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BROOKINGS CAFETERIA PODCAST

PROPOSALS TO MEET GLOBAL CHALLENGES IN ARTIFICIAL INTELLIGENCE AND TECHNOLOGY REGULATION

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P R O C E E D I N G S

DEWS: Welcome to the Brookings Cafeteria, the podcast about ideas and the experts who have them. I'm Fred Dews

In December, Brookings launched the Blueprints for American Renewal and Prosperity project to offer federal policy recommendations in five challenge areas. These are racial justice and worker mobility; economic growth and dynamism; international security; governance—both domestic and international; and climate and resilience.

On this fifth episode from the Blueprints project, two Brookings experts discuss their blueprints for strengthening governance to meet key international challenges in the technology arena. They are Landry Signé and Joshua Meltzer, both senior fellows in Global Economy and Development at Brookings. Signé is co-author with Stephan Almond of "A blueprint for technology governance in the post-pandemic world," and Meltzer is co-author with Cameron Kerry of "Strengthening international cooperation on artificial intelligence."

You can find all the essays at brookings.edu/blueprints.

Also on this episode, Senior Fellow David Wessel, director of the Hutchins Center on Fiscal and Monetary Policy at Brookings, looks at the politics and the economics around raising the federal minimum wage to $15 an hour.

You can follow the Brookings Podcast Network on twitter @policypodcasts to get information about and links to all our shows including Dollar and Sense: The Brookings Trade Podcast, The Current, and our events podcast.

First up, here's David Wessel with his economic update:

WESSEL: I'm David Wessel and this is my economic update. President Biden and many Democrats want to raise the federal minimum wage from $7.25 an hour to $9.50 an hour this year and to $15 an hour in 20205, proposal that has drawn cheers from those who

see it as long overdue justice for low-wage essential workers, and jeers from those who deride it as a job-killer.

Textbook economics says that raising the price of something means less demand for it, in this case less demand from employers for workers. The question is how many winners and how many losers. The Congressional Budget Office, which is influential in these matters, estimates that in a typical week in 2025 at least 27 million workers would get a raise from the bill pending in Congress, about 900,000 people would be lifted out of poverty. But 1.4 million would have lost their jobs or would not be working because wages are higher. Yet economist Arin Dube at the University of Massachusetts at Amherst, who has been looking what happened when *states* raise minimum wages, argues that CBO is overstating the ill-effects of the $15 minimum wage. Still, there are losers and there are winners.

What about employers? Well, the bill would raise their payroll costs for sure. Some of them would suck it up in lower profits. Some would pass along to consumers in the form of higher prices. Some might find they're getting better workers or have less turnover because they are paying more. Yet some would get by with fewer workers or cut the hours of the workers they have. It'd be very painful for some businesses, particularly for those already hard hit by COVID. But a new academic paper that looked at 10,000 McDonald's outlets—many of them in states or cities that have raised the minimum wage—found that nearly all them raised prices to cover the extra costs, didn't lay off workers, and found also that higher labor costs didn't prompt them to install labor-saving devices like touch-screen ordering.

To soften the blow on businesses, there is some talk of coupling a minimum wage increase with a tax break for small businesses, and some economics—including some of my colleagues at Brookings—would prefer less of a minimum wage increase but couple it with an increase in the earned income tax credit under which the government provides a cash bonus to low-wage workers.

One political obstacle to raising the *national* minimum wage is that it would be a bigger deal in some parts of the country than in others. Twenty-nine states and the District of Columbia set their minimum wage above the federal minimum today and so do several big cities. Raising the wage to $15 an hour would have a huge impact on several states in the South which have no state minimums, or on a state like West Virginia where the minimum wage is $8.75 an hour. That's important politically because Democrat Joe Manchin from West Virginia has indicated he'll oppose a $15 an hour wage, and his opposition could be fatal to the proposal in the Senate. A $15 minimum wage would have less impact in states like California, where the state minimum went up to $13 this year, and is already headed to $15. And in Florida where voters in November approved a referendum that takes their minimum wage up to $15 over the next five years.

