Center for Strategic and International Studies

TRANSCRIPT
Online Event

U.S. Innovation Competitiveness Summit – Panel 3
“Economic Benefits of IP Protection”

DATE
Tuesday, September 14, 2021 at 2:00 p.m. ET

FEATURING
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Good afternoon, everyone. Thank you for tuning in for the CSIS U.S. Innovation and Competition Summit. As a part of the Project on Renewing American Innovation, we thank you all for being here, and for Dr. John Hamre and the rest of the CSIS team for putting this together.

We just concluded a session this morning on the state of U.S. IP policy and international competitiveness. Led by Andrei Iancu, the former undersecretary of commerce and director or the U.S. Patent Office, who is also the co-founder of the Renewing American Innovation Project here at CSIS, along with former director of NIST, Walt Copan. The panel that Andrei led was with leading IP thinkers and judges. And it really highlighted the state of affairs vis-à-vis IP policy, and the urgent need of a comprehensive plan to up our game in the United States vis-à-vis innovation and intellectual property.

I found that exchange striking, because here we are at the crossroads of, you know, appreciating and recognizing the urgent need to invest in R&D, in innovation, in science and technology, supported indeed by many bills that the Congress is considering and passing today. And yet, the role of intellectual property in driving innovation and in driving economic growth is not well understood. So in this panel we are trying to address this topic head-on. We call this panel The Economic Benefits of IP Protection. And we have today a perfect opportunity to learn from the chief economists of the U.S. Patent and Trademark Office and the European Patent Office.

So allow me to introduce our panelists today briefly, who I’ve had the privilege to know and have followed their work for a long time. Let me start with you, Andrew. Dr. Andrew Toole, he is the chief economist at the U.S. Patent and Trademark Office and a research associate at the Centre of European Economic Research centers, the ZEW. And he’s had experience that spans across the private sector, academia, and government. While completing his Ph.D. in economics at Michigan State, Andrew was a senior economist consulting for the industry.

And he’s been a faculty member at Illinois State University and Rutgers University, before, you know, moving onto the government. And as an academic, he advised, you know, on science and technology policy issues at the National Academy of Science, at the National Institute of Health, and the U.S. Department of Agriculture, where he worked before joining the U.S. Patent Office. And indeed, his research has focused for a long time on economics of innovation, intellectual property, and related science and technology policies – so a perfect panelist for this topic. Andrew, welcome. We’re glad to have you here.

Thank you, Kirti. I’m super happy to be here. And I just want to say thank you for organizing this event on a very important topic.

And let me also introduce Dr. Yann Meniere. He is leading the chief economist unit at the European Patent Office. Now, this unit, as they call it in Europe, was
set up to provide economic insights into issues relating to patents, innovation, and economic goals. Yann is a professor of economics on leave from Mines Paris Tech, where he was the leading chair on IP and markets for technology, until joining the European Patent Office. So his research and expertise too for a long time has been related to the economics of innovation, competition, and intellectual property, technology standards, and IP issues, and climate negotiations. He's written a number of policy studies on the – for the European Commission, French government, and other organizations. Welcome, Yann.

Yann Meniere

Thank you, Kirti. Good afternoon, everyone. And it’s a pleasure to be here. And I’m grateful for you and the organizers for this opportunity.

Ms. Gupta

Thank you for both of you, you know, two economists from the field of IP and innovation in their research, in their work in the government.

Let me tee-up the key essence of our discussion and launch into the Q&A right after that. Economists have long articulated the critical role of innovation in driving economic growth. You know, we’ve known this from the time of somebody all economists know, Robert Solow’s, new classical economic growth model. We study this in textbook. It clearly displays that the primary driver for long-run economic growth is not labor, not capital – they play a role – but it’s really technological progress, because other things like labor and capital can only scale linearly, right? You put in one unit of input, you get one unit of output. Technological progress is like a shock. It has a multiplier effect by increasing the productivity of everything else – of labor, of capital.

Most governments today, their plans reflects the focus on innovation leading to technological leadership. There is this recognition, not only for economic growth but also for concerns related to national security and tech sovereignty. But what is less understood is the role of intellectual property in driving this kind of innovation. From these early works to today, the question on whether intellectual property enables or hindered innovation has been sometimes an answer, sometimes ignored, sometimes answered and negotiated. Now, it’s an important question because in today’s knowledge economy – one led by tech innovation – the question is of critical importance and of actionable importance.

You know, a few decades ago, as an example, 80 percent of the market value of S&P 500 firms was explained by labor and capital assets. Today it has reversed. Eighty percent of market value is explained by intangible assets. Now, they come in various forms – like skills, and ideas, and patents, and copyrights, and trademarks. But since intellectual property is a mechanism that has been widely accessible to anybody – big firms, small firms, individual inventors, universities – many economic historians have described this intellectual property as a key instrument for the democratization of invention, making economically feasible inventing activity available to all.
At CSIS, we are embarking on projects to empirically examine and explore the mechanisms by which IP drives innovation, and what kind of innovation takes place if intellectual properties are available and aren’t available in society. So with that, you know, I would love to ask this question with our experts on this panel who have been long-time researchers and have been in patent offices of very important economies and jurisdictions. So let me start with you, Andrew. What is your view on the link between IP and innovation? And what do you see from your vantage point at the USPTO as its chief economist?

Mr. Toole

OK, great. Well, thank you, again, Kirti. I appreciate that question. It’s a very important question. I think that the word “innovation” is used frequently in press and in policy and in academic work. And I think it’s important to start with what we mean by innovation, right? Innovation is when a new product, processes, business method comes into the marketplace. That is to say, when people can actually use that product, they can have that service. And so innovation is when it is available and exchanged in the economy.

And we know that innovation actually is a function of a lot of – a lot of factors, right? So intellectual property is one of the factors, but there are other factors that go – that feed into whether a company is successful, for instance, in introducing new product to the market, right? And it’s a complex process. It’s a complex process. But the role of intellectual property, in my view, is actually very, very important. It’s not really obvious to the standard consumer who just buys the smartphone, for instance, what the role of intellectual property is to bring that smartphone onto that shelf, right?

