get comfortable saying that, because if we don't, especially our global peers, they may be. That can be the difference between which economies prosper in this both digitalized and climate-sensitive era and who doesn't.

DOLLAR: Adie, I agree with your sense that global value chains are not going away. There will be some adjustment as a result of the pandemic and trade conflict, but proving to be surprisingly robust. So, these issues we are discussing, both the creation of the infrastructure, there are going to be complex value chains involved in that. Then, if we do a good job, it's going to create a foundation for all kinds of expansion of services, manufacturing, et cetera. So good topic.

It's been really good talking to you, Adie. I'm David Dollar, and I've been talking to Adie Tomer. This is infrastructure week. Finally, I think it's real, and Adie has been helping us understand what's proposed and what's likely to happen. Thank you very much.

TOMER: Thanks for having me, David.

DOLLAR: Thank you all for listening. We'll be releasing 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.

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