You might wonder if there is something special about raising the minimum wage to $15 instead of, say, to $10 as Senators Mitt Romney and Tom Cotton have proposed, or $11 as Joe Manchin has suggested, or, say, $14. Well, $15 an hour is politically important because it was a campaign promise that Joe Biden and many other Democrats made. Economically, it's a fact that the federal minimum wage been stuck at $7.25 an hour since 2009. It would be close to $9 an hour today if it had kept up with inflation since then, and would be around $12 an hour if it had kept up with inflation since 1968.

DEWS: You can listen to more Wessel's Economic Updates on our Soundcloud channel. And now, here's my interview with Joshua Meltzer and Landry Signe.

Josh and Landry, I want to welcome both of you to the Brookings cafeteria podcast.

MELTZER: It's great to be here.

SIGNÉ: Thank you very much for having us.

DEWS: So, I've asked you both to come on to participate in the fifth of our Blueprints podcast series to talk about the papers that you've both coauthored on some international

governance reforms that are really crucial. And I'd like to start with and I start the episodes this way every time by asking each of you to discuss a very high level and very briefly kind of the nature of your paper. We'll take a deeper dove into both of them here in a few minutes. But just to set for the audience what it is that you're both talking about, maybe, Josh, you could take that first.

MELTZER: Sure, thanks. So this is the paper coauthored with Cameron Kerry, and it focuses on strengthening international cooperation on artificial intelligence. And the basic approach of the paper is to identify what the existing approaches to AI policy development, both at the domestic level but also what's happening in various international and other multilateral forums to look at some of the challenges that are arising that essentially drive the need for international cooperation on AI, to look at the limitations of the current sort of mechanisms for international cooperation. And then we propose a range of policy recommendations for this administration to take forward to really build a more systemic approach to AI cooperation internationally.

DEWS: How about you, Landry?

SIGNÉ: Yes, thank you. Our paper, "A Blueprint for Technology Governance in the Post Pandemic World," was coauthored with Stephen Almond. As a matter of fact, too often regulations struggle to keep pace with innovation, whether we speak about new ideas, products, or business models, they are hampered while citizens are so often left without options. So as government seeks to build back better in the context of the COVID-19 pandemic, a more agile, innovative, enabling approach to regulation is needed. So, our paper presents a blueprint for regulatory reforms offices to introduce a more innovative enabling approach to regulation across government and to seize the opportunities of technological change. So, I think we really try to ensure that on the one hand, the fast pace of technological

innovation can continue. And on the other hand, the ability of governments to regulate those innovations such-so that they serve the greater good is also enabled.

DEWS: OK, it's great. And so now let's take a deep dove into both of your papers and actually want to jump off here on that idea of technological change, Landry, that you're talking about, but go into Josh's paper first, because I think obviously AI—artificial intelligence—is a huge arena of technological change. Josh, if we could start with defining what artificial intelligence is. I think a lot of people might just think of artificial intelligence as robots. Obviously, it's a lot more nuanced and complicated than that. So for the purposes of your paper, what are you talking about when you're writing about artificial intelligence? And also address, if you would, as you do in the paper with Cam Kerry, how would it benefit us?

MELTZER: I think the definition of AI is a good one, we have a definition in the paper. It's we don't spend a lot of time going through the nuances of what different definitions mean and in what context. So, I do want to sort of signal out at the beginning that when you think about AI definitions, if you are sort of thinking about what would be an appropriate definition in a legislative regulatory context as distinct from talking about in the scientific context, there are important differences there. But your point, Fred, it's not a specific technology. It's essentially a general purpose technology which combines both software and hardware that enable, systems that enable technologies. And that's the approach we've taken in the paper. That includes, for instance, machine learning in particular, which uses large amounts of data to essentially train algorithms to perform specific functions just a lot better than the humans do. But it also includes other forms such as knowledge representation and other ways of approximating human intelligence. I just want to pick up on the robot thing. I think that it's also important to distinguish between sort of general purpose AI, which is what we think of when you think of robots or Terminators or sort of Hollywood representations of

AI, which this is not about and which we are not really close to approximating, as distinct from narrow AI, which is really what's being operationalized today, where essentially AI systems perform very specific tasks extremely well. And that's the focus of the paper and work.