But intellectual property is just – one way to think about it and its role is simply to recognize that it is an intangible asset. One of the most – one of the most celebrated aspects of the intellectual property system is that it protects the inventor – and in the case of patents – it protects the inventors from others who might want to use that invention, or make, or offer for sale that invention without authorization. So it allows them to exclude others from using their invention. That exclusion actually provides that innovator, when they get to the marketplace, with an advantage, right? Assuming they can make it there. That’s not an easy thing. I hope we can touch on the long and circuitous process from going from, let’s say, a patent to actually getting a market on – getting a product on the market.

But the patent protection, once obtained, does help the innovator in the marketplace capture a fraction more of the revenue than they would have – than they would otherwise obtain if other competitors could come in and use their idea that they had invested so much time and energy to create in the first place. So that protection creates an economic benefit. And that economic benefit feeds back to become an incentive for the original investment of energy, creativity, financial capital, and other factors, to actually come up with that. There’s a second – so that’s the most celebrated kind of aspect of the patent protection is that, you know, you get this incentive, this reward that can potentially yield, if you are able to get to the marketplace.
The second part of this asset that I really want to emphasize that’s not well-understood is that once you get a patent, for instance – and this is true of the other intellectual property assets, intangible assets – once you get this asset, you get to choose – as the owner – you get to choose how to proceed with the development, the commercialization, who to partner with, who to perhaps license it to. And these rights, these control rights to the actual invention, provide a tremendous benefit that feed multiple other parts of the economy.

So for instance, maybe the product isn’t going – maybe the innovator him or herself is not going to take that invention through the development and introduce the product themselves into the market. Well, they can license that. And the rights that they have as the owner to license that is a very important part of its asset characteristics. And then they license it, let’s say, to another company who can then develop it and market it. So it’s not just a financial incentive that’s provided by the protection from intellectual property, but it’s also the rights to choose who to partner with and how to commercialize that make intellectual property so important for innovation.

And I guess I should say one final thing. I don’t want to – I don’t know what Yann’s going to say. I hope it’s a different take on this a little bit. But some of us – we talk a lot in different meetings, and we tend to agree on things. But let me just mention one other aspect that maybe Yann will develop more, or at least we might be able to develop more on this call. And that is that legal system in – they call it the grand bargain, right? So for getting the patent protection, which allows the exclusivity and protection in the marketplace, for doing that the actual patent owner has to disclose that invention to the public. So the disclosure part of it, which is – which is different than the other two parts that I just talked about – that actually feeds further invention and more clarity into what’s – into technological development.

So I won’t say too much more about that at the moment. Maybe we’ll talk more about that soon. But those are the three aspects, I think, that people should recognize when they think about intellectual property feeding innovation. And there are complex ways, but those three characteristics are very important, and have multiple implications.

Ms. Gupta

So, really the three key things that you described are, first, providing the fundamental incentive to innovate in the first place. Second, you know, technology transfer. You can come up with an idea, but you don’t have to come up also – you don’t have to carry the burden of commercializing that idea. And the third is essentially this method for disclosing your idea to the world and letting them innovate further in return for a temporary protection for your idea.

Mr. Toole

Yes.
Ms. Gupta

Fantastic. Fantastic additions. And let’s unpack those themes a little bit more but, Yann, same question applies to you. What is your view on the link between intellectual property and innovation, and what do you see from your vantage point at the EPO as its chief economist?

Mr. Meniere

Right. So I think Andy has covered the key points for IP as a rule. And let me elaborate a bit more on IP and patents – on innovation and patents and, indeed, on disclosure. So that’s a complex enough topic, actually, patents and innovation. It’s complicated because it’s very important and, at the same time, it’s at the crossroad of legal aspects, technology aspects, and economic aspects – which makes it very complex to grasp and to analyze empirically. And as a result, my view is that there has been a lot of economists talking about patents and innovation from a theoretical perspective. That’s easier. It’s more difficult to empirically document how it – how it works. And so you mentioned it works by – it is very granular, actually, to really understand the mechanics.

And so you are a student of history, that’s very valuable. But we are talking about innovation, so the world is changing. It’s difficult to – so the historians have to catch up with how the world is evolving. So some lessons can be learned from there, but not everything. And then you have empirical studies, and it’s difficult to find data, it’s difficult to analyze causalities. And we are – and indeed, we are struggling with that, actually, like all the economists in the field, every day.

But there are some valuable studies, nevertheless, and let me quote one. Actually, it’s a paper published in 2013 in Econometrica, so the best possible journal, I think, in economics – in empirical economics – by Bloom, Schankerman, and Van Reenen, and they used patent data from the U.S., actually, to assess the social rate of return of R&D investments. And so I will not say too much on the paper, but the main result – the main point is that the social rate of return of R&D is estimated to be 55 percent. And the private rate of return is estimated to be 21 percent. So while I as a private investor rates one R&D, I get a return of 21 percent. But there is an additional return of 34 percent for the rest of the society.

So put differently, one dollar from me as the owner of profit generates more than one dollar for the rest – benefits for the rest of the society. And that is really the crux of IP and patents and innovation. Investment in R&D and innovation creates a lot of value – private value and social value. And this is what the IP in general, and patents in particular, are meant to support. And why is this so? It’s because when you invest in R&D, you ultimately invest in creating knowledge. And knowledge is information. And the asset is different from the other types of goods. It’s different from an apple. I buy an apple. I eat the apple. There’s no apple anymore. If I create knowledge, then the knowledge is there to stay.

We all know the Thales or Pythagorean theorems. They have been there for centuries. We are not the first one to use them, nor the last ones. It’s there, and
people can build on that. And this is the value of knowledge. This is why it has a huge social value beyond the benefits that Thales or Pythagoras could derive from it at the time. So we need to incentivize investment in the creation of knowledge and innovation. And if you just let the market do that, we have some investment because there are private returns, but not enough because you need to – investment up to the social returns. So you need some mechanisms to incentivize investment in knowledge. And if you don’t have these mechanisms, people will invest but then they will keep the knowledge secret and they will destroy the social value of knowledge.

And this is where patents come into play, indeed, because that’s the way, as Andy said, by protecting the knowledge it’s a way to ensure that the inventor gets the returns on their invention. But it’s also a way, as Andy said, to ensure the diffusion of that knowledge, because any patent application – be the patent granted or not – has to be disclosed, has to be published. There is a published description of the invention. And that means everyone is able to consult this information and build on it. And that includes building on it by having – by contracting with the patentholder.