DEWS: The paper is also very focused on—it's in the title—international cooperation. So can you talk about what is the current state of international cooperation in AI governance? I mean, what countries, what bodies, what forums are involved in AI governance?

MELTZER: Well, it's nascent and it's disaggregated and it reflects in many respects the newness of the technology, the fact that many governments and industry are really only coming to terms with the implications of what AI is going to mean broadly. And it touches on also a whole range of different areas. So, it also really brings in a lot of policy and as a result or also potentially touches on a whole different range of areas where international cooperation may be needed.

So, we outlined in the paper what we've identified as where some of the key ~~work~~ areas of work that AI is happening. And this includes in the G-7, where there has been various outcomes on AI. And actually I think probably most significantly, the G-7 led to the standing up of the global partnership on AI last year, which is essentially a multi-stakeholder process for doing more deep dives into our governance issues.

The G-20 has had various successes in terms of developing high ethical principles, different heads of the different G-20 agendas over the years have focused on AI in different ways. But I think that remains one platform where at least it's being discussed. The OECD has been doing some really important, interesting research and work on AI and is actually the secretariat for this global partnership on AI.

But then I think also really importantly, you're getting a lot of AI specific work happening in international standards bodies. So we talk about this somewhat in the paper,

such as the International Standards Organization, the IEEE, and what that might mean for building out forms of international cooperation and governance on AI. The United Nations, in fact, and various of its bodies, does a lot of different types of work on AI.

And then also we've seen trade agreements and increasing move to include commitments in there, some of which is not AI specific, but actually matters a lot to AI, such as commitments on cross-border data flows, but also in some of the more recent trade agreements steps to actually do specific commitments on AI.

So, we have quite a disaggregated, broad landscape touching on different areas and I think really reflecting the broad nature of the policy that AI ____.

DEWS: So a question that stems from that in my mind then is, why? Why are all these different bodies, these disaggregated bodies, focused on AI issues, AI cooperation, AI governance, maybe in a way that except in some areas, maybe they're not in other kinds of technologies. But AI in particular. I mean, why, Josh, are they focused on AI governance?

MELTZER: No, absolutely. And the core question and that was part of your earlier question. Yeah, so, it's increasingly understood that AI is going to have potentially very significant implications for how economies grow, how people work, how people live their lives, in addition to a whole range of potentially very significant national security implications that we do not go into the national security implications in this paper, though, it's a big part of it. And I did not mention any of the national security bodies that are working on AI at the moment, such as NATO and the bilateral alliances. But that's certainly out there and matters a lot.

But on the sort of nonmilitary side of AI, whether we're talking about in the manufacturing sector in terms of using data better for manufacturing facilities to work in cooperation and use of robots in transportation as we move to autonomous vehicles, we've seen with COVID the use of very large data sets in AI to actually produce very rapid

production of vaccines, the potential use of AI in the education sector, and the list goes on. So, this is the nature of a general purpose technology, like electricity, where it begins to essentially infiltrate and have implications for your economy broadly.

And so the numbers that are out there from some analyzes in terms of what the opportunity side of it is very significant. But it also means that governments and people who are thinking about the policy implications are also thinking about what it means for jobs in the future and the nature of work and the whole set of issues around making sure that AI is ethical, that the decision making that actually happens when AI is used, for instance, as an assistant by judges to help with sentencing does not just perpetuate inbuilt biases and discrimination in the criminal justice system. Or if you're going to be subject to an AI decision-making in terms of your access to a loan, how does it make sure that it's not discriminating in that process? How do we understand what the AI system is actually doing and so forth, means that there's a whole set of underlying ethical considerations that are also very much come into play.

DEWS: A key issue that you and Cam Kerry address in the paper, throughout the paper, is China. And it struck me that China is involved in a lot of these international fora in terms of cooperation on AI. But China also presents a challenge on AI governance. Can you address what that challenge is?

MELTZER: The China bit is significant. It fits into, I think, the broader context, which is growing strategic rivalry between the United States and China and really broadly the West and China, and AI is sort of pivotal in all of that because of its dual use nature, its strategic and military implications, as well as its implications for the economic side and so forth.

Focusing again on the economic side, there are two issues. And by economic, I include the ethical side. One is this ethical use of AI. So, how do we ensure that ultimately

the way AI systems work are consistent with and supportive of the types of rights and democratic norms that we associate with liberal democracy? So, for instance, if you have an authoritarian system using AI for surveillance purposes in a way that you can imagine could easily be at odds with various due process rights and other rights that we associate in the United States and other democracies, then that's certainly an area where it's a significant issue of concern in terms of how AI develops and who leads that development. The fact is that the U.S., by most metrics, is really the world leader in AI, but China is a very close second in some areas and potentially may be leading in other areas. China has huge data sets just by virtue of the size of its population and the way that it collects data and with less attention to individual privacy than you get in the United States.

And so you have that issue there in terms of also its sort of capacity to develop AI. China's got a very ambitious set of goals for essentially becoming a world leader in AI and also really doing it in a way which makes it independent of the rest of the world in terms of the inputs into the AI systems as well, the data as well as the hardware.

And you've got a set of other economic policies that prop up these goals, which are also very concerning for the U.S. and other countries. This includes in terms of government sponsored cyber theft of commercial technology. So state directed strategic acquisition of Western technology _____ localization requirements and the like.

So, to sort of summarize, you've got two concerns. You've got one, is on the AI ethical concern and actually how AI develops, making sure it's consistent with liberal democratic values. And China certainly presents models where AI could be used which would be at odds with that. And the other is the way that AI develops on the economic side of it and making sure that it's a space where the benefits can be captured broadly, it happens in a sort of a market orientated, competitive way and the Chinese set of economic models that are sort of propping up its goals of being a leader in AI are very much at odds with that.

DEWS: Well, those two factors alone suggest the importance of cooperation in governance with China, so it's not like they can just be a competitor that can just present a challenge. They have to be part of these international fora, these international modes of cooperation. I mean, if not only those two areas, are there other areas where cooperation with China is essential?

MELTZER: I think this is going to be one of the really difficult sort of policies to navigate really over the next few years, which is how do you identify areas where you can cooperate and work with China on AI and where do you push back and essentially avoid that happening because it presents too many potential risks and downsides. If you look at, say, for instance, on the R&D side, what we see in the AI space is a very distributed open process for collaboration and research. And that has very much involved a lot of Chinese researchers as well at AI conferences and globally. And that's, I think, broadly been a very productive part of the landscape.

The concern, of course, there is how is that information, how is that insight, how is that intellectual property used in China? And so how do you find a way for trying to still keep open the opportunities for scientific research and collaboration, cooperation with China, but being sort of aware of that this is also a pathway for China to become and develop its own set of AI technologies itself. And so that's one area where there may be opportunities for cooperation, but it's going to have to be, I think, sort of risk based.

Then there's a whole set of issues around the actual development and use of AI. Some of that's going to be around access to technology, access to hardware, and then the actual application and use of AI in the markets. And part of that's going to be around market access issues, is going to be around ethical issues in how AI is developed. And that is, I think, also an area where there's going to be a lot of competition between the U.S. and allies and China around. I would hope that is not purely competition, not everything China is going to do on

AI is unethical. And not everything China does commercially is necessarily problematic from a competitive perspective. But sort of disentangling those two is really going to be the challenge.

DEWS: And China isn't the only challenge that you cite in the paper, interestingly, the second challenge has to do with U.S. and regulatory policies, and I think that dovetails somewhat with Landry's paper. Can you address what that second challenge is?