There is also a misconception that when I have the patent, I keep the monopoly. But most of the time it’s not the case. There are collaborations, in fact. You need to work with other people. And it’s very difficult to do if you – if you keep the knowledge secret. There’s the paradox there, actually. If you want to convince someone of the value of your knowledge, you have to show it. But once you have shown the knowledge, there is no point for the other guy for buying the knowledge that’s disclosed. And the patent is the solution to that. It’s a way to organize transactions around the knowledge.

And that’s very important. Actually, that’s increasingly and increasingly important in today’s economy, because innovation does not take place in a silo. It stays on collaboration. So that’s a last point that I would like to add is the decentralized nature of the patent system. Because I was mentioning the need for a policy mechanism to support investment in knowledge creation and innovation. And we can think of other mechanisms – actually, there are other mechanisms, like public subsidies – and they’re very important, by the way – public research, for instance. So it’s important for upstream research when there is no obvious private benefits.

But it’s very difficult to organize. I say that coming from France. (Laughs.) Actually, you need a government organizing everything and trying to regulate the economy and decide what is the right project, what is the wrong one. That’s very difficult to do. You need a lot of information and expertise to do that. And the real strength of the patent system and IP system in that respect is that it’s decentralized. I have an idea. I think it’s a good idea. Then I try to invest. And if I succeed to develop something, I can get an IP right, and I can keep investing in it to bring it to the market, as Andy said. And this decentralized nature of the IP system and patent system, as opposed to government investment, is very important and often overlooked, I think.
Ms. Gupta

Yann, such fantastic points. And sort of, like, fundamental points, right, that, first of all, this myth that patent is a monopoly. I mean, it is a mechanism for disclosing knowledge in return for a temporary protection. It is a mechanism for making it available to the world so that others can use that idea, not the opposite. Fundamental point. And it’s only – knowledge is only – actually, it grows by sharing. The other one that, you know, there has to be a balance between returns and diffusion, because otherwise there won’t be the incentive to have the idea and disclose it in the first place.

And finally, the centralized versus decentralized. So I think, you know, we’ll get to the – sort of the debate on the intellectual property system and other ways of innovating and all that. But I think it’s a nice – it’s a nice framework to look at mechanisms of innovation in this way. Patent systems or intellectual property regimes are a decentralized, maybe democratized, decentralized way to create innovation, providing access to anybody.

And a story comes to mind, you know, during the times of late USSR and the end of the era, Gorbachev’s time. His aide goes to, you know, London to study about how the bread supply chain works. And, you know, he’s shocked to see that there’s never any lines or any shortage of bread, and the bakeries are in the – in the grocery stores. So he asks, you know, take me to the person in charge of bread supply in London. And of course, the secret was that there was no one in charge. We have learned through history that decentralized systems are just more efficient. Centralized systems don’t work.

So we can get rid of IP, but we’re going to live in world where innovation comes from only mechanisms where there are clear ways of protecting ideas through other means – like vertical integration, or conglomerates, or large, big tech, you know, forming these big firms where you’re taking your ideas, you’re also creating the products and monetizing your ideas in that way.

We’ll get to all of that later, but I really want the audience to hear a little bit more about some fascinating work your offices have done. So for everybody’s knowledge, both the U.S. Patent Office and the European Patent Office – U.S. Patent and Trademark Office, I should say – do regular studies on looking at, measuring the economic contribution of IP to the economy. There are several studies that both can talk about. So let me start with, again – well, this time let’s start with Yann. Your office has most recently done a 2019 study on economic contribution of IP to the EPO. There are many others, you know, that you have talked about and mentioned that touch upon that theme. Could you share with us some key highlights? What we can learn from mild-mannered economists who look at the numbers and try to understand the contribution of these mechanisms to the economy?

Mr. Meniere

So one first point here is that so I come from the European Patent Office, but when we talk about the value of IP in the economy, as you mentioned at the beginning, as Andy said, it’s sort of about – at the end of the day, about
intellectual intangible assets. And IP is a way to protect – to organize that. And therefore, it does not make sense to focus on patents only. And to be clear, these studies, we carry out – we carry them out in collaboration with the European Intellectual Property Office in charge of European trademarks and designs, because they want to have their own institute. So we focus on the holistic impact of IP.

And we have a number of such studies. The first one, which is the twin study of the one prepared but USTPO is a study on the contribution of IPR-intensive industries to the new economy. So we define IPR-intensive industries as industries that make an above-average use of intellectual property rights in terms of number of rights per employee on average. And we show that actually these industries are really the engine of the European economy. They account for 45 percent of GDP in the EU, 39 percent – 29 percent of employment directly, 39 (percent) to include indirect jobs, the bulk of EU trade – like 80-90 percent, depending on the metric you consider, and they create – they create very well-paid jobs. The wage premium is over 50 percent on average, as compared with other industries, and up to 72 percent for patent-intensive industries.

So these are impressive figures. But it's important also to put that in perspective. What do they mean? In fact, one first element is that the contribution to GDP is 45 percent, to employment it's 29 (percent). Which means that there is a lot of value-added per employee in these – in these industries. They create more value-added. And whatever the threshold you take to define what is an IPR-intensive industry or not, the more you go towards the IPR-intensives, the more you see that a lot value-added per –

Ms. Gupta And not just jobs. Knowledge-intensive jobs being –

Mr. Meniere Yes. Highly paid jobs, because they are highly productive, because there’s a lot of investment and creation of intangible. And that’s the point. That’s the key point. And likewise, they account for the bulk of trade. They generate a trade surplus for Europe because they drive the competitiveness of the European economy. And that’s why IPR-intensive industries are important in Europe, or in the U.S. it’s exactly the same patent. You may change the metric a bit, but you still have this pattern of industries that invest in intangible assets and create more value than the other industries.

So we do that at the industry level. And we have a senior study checking at the company level. And we find actually very similar results. And what is particularly interesting to me is that when we look at the size of the companies, we see that while large companies that make use of IP – who make more use of IP are more performing in terms of revenue per employee. But actually, this performance premium is much higher in the case of the small business. So small businesses that use IP – meaning small businesses that invest in intangible, in innovation – make a huge difference. They are super performers. So the premium is about 55 percent higher in terms of revenue per employee.
as compared with other small businesses. That’s – sorry, 68 (percent) – that’s pretty high.

And if we look also at those that make a combined use of patent, trademark, and design, so that have a holistic approach to IP, the premium is 98 percent. So they are twice more performing than small businesses that do not use IP because they smartly combine all the possible intangible assets and all the possible ways of capturing and exploiting that. So, as a last point, I would like to say that, of course, this does not establish a causality. This highlights the specificity of these assets that companies, industries that invest in intangible are. They are more valuable – they create more value.

And we could argue also – this is an argument we hear in Europe – that it’s a reverse causality. So successful businesses can afford to invest in IP. So in response to that we have a lot of study also with our colleagues from EUIPO on where we have been looking at small businesses. And basically, we have taken a period of three years, checked whether they have been filing using IP this period, and then we look at the next three years. So it’s still not a causality, but at least you see the – you check the success afterwards.

And you find actually a strong correlation between the prior use of IP and the likelihood of growth afterwards, or even of the high growth, meaning plus – or, at least 20 percent of turnover growth during three consecutive years. So quite a high bar. So there’s a very strong correlation between prior use of IP and any growth indicator. And interestingly, this correlation is stronger the smarter the use of IP. So when they use European IP rights as compared with national IP rights, they are more likely to grow because they are not only innovating but also geared towards international growth. And likewise, when they use the IP bundle – so trademarks together with patents and designs – they grow faster, they are more likely to grow.

And so that’s to – that’s the kind of results we produce, and that we – or, that are accessible on our website, of course, if there is an interest in the audience. We have some other studies on more of the use of IP, but I’ll keep that probably for later in the discussion.

Ms. Gupta

So, Yann, this is why I would like to share the audience. We call ourselves mild-mannered economists because we would never make claims that go beyond – (laughs) – what we know can be proven by carefully considering issues of causality and making sure we can – we can bag them up. So any numbers here will be, you know, presented with great caution. So I would love to invite the audience to ask any Q&A. At the end of our panel, we’ll have a 15-minute Q&A. There is a Q&A box at the bottom of the screen on Zoom. Just please type your questions. And I already see a couple. We’ll take them at the end of the panel discussion. We have – we have some time reserved for that. So we want this to be an interactive discussion with our – with our audience.
What was interesting in what you said is, you know, this idea of reverse causality that, hey, you know, because the businesses were successful, they invested in IP. I actually don’t find that convincing, because if you’re already a large, successful business you have other ways of protecting your ideas. But if you’re a small inventor, or a startup, or an entrepreneur, you’re really trying to ensure you’re protecting your ideas to get venture capital funding and to, you know, protect yourself against the big guys, because you don’t have any other way to do it. So for them, the – you know, IP as a mechanism for protection of ideas is way more critical and almost an existential issue. And that seems to be what your data is suggesting too, they just tend to rely more on IP.

So, you know, with that in mind, I would love to connect the dot to sort of a growing conundrum in the United States and Washington. We are living in an era where we are focusing on, you know, big tech concerns, reining in the big tech in the antitrust world. And on the other hand, we are also shifting the pendulum too far in the direction of weakening intellectual property rights. So on the one hand, we are trying to ensure that big tech is, you know, not the only driver of innovation, and on the other hand we are trying to weaken intellectual property rights which, you know, frankly, is worse for small inventors, and SMEs, and startups, and good for big tech because they have other ways to protect their ideas.

So it’s a dichotomy that needs to be addressed. You know, I call it a paradox. But more on that later. Turning to you, Andrew, you know, your office has done similar studies on role of IP in economic growth. Can you give us some highlights and some plans of the Patent Office in highlighting and updating these studies?

Mr. Toole

Sure. So the way – the way that we think about it – and we’re a small group within the Patent and Trademark Office. You know, most of the employees at the U.S. Patent and Trademark Office are patent examiners, as they should be. And so we have a certain capacity constraint, but we try to do studies in three broad areas. So think about what are the factors that are shaping the inventive process that leads an inventor and his or her company to the door of the Patent and Trademark Office? We also have studies – some studies about, well, after they reach the Patent and Trademark Office, what’s happening there? And then, of course, what we’ve just been speaking about, which Yann was highlighting, is what happens after? What happens after the Patent gets granted, or if the trademark gets registered?

And so we dabble in all three of those areas. I wouldn’t mind later on perhaps spending a little bit of time about what’s happening before, because you mentioned weakening of intellectual property rights. When you weaken intellectual property rights, it diminishes the incentives that happen before, in the inventive stage – in the creative stage. And it also weakens the assets in terms of their tradability, right? So why would you license my patent if you’re really not sure that it’s going to hold up in, let’s say, a legal context? So weakening on the – after grant can actually have feedback effects before grant,
which, you know, are detrimental to the incentive system that we’re trying to uphold here in the first place, that has worked. And we’ve seen it already.

You know, intellectual property was not a big part of coming up with a vaccine particularly for COVID-19. But the drug industry, for all of its people that are both in favor and against the industry, they’ve been super successful in coming up with ways to save people’s lives and make morbidity and mortality lower in the world. And those – many of those discoveries are fueled by the power of intellectual property. So – at least, the incentive part of it. There’s also a ton of scientific knowledge there.

But let me jump to the end, that third bucket, what happens. You know, we also have studies that we look at. We take industries, we take companies, and we associate with those companies how many patents do you have, how many trademarks do you own, for instance? Those are the two that we care mostly about in the Patent and Trademark Office. And then we ask, you know, how do those holdings of patents and trademarks correlate to the different performance indicators that we have for companies, and we have for industries?

So Yann was referring to the IP-intensive industries. Those are – again, just to repeat – are industries that we classify as intensive because they use – they have, let’s say, more granted patents per employee than the average industry. So we take – we essentially take all of the industries and put them into two groups. One group is IP intensive, and the other group is not IP intensive. And then we compare those groups and we find, much like what Yann has described. Which is surprising in some ways because, remember, intellectual property is jurisdictional. That a U.S. patent is not going to be valid in Europe. And a European – a patent from a country in Europe is not going to be valid in the United States.