MELTZER: The other challenge in part arises from the fact that governments everywhere are essentially developing AI policies, some more robust than others. But that's absolutely the trend. And as with a lot of sort of ambitious regulatory ventures, particularly at the cutting edge of technology, where not necessarily but there can be some tradeoffs between regulators essentially getting ahead of the technology and stifling the innovation. But you want enough regulation in place to ensure trust in the new technology being brought forward. And getting that balance right is hard, and it's struck often in different ways, particularly between the United States and the EU, which is moving ahead with fairly ambitious regulation. And given that the transatlantic relationship when it comes to AI will be crucial in terms of building out a common Western democratic approach to what should be ethical AI, getting the U.S. and the EU as aligned as possible, I think, is going to be a core part of that. So, one of the sort of challenges in a way is trying to ensure that the U.S. and the EU don't go off on divergent places when it comes to AI regulation and finding ways to build more and deeper areas for cooperation, particularly around AI R&D, where the EU is also a very big player in the AI space and has ambitions to do more. And there seems to be a lot of scope to build, whether it's project specific opportunities for the U.S. and the EU and really other countries to cooperate on what might be using AI to address various public policy and global challenges as well.

DEWS: So, the way that these Blueprints papers are all structured—and again, this is the fifth set of papers here, your two papers are part of a set of papers on international governance reform that follow a number of other challenge areas. This is the fifth set of papers and the fifth podcast episode—the way they're structured is that they present a policy challenge, kind of analyze the field of play, analyze what's happening either domestically or globally in this policy area, and then in the true Brookings fashion present policy solutions and in this case aimed at the new Biden-Harris administration. So, Josh, before we turn it over to Landry, can you talk about your call for the Biden-Harris administration to reengage at a global level on AI cooperation? What does that look like?

MELTZER: So, it's worth saying that actually on AI policy, this is one area where I think the previous administration didn't try to rewrite the rules and really was building on the work of the Obama administration. So there was quite a proactive AI policy coming out of the last four years that gives, I think, the Biden-Harris administration a lot to build on. Our basic sort of framework for thinking about what should happen going forward is that there's multiple forums where there is a lot of important work going on and the U.S., should very much work in those forums where they can to achieve discrete, specific goals, whether that's through the G-20, the G-7, and the OECD, GPAI [Global Partnership on Artificial Intelligence]. We certainly make recommendations around beefing up the use of trade agreements to push new rules and norms on AI. So, we think all of that is important and all and all of that is one area where they should be continuing in more intensive engagement.

The other thing that, though, we think is missing a little bit from the landscape is that there is not really a leaders-level meeting that brings together the right leaders to have a coordinated view on tech policy broadly, but that would include very much AI policy as well. So we very much also see as in addition to engaging in these existing forum, the current administration essentially leading and pulling together a leaders-level dialog on technology

issues, including with a focus on AI. What this leaders-level dialog would do fundamentally would be a coordinating role and it would provide additional direction to the engagement that would then happen with all the existing forum that are around and discussing AI.

DEWS: Well, terrific. And Josh, we will come back to you in a few minutes, but let's take a deep dive now, Landry, into your paper. Again, as you mentioned at the outset, it's coauthored with Stephen Almond, who's a fellow with the Center for the Fourth Industrial Revolution at the World Economic Forum. And I actually want to start with that because it kind of underpins the thesis of your paper and a lot of your work, both at Brookings and elsewhere, the fourth industrial revolution. You've written a lot about it. What is it and why is it important?

SIGNÉ: Thank you. So to understand the fourth industrial revolution, it is helpful to examine the context of the three previous industrial revolutions. So the first industrial revolution of the 18th century involved the development of steam power to enhance production. The second industrial revolution of the late 19th century marked the advent of electric power in homes and factories across the world, among others. And the third industrial revolution of the 20th century was characterized by the acceleration of electronics, information technology, and digitization. Some will be confused when speaking about the third industrial revolution versus the fourth one. But one of the characteristic or distinct elements of the fourth industrial evolution as Klaus Schwab pointed out and I cite, is the fusion of technologies that is blurring the lines between the physical, digital, and biological spheres.