So there’s no – there’s no necessary reason to think that these are going to be similar results right off the top of one’s head, because they’re different systems. But in fact, the results line up very broadly and very similarly. And so, I mean, I could talk about – we had a – we had a report come out in 2016. We’re updating it right now. I could tell you what those results are. I mean, IP intensive industries contributed nearly 40 percent to U.S. GDP. There were 27 – directly accounted for nearly 28 million jobs in 2014. We’re updating our information on jobs. We’re updating our information on GDP. We’re updating our information about the premium.

There’s constant – it’s very – it’s always the case, essentially – it we haven’t seen it not be the case, where industries that use intellectual property intensively pay their workers more. We call this a wage premium. So we’re looking at those three variables, you know, again, in our new report that we’re going to have, let’s say, coming out in, let’s say, four weeks or maybe eight weeks, max. We’re in the process right now of getting that updated study through the clearance and review. But not only are we going to look at those
indicators, but we’re also in the new report going to look at things like women – how many women are participating in industries that are IP intensive? What kind of health benefits and retirement benefits are offered to the employees of these companies in IP-intensive industries?

And, you know, I won’t go into any details, but it lines up with the other results. In other words, to say there are incremental differences that are – between these industries in terms of the participation of women and the other aspects of their job besides their wage, in terms of, like, health insurance and retirement savings and opportunities. So there are these – we’re going to be issuing that report very soon. It’s exciting to see this new incarnation of it. And I hope everybody will check it out.

Let me just throw this out to the group that’s listening or perhaps watching, just so there’s some information on the table. And this is going to be a website. (Laughs.) So it’s www.uspto.gov – OK – and then /economics. If you do that, you’ll be able to get to the office of the chief economist at the USPTO. And you’ll be able to access for free the studies I’m referring to. And we have a number of other studies we could talk about later, but certainly the IP-intensive industries, as we shorthand call them, studies you’ll be able to access there. The third one in the series of those studies is coming out again in about four-plus weeks.

Ms. Gupta Wow. That’s – yeah, go ahead, Yann. You were saying something, and I’ll intervene later.

Mr. Meniere I just have a remark. At this point it made me think of that, so he was developing the different dimensions that USPTO is addressing in the next study. And so I was listening carefully, and I hope we can integrate some of it in ours – in our next one. There is one that I think is relevant on both sides, at least that’s one lesson we get from Europe, is that very often – so these industries are industries. They produce things. They are knowledge-intensive, but they produce things. For instance, the car industry is an IP-intensive industry.

And what we see in Europe, and I’m curious about the U.S. but I think it may resonate also with the U.S. – is that we have a patent and a complementary. So, yes, a lot of the – a lot of the R&D job and headquarter jobs are in Western Europe, actually. So there is a lot of value-added here. But there are also a lot of jobs created by these industries in Eastern Europe, productive jobs. So there is a complementarity. And there you really see the impact of – on the jobs, actually. So if you want the factories, basically, you have to perform with the technology. And that’s – I think that’s an important lesson for European policymakers and probably also for CEOs who are going with the debate in the U.S.

Ms. Gupta Thank you. Thank you, Yann. Indeed, it is.
And I’m just going to turn to the policy – broader policy context in a minute. I just want to be able to highlight something that Andy brought up – patents and diversity, or intellectual property and diversity. That’s another area of workstream that the CSIS Renewing America Innovation Project is looking at. What is the role of the IP regime in really pushing the envelope on diversity? And, you know, we’re going to feature some programs over a period of time. And I just want to take this moment to highlight, first of all, the great work by the U.S. Patent Office in having various programs that highlight the same theme.

And you know, one of our colleagues, Lina Khan, who is an economist, has really done this work to explain, you know, a long time ago when there were no other property rights that were granted for women, patent rights were one of the first ones. And there are – there are records of, you know, creating patents and creating companies by women who otherwise didn’t have any access to capital loans or entrepreneurial initiatives. So it has been an important mechanism for invention and democratization of invention in many ways. Not just for, you know, startups, and SMEs, and individual inventors, but really creating a diversity – role for, you know, diversity here. So thank you for bringing up that theme, Andrew. I think we all need to – you know, as economists, as those who study innovation, need to continue to push the envelope on that theme.

Mr. Toole

Yeah. I mean, I can say a lot more about that because it’s a very important effort in our office, but also at the U.S. Patent and Trademark Office more generally. Under Andrei Iancu we established the National Council for Expanding American Innovation, which is still in existence and thriving. And there’s a national strategy being put together about how to expand the innovation system to be more inclusive of women, of minorities, and veterans. And so there are many, many efforts. And the office of – our contribution as economists, actually, has been more on the data side, as you’re basically saying, Kirti. You know, we crunch a lot of numbers.

What we’ve been able to do, though, is we’ve been able to apply an algorithm, a set of rules that allow us to predict whether an inventor, based on their name, is actually a man – a male or a female. It turns out that that works out pretty well. We tested the algorithm. It got it right 94 percent of the time when we could actually make an attribution like that. When we use that data, and we used it twice in two reports. And this is a continuing research area that we actually are going to be engaging. And we talked internationally with our other fellow offices, including EPO, about this kind of stuff.

But we produced two reports. In both of those reports, which are available on the website, are called Progress and Potential and the second one’s an update. But the most recent update with 2019 numbers shows that women only make up 13 percent of the inventors in 2019. Thirteen percent is a terribly small number. It’s an obvious – it’s an obvious red flag that we don’t have as inclusive
an innovation system as we would want in the United States. And there are a lot of efforts to go ahead and do that.

And so what we're doing is actually – the economist folks – we're just quantifying what the situation is. I think it tells its own story. When you say 13 percent, you don't really need to tell people that's a low number. They get it. It's especially low if you think about how many women are getting degrees – and degrees in STEM. I think it was 29 percent of the degrees of STEM were going to women, but yet 13 percent of those women are translating those into patents – into being inventors on patents.

So there's a lot going on there. But it's a very important area. And I'm excited about the international interest across the ocean, in Europe and elsewhere, about building our evidence base on this issue and expanding – and coming up with new ways to really engage with women and minorities and veterans in such a way that we can expand the system.