And here it is really important to take a few elements into consideration. First, the velocity, the incredible speed of innovation. And that is also one of the reasons why we have a gap between the ability of corporations to innovate, especially to have technological innovation, on the other hand, of governments to regulate those technological innovations.

But you also have the scope. So when people hear perhaps about the fourth industrial revolution, many may think about industry. But I think perhaps the term may not even be appropriate to describe what it is because the fourth industrial revolution affects all industries and sectors. So that is a second key characteristic.

And a third one is the system impact as well. So, whether we speak about governance, about economic prosperity, about global impacts, the fourth industrial revolution affects both parts of the element of the global system, but also the system itself.

And I think some of the illustrations discussed by Josh, for example, when it comes to artificial intelligence, clearly show the complexity combining the velocity, the scope and the system impact. And many of the technologies, of course, of the fourth industrial revolution will include the Internet of Things, automation, artificial intelligence, biotechnology, blockchain, 3D printing, advanced materials science, nanotechnology, cloud computing, autonomous or near-automous vehicles and drones, big data, augmented reality, virtual reality, and others.

DEWS: Yeah, I'm glad you suggested that list of new technologies, because they are things that we are living with every day or we expect to be living with soon. Drones, the Internet of Things, autonomous vehicles, and the list goes on and on. So, given that context, can you describe in a little bit more detail what the current problem is in the regulatory approach that government faces? And it's not just the U.S. government, it's governments worldwide and it's other kind of governing bodies worldwide, right?

SIGNÉ: Absolutely. Although I can quickly sum up in terms of the pacing problem and coordination problem, perhaps let me come with a broader context. So, we are really living in a complex world with the increases rein of uncertainty, whether we speak about COVID-19, some geopolitical challenges, the recent oil price war, trade wars, cybersecurity challenges, climate change, nuclear security, migration, civic participation, among others. On

one hand, we have an increased number of complex challenges and uncertainty. On the other hand, you also have that diffusing governing power, whether we speak about the prominent role of cities, of state, of international organization, of transnational actors in ____ order. And when we combine those with the rise of the disruptive technologies associated with the Fourth Industrial Revolution, we can really think about the critical importance of human centered innovation. When you speak about human centered innovation, we refer also to so many things Josh mentioned, for example, ethics, human rights, inclusion, civic participation, humanitarian action. But we also have the critical importance of multi-stakeholder collaboration with the creation co-production, open government, crowdsourcing, public private philanthropic partnerships, _____.

So, putting all those elements together, the complex demands made on government and businesses really require agility, responsiveness, flexibility and ultimately effectiveness, which are at the heart of agile and multi-stakeholder governance. ~~So,~~ and when we connect those elements with the COVID-19 pandemic—in fact the COVID-19 pandemic has further demonstrated the weakness of our regulatory systems designated with the past in mind, governments around the world had to rewrite the rules at a breakneck pace, both to allow just citizens to benefit from innovations such as telemedicine and drone delivery, on one hand. But also to have their economies adapt to many disruptions the pandemic has caused. So that's why it's really important to bear in mind, perhaps to sensitize, a couple of core elements of the pacing problem, but also the coordination problem to which we can also add the broader element of accountability, of human centered innovation among others, and effectiveness.

DEWS: As awful as the COVID-19 pandemic is in terms of lives lost, people made sick, damages to the economy, it presents in some way an opportunity to rethink a lot of systems in the world. But it's really interesting to then also hear this concept coming into the

realm of technology regulation, that this is, again, as awful as it is, an opportunity to not go back to doing things the way that we used to do them, because that wasn't even sufficient for the pre-pandemic world. We have to think about the pandemic world.

SIGNÉ: So definitively, I couldn't agree more with you and when you mentioned that was also relevant in the pre-pandemic ward, let me take an illustration: Zipline. Zipline is a California company which developed drones, a very practical for low delivery and medical or other medical functions. But when Zipline was developed, the regulation in California was not allowing the company to operate for its medical mission. However, the company has partnered with the government of Rwanda and now with many other governments in Africa. And it's expanding around the world to provide a practical solution to many of the local challenges, especially the lack of infrastructure and with the ability now to deliver blood in remote rural areas, among others.

And some surveys of the U.K. study, for example, mentioned also that 92 percent of businesses surveyed thought that if the regulation was not changed within two to three years, your ability to innovate will be drastically affected. So when we really speak about agile governance before the pandemic was an extremely important question, I tried to tackle regulation. Extremely important question, but it is even more important during the pandemic and for the post pandemic world, because we have clearly seen many of the governments have experienced the critical importance of adjusting timely, of collaborating both nationally and internationally. So the concept of multi-stakeholder governance has definitively found its meaningfulness close to the fullest.

DEWS: Let me quote from your paper, Landry. You write, "Without reform, regulation is in danger of stifling the potential of technological innovation while failing to address its risks." And can you offer a concrete example of that and maybe focus on the risks

part? I think you've addressed, say through the Zipline example, the potential. But what do you mean by failing to address the risks?

SIGNÉ: So we have different dimensions here. So I think as I mentioned earlier, so we are really in a complex world with many variables which are involved whether ... now, one of the most prominent one is definitively the COVID-19 pandemic. But we also have other questions related to cybersecurity, to climate change and innovation also ready to address some of those challenges, to the financial and monetary systems in the modern order.

So, bringing those elements is really important to adopt more agile methods of governance. So in Australia, for example, as we mentioned in the paper, the New South Wales government established a program to make existing regulation more technology neutral using, an element for which Josh may be happy to hear or probably know very well, artificial intelligence to identify opportunities to remove requirements such as the use of paper documents or signature. And those have contributed to reduce the cost of compliance, even reducing by a few percentage points can save lives, save billions of dollars. And this also helped solve what was an efficient amendment process of designing regulatory policies. So on the use of artificial intelligence tool to analyze data and to identify current problems in regulation.

So, it is definitively clear that many of the countries—recently the agile nations, many countries, including the UK, among others—are moving towards a more agile approach for governance, which is really critical. We have engaged, for example, with the World Economic Forum in a global virtual conference on agile governance. And many of the members have identified as some of the core challenges the imperative of building capacity on one hand, but also accelerating collaboration internationally. So those will help address the pacing problem, but also the coordination problem.

DEWS: Well, Landry, let's turn to the policy recommendations in your paper. The blueprints paper includes seven pillars of what you call good practice, and listeners can go read about all seven. But I wanted to focus on just one, and it's actually the seventh one, and that is to collaborate internationally. And interestingly it also dovetails, I think, with Josh and Cam's paper. Can you expand on collaborate internationally and again, kind of just how that might dovetail with AI cooperation in regulation?

SIGNÉ: Absolutely. So the first one to highlight here is that many of the global challenges that countries are facing require international and coordinated action. So it's really critical to address many of those challenges. And as the fourth industrial revolution is reshaping business and the world over, or creating common opportunities and risk that regulators in different jurisdictions must respond to. So you also have the cost of effectiveness, the cost of transaction. And by cooperating across borders, regulators can really facilitate trade and investment and address shared challenges more efficiently and more effectively. So, and this is driven in different jurisdictions which are finding new ways to cooperate on technological innovation, including to sharing foresight and to joint experimentation. And such activity can really create the conditions for regulators to develop more interoperable and effective rules. And through various alliances, including the one as I pointed out of agile nations where you have the UK involved, but also Denmark, Canada, Singapore, Japan, Italy, among others. So with the goal of really offering a regulatory cooperation partnership that will cover innovation ranging from green technologies to mobility.