Ms. Gupta

Very interesting. And, Andrew, I think both you and Yann mentioned that the IP system creates jobs that are – you know, like, in an IP-intensive industry, the kinds of jobs are more, you know, higher paying, more knowledge intensive, and things like that. You know, a last comment on this topic and I promise I'll move on, but I can't resist this. Because I think Yann and Andy know this, but for, you know, many others, before I turned to the dark side and became an economist, I was an engineer. And I had patents. And I wanted to do this study to try to understand, you know, what are the – what are the indicators for who patents and who doesn't.

And really, you know, once we control for a number of predictors like, you know, education level, and what kind of project you're working on, and gender, and all that, it really turned out that, you know, exactly what Andrew was saying. That, you know, fewer patents from – you know, based on gender. But really, the reason for that was self-selection or some kind of selection into roles that don't require patenting. And we need to fix that. That's a systemic issue. And a patent system plays a really important role in that because it gives you that venue, that opening, to be able to fix it.

More on that coming in the diversity talks in the patent and diversity series. Let me quickly jump back to, you know, economic contribution of IP more broadly. So, look, there are so many ways of articulating economic contribution of IP to the economy. You guys have done amazing work in this area, you know, with your reports and other studies. Where are we failing? Let's just pause here and ask ourselves this question because, you know, we are in a – maybe, perhaps, in some kind of an echo chamber right now, where we recognize the importance of this important mechanism.

But of course, we've all heard some concerns and criticisms, perhaps by special interest groups, nevertheless, on concerns with the intellectual property system. That there are too many, you know, quote/unquote, “weak” patents, or
a thicket of patents, or patents that aren’t – you know, that are undermining innovation progress in the innovation economy. So how do we handle that? And how do we make sure that we, you know, treat those concerns not – I mean, my view is that many times those concerns are laid out as anecdotes. You know, something happened on this idea and some, you know, mom and pop shop got some, you know, letters for, you know, paying royalties. But they capture our imagination.

But as economists, we recognize that we need to look at the problem as a systemic problem. No system is perfect. No system is perfect. Every system we have, some cost, some failings, some things to reckon with. So how do we view these concerns that we are hearing? And how do we manage them as we try to come up with these tools for measuring the importance of IP in its economic contribution? Whoever wants to start first. Let’s start with you, Andy.

Mr. Toole

Oh, with me. OK. That’s fine. I was talking last time and I thought I was talking too much. But I’m happy to –

Ms. Gupta

All right. Yann is happy to – Yann is happy to jump in.

Mr. Toole

I don’t want to take all the time. I’ll say, this is – you’ve actually highlighted a very important area that’s very complicated, okay? So this is kind of the post-grant – you know, after you get your patent, you know, you stand there with the piece of paper in your hand and you know you have an exclusive right. And you say: OK, now what? Well, you know, there are a number of challenges, right? So, first of all, it could be that you’re able to license that patent out. But it might also be the case that somebody tries to – tries to use that idea that you have – that invention that you have a patent on. And so they’re called an infringer, right? So they create, maybe, a new product that’s based on your patent.

So you need to go out and you need to figure out, is there an infringer out there? So you have to enforce your patent. Remember, in the U.S. – and I won’t speak for European law – but the patent is a right to exclude. So in order to exclude somebody from using what you’ve got a patent on, you have to find them using it and tell them to stop. So there’s this challenge to find these folks and then, of course, to take them to court or to perhaps challenge them at the Patent Trial and Appeal Board at the USPTO.

Both the litigation in courts, nonpracticing entities or patent assertion entities, and the Patent Trial and Appeal Board, which is at the PTO – all three of those areas are very controversial and unsettled at the moment. When it comes to litigation, there’s a lot of discussion about the costs of litigation and the burden on small businesses. You know, patents do allow you – do allow for democratic participation in invention. But after you get that patent in your hand, oftentimes you have to be able to defend it and/or get those folks who are infringing out of the marketplace. And that costs money.
So the costs of litigation are an issue that are facing a lot of small- and medium-sized companies. It’s a big public policy question. I don’t have any deep insights into it. It’s an important discussion. These patent assertion entities, sometimes negatively referred to as trolls – I don’t buy into that particular language – but they play an intermediary role, right? And they can actually do positive things for the economy. It doesn’t have to be a negative thing. Dean Kamen – I remember a conversation with Dean Kamen. Dean Kamen is the person –

Ms. Gupta

The inventor of the Segways.

Mr. Toole

The inventor of the Segway. I was going to say, Dean Kamen invented the Segway. This is an incredible thing where we all, like, take a drive. You know, every time you to go to D.C. you want to get on one of these to do a tour, right, because it’s fun. So and Dean Kamen said to me – and I don’t think he’ll mind me repeating this – he said: Well, I’m a nonpracticing entity. I come up with these inventions, and I license them to the companies that have the wherewithal to actually produce them, do the – do the proper marketing, get them distributed to customers, and so on. I can’t do that.

So I produce – I invent and I license. And he said, that makes me a nonpracticing entity. Am I a bad – am I bad player? And the answer is, no. So there are many good examples of nonpracticing entities that engage in the licensing, and an intermediary role, right? Sometimes there are third-party companies. And that’s a very important thing.

Ms. Gupta

Which is – which is what you were saying. You know, disclosing your ideas and sharing your ideas.

Mr. Toole

Yes. Yes. Exactly. And then finally, there’s the Patent Trial and Appeal Board, which is a new – a relatively new entity which was created by the American Invents Act in 2011. And it’s supposed to be a faster and less expensive option to district court litigation. And there’s a lot of controversy about different aspects of that, which mostly surround – there’s a lot of legal nuances there that economists are not quite as involved in.

But so, yes, the post – after you get the patent it’s important to be able to monetize that and to be able to create a product or service in some way to get that return for your effort. And licensing has become one of the most important areas of study these days. And I would just highlight that as one of the – one of the things that everyone should keep in mind as a very fruitful avenue. Once you have an invention you can license it, just like Dean Kamen has. (Laughs.)

Ms. Gupta

Thank you, Andrew. Over to you, Yann.

Before that, let me quickly remind the audience, please put your questions in the Q&A chat box. We’re going to get to you shortly.

Yann, what do you have to say about this?
Mr. Meniere  

It’s a vast topic. I think the controversies that you mentioned, they are very much related to digital technologies, software startups. And I think we should recognize where they are coming from. You said at the beginning that 80 percent of the value of companies is based on intangibles. And a lot of these intangibles consist of digital technologies and software. Actually, now you find these digital technologies in farming, in – I don’t know what – in roads, in cars, everywhere. They created a huge lot of value. So they are very central to the economy.

And I think the climax of these value is probably in standardization, because nobody’s, I think, Andy, you said it already, that, you know, you used the example of your smartphone. You have, what, thousands of patented inventions belonging to hundreds of – coming from hundreds of different inventors and companies. So it’s a lot about licensing, about finding ways, organizations to make that work together, and the standards make it possible. And the standards are themselves very sophisticated technology networks with a lot of patented inventions in them, and driving a huge lot of value, basically.

I think that means that on the license for these patents if you change one hundredth of digit, that represents a huge lot of money in one direction or another. And when there is a lot of money at stake, you have a lot of disputes. And the disputes may spillover in the – in the policy arena, in the – (inaudible) – without having any prejudice of who is right or wrong. I think this is just what is happening. And to me that’s more a signal of the value that’s created by this ecosystem, at least this part of the story, and an important one.

That being said, there are also concerns. There are other aspects. You mentioned nonpracticing entities, or whatever controversy that may rise. We need to be sensitive to it, and we need to take it – yes, to check, actually. And the way we see it at the EPO is that we need to listen to that, because we need to provide the right system to support continuing innovation. And our answer is always the same. So, easy to say but not easy to do is to provide quality, stability, predictability of the patent system. And so constantly invest in quality, in training, in collecting – (inaudible) – and in improving our search techniques, and also in understanding new technologies.

I mentioned software. So we have a – it took time, but now we have a clear and predictable framework for patenting software as a technical solution to a technical program. And we – now the next question is artificial intelligence. So we provide – we try to provide the maximum clarity to all users in that respect. And we do that in coordination, in constant discussions with our federal patent offices, including, of course, USPTO around the world. So I think that’s the – it’s not a very fancy answer, but that’s what we have to do. We have to constantly focus on quality, stability, predictability, transparency of the system.
Ms. Gupta So I really appreciate that insight, thought, because – I’m sorry. I’ll let you finish. I didn’t mean to jump in.

Mr. Meniere Well, I just had two small points. Another one is so that’s – the EPO is focused on granting patents, right? We are not – so patents and granting patents. So then there is the – like the USPTO. Then there is the litigation stage, and so on. So talking from the European perspective, we also have to ensure predictability, consistency of the system. And there our usual issue in Europe is that we have many countries. And so it’s about harmonization between the countries. And I just wanted to mention that we are advancing with a unitary patent, so, in short, a patent for most of the – a single patent in courts, a unified patent in court, for most of the European single market. And that will be a gamechanger in that respect, in terms of simplicity and predictability.

And the last thing that I wanted to mention is that we have been publishing last December a second edition of our study of the fourth industrial revolution. So tracking patent applications related to smart, connected objects – so exactly the technologies I was mentioning. And I don’t want to say it wrong – I should know it by heart – but if I remember correctly the growth rate on average during the last decade is between 10 and 20 percent of innovation in that – at the world level. So it seems like innovation is going up. It’s happening. It’s moving in a positive direction. There is no wreck, it seems, so far.

Ms. Gupta (Laughs.) So, Yann, the reason I appreciated that insight, I really want us to unpack this for our audience. You know, what you mentioned in critical to underline. If there are disputes, if there are challenges to intellectual property regime or the patent system, let’s say, to recognize that they’re happening between 80 percent of their value offers is an intangible asset. Firms are going to have disputes about things of value. So just disputes isn’t an indicator of a problem, which has been a narrative sometimes in various jurisdictions, not just in Washington.

But it needs to be taken into account in a systemic way. In fact, I think it’s another plug for everybody to consider looking at, you know, reports of mild-mannered economists – (laughs) – like the offices that Andrew and Yann are leading – to try to fully understand what are the pros and cons, the balances? And after all of that, what is the role of intellectual property in driving economic growth? So please, you know, let’s remember to take a systemic view.

I guess I’ll – you know, I’ll ask a final question and jump to the question and answers from the panelists. Any word – you’re, you know, closing remarks on where you think each of your jurisdictions is going in terms of, you know, intellectual property policy, and how that affects your work.

Mr. Toole I guess I can start, since I – you know, Yann already went before. So that’s good.

There are a number of issues that need to be addressed. I think the one that’s kind of highest on the radar, if you will, is what’s called subject matter
eligibility. In other words, is the invention that you have – you know, that you have discovered, or created, or derived – is that invention eligible to be patented? Can it receive patent protection? And that question has – is a big question in the United States right now. And I’m not a legal scholar, but there have been a couple of Supreme Court cases. One of them is called Alice Corp versus CLS Bank International in June of 2014. That particular case in the Supreme Court introduced and expanded a prior – a prior ruling by the Supreme Court about how to evaluate whether a patent – the subject matter of the patent is eligible to patented.

And the particular wording and the particular methodology that they talk about in that – in that Supreme Court ruling, actually introduced a lot of uncertainty in the U.S. environment. And it was particularly related to abstract ideas. We know that artificial intelligence technologies are usually embodied in some kind of computer program or algorithm of some kind and are often stated in some abstract ways. And so there has been kind of an injection of uncertainty into U.S. environment about whether these kinds of important new technologies are actually eligible to be covered by the patents.

And that’s – we have a study, actually, on that from the Office of the Chief Economist, where we’ve got a lot of help from lawyers – because we’re not experts in law. It’s called “Adjusting to Alice.” And it shows a couple of things. Number one, the Alice decision introduced a lot of variation – a lot of inconsistency in patent examination, because the language of that particular – that particular ruling was – had so much leeway and had arbitrary vagueness to it. But it also increased the number of rejections that the office gave for patents for ineligible subject matter.