So, and you have in the administration also for Canada, the Health Canada and the Access Consortium. So really, the critical importance of multi-stakeholder collaboration and the development probably of a global regulatory framework still remains a challenge, but ultimately will be needed in the context of global technological innovation.

DEWS: Again, I want to emphasize for listeners that collaborating internationally is the seventh of your seven pillars of good practice, the focus of your policy recommendations and the paper. People can go to the Brookings website, Brookings dot edu slash blueprints, to find your paper, to find Josh and Cam's paper, and get a lot more detail on all these issues. Landry, as we wrap up our deep dive, can you talk briefly about what policy steps or changes that the Biden-Harris administration can take to implement the ideas in your paper?

SIGNÉ: So, absolutely. I think that different elements are really important to take into consideration. And perhaps one thing I want to start with is that systematic measures are needed to enhance foresight, to focus regulation on outcomes, to create space, to experiment, harness data to target interventions, leverage the role of the private sector, bring about a seamless regulatory landscape and tackle barriers to trade and cooperation. It is also really important for the Biden administration to accelerate multilateralism and cooperate globally. I think that we have seen some already indicators that the Biden administration will be more likely to cooperate, but it is really important to make sure that those indicators are transformed into reality.

So, if we are to have an outcome-focused regulation, _____ with international regulatory cooperation, testing, initiative, experimental regulation as well to support specific policy goals--for example innovation funding for highly regulated markets—and also while achieving unlocking the technological innovation potential and sharing also that they are fair, open ____ input from multiple stakeholders, whether from the public, private sector or non-governmental organization, among others.

DEWS: I'd like to wrap up this terrific conversation with you both by asking you to each reflect on the question, what's at stake in implementing the kinds of policy recommendations that you're talking about in your blueprints papers? What should we hope for in the implementation of say, more agile technology regulation at home and abroad by

strengthening international cooperation on artificial intelligence? What's at stake? Landry, do you want to start?

SIGNÉ: So, definitively, I think that greater prosperity in both developed and underdeveloped nation alike, more effective solution arriving faster because they are developing a controlled yet flexible and experimental regulatory environment. So that ability to really bridge the gap between technological innovation and regulatory challenges and ultimately a more effective and accountable technology governance which will allow, on one hand, technological innovation to continue flourishing, and on the other hand better satisfy citizens with government able to bridge the gap.

DEWS: What about you, Josh? What's at stake?

MELTZER: Three points. First is ensuring that the way that AI developed is ethical. So trustworthy AI, ethical AI that's aligned with common democratic values is absolutely core to this. The other is ensuring that the opportunities from AI, the economic opportunities, are realized, obviously balancing and taking into account the potential risks, ensuring that it happens in a way that is trustworthy. And third is the development dimension to it. And we didn't touch on that much, but it's in our paper and that is that there's a huge potential for AI to really help achieve many of the sustainable development goals, making sure that this is not just a developed country opportunity, but is disseminated widely and is something that developing countries as well have a big stake in getting right.

DEWS: Well, there's so much more that we could talk about in this podcast in your papers, which people can find in the Brookings website, Brookings dot edu slash blueprints. Josh Meltzer, Landry Signe, I want to thank you both for sharing with us your time and expertise today.

SIGNÉ, MELTZER: Thank you. Thank you very much. Thank you. All right.

DEWS: You can find the other Blueprints papers on international governance reforms, plus the already published policy briefs and podcasts on racial justice and worker mobility, economic growth and dynamism, international security and domestic governance reforms on our website. And stay tuned in the coming weeks for the sixth and final set of blueprints on the topic of climate and resilience.

A team of amazing colleagues helps make the Brookings Cafeteria possible. My thanks to audio engineer Gaston Reboredo; to Bill Finan, director of the Brookings Institution Press, who does the book interviews; to my communications colleagues Marie Wilkin, Adrianna Pita, and Chris McKenna for their collaboration. And finally to Camilo Ramirez and Andrea Risotto for their guidance and support. Our podcast intern this semester is David Greenburg.

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Until next time, I'm Fred Dews.