Now, subsequently under Andrei Iancu, there was an examination guidance given to patent examiners. And that helped put more structure onto how to interpret what was the Supreme Court ruling. That ended up reducing the uncertainty or the inconsistency in the examination process, and also reduced the number of rejections for – initial rejections, called first office action rejections – for patent ineligible subject matter. So the office – what I learned as an economist, right, is that the office is just part of a broader system. And when a Supreme Court issues something, it’s like a wave that travels across the ecosystem. And it hits the office. And the office is like a – you know, it’s unstable for a while until you can –

Ms. Gupta Yeah, one of the many pillars.

Mr. Toole – rebalance, right? And so this is a very important area. And it’s an area that I think there’s going to be a lot more discussion on, particularly related to U.S. competitiveness and, you know, in patenting inventions in kind of hot technology areas, that I think concern a lot of folks who are part of CSIS.

Ms. Gupta Thank you, Andrew, for those insights.
Yann, what do you see coming out of the –

Mr. Meniere

So, first to say, that the EPO is not a European Union institution. So it does not matter much for you, but it means I cannot speak on behalf of the European Commission, since it’s two different things. But of course, what is – so we are an independent international organization in charge of granting European patents, and with more member states than the EU. But of course, what the EU is doing is very important. It’s kind of defining our context. So that being said, I will talk about what is – what is happening policy-wise in the EU.

And I would say in general there is a lot of focus on innovation and technology now, with two main things. The first one is digital transformation with these new technologies that Andy mentioned – AI and so on – where Europe is not as advanced, in fact, as the U.S. or China. If you count the patents, for instance, we see that. So there are a lot of efforts done to catch up, to perform there, to support innovation there.

And the other aspect is sustainability, the Green Deal. And that’s really perhaps even more important actually today in the EU. So, I mean, we have all seen this summer everywhere the fires and so on. So there’s really a sense that something needs to happen. The clock is ticking. And that the solution is very much at the level of the technology and innovation. Actually, we have very little time to scale up a lot of new technologies. And this is a huge challenge. And a lot of the momentum – the policy momentum is directed there. And that also implies a strong focus on innovation and on tech.

And how does it translate to us? So the first one, it’s – as Andy said – so understanding these new technologies, making sure we provide the right legal framework for the patenting of these technologies. Having a continuous watch and dialogue with our users and with our federal offices in that respect. So same thing. But also, in the current policy context, there is a – as I said, there is a lot of focus on innovation, on startups, on funding. And that’s a bit new from the European perspective. Things are happening, truly. And ecosystems are emerging.

And for instance, firms from the U.S. are arriving now and starting to invest in Europe, bringing their experience and culture. That’s very good news for the European ecosystems. And that has a lot to do with respect to the IP culture and startups in these firms. There’s a lot to do in terms of universities also leveraging the good research we have into commercialization, as Andy said. And, again, IP is instrumental there. And so the office has a role to play in that respect, clearly. So we focus a lot on that. And I mentioned already that that’s fundamental, the unitary patent. So we have a very big market, the biggest markets in the world. But we have to fully realize it when it comes to innovation, because the patent system is still fragmented. You have national – well, once you have a European patent, you have to validate it in the different member states – German, French, Belgian patents, and so on. And with this unitary patent coming, now likely next year, that will really be a gamechanger
because we will have a patent sustainable scale European Union-wide, especially to scale up –

Ms. Gupta
Thank you, Yann. Much appreciated.

So let me – let me open this for Q&A from the audience. Thank you, again, for participating in this panel. You know, as we continue the Renewing American Innovation Project, and the summit this week, we are going to discuss more and touch more upon these themes of how do – what are the continuing challenges on intellectual property today, like the ones that, you know, Andrew and Yann mentioned – like, what’s patentable what’s not, and how do we streamline the patent system, or how do we make sure that patent owners get the protection they need to be able to challenge the use of their patents in courts. If that’s not happening, then having a patent is valueless anyway. So all of those things will be discussed in light of, you know, an understood policy goal we’re all behind today in driving and renewing American innovation.

So we’ll continue that discussion. In the meantime, let me open this to Q&A from the audience. Again, please type your questions in the chat box. Let me ask with the first – start with the first question.

So it’s from Tony Carroll, who is an adjunct professor at Johns Hopkins. Thomas Piketty spends little focus in his book “Capital” on facilitating the role that capital plays in innovation. Does he adequately account for societal benefits of innovation that you describe? And have you discussed this with Dr. Piketty?

Mr. Toole
You know, I’m actually not familiar with Dr. Piketty’s book, unfortunately. (Laughs.)

Ms. Gupta
“Capital in the 21st Century.” I thought we all read it three years ago, or four years ago, when it became suddenly the talk of the town and then – you know, and then it wasn’t anymore. (Laughs.)

Mr. Toole
Yes. I have to admit that I have a stack of – like, three stacks of reading that I’m behind on, of books and magazine articles that I’m behind on. So maybe I’m not a good example. I apologize for that. But, you know, there is this change, right? We’re not in a physical capital, we’re not – as you pointed out already, Kirti, I mean, we are in a world of intangible capital, where value is really embedded in intangible capital and not in capital itself. So if capital is plants and equipment, then that’s part of the equation. It’s the traditional element – one of the traditional elements economists have looked at. And it’s still there. It’s still important. But it’s not the most important form of capital anymore, I guess. I don’t know more about the book, otherwise I could say more.

Ms. Gupta
I have. Let me – let me jump in here, if that’s OK. I have a sort of view on this. It’s actually I think that the fundamental takeaway of his book, that capital – return to capital is growing faster than incomes. So if you have more capital,
you’re just going to be richer, no matter what, because that’s just how it is in the 21st century. That’s true. Why? Why is that true? It’s because for the first time we are living in a world where we are all taking a bet on, and investing in, economic growth. That’s why the return to capital is higher than return to anything else, especially income.

So it’s already taking into account the idea of the importance of innovation because that’s what’s driving economic growth. Never in the history of humankind was this ever true before. We never invested in future thinking we’ll get more money in return in the future. We were in a zero-sum game. So this is the modern economy, and it’s true because of innovation. So I think that’s sort of already a feature of his thesis. And it supports our view.

Yann, any words from you?

Mr. Meniere  Well, I think the main focus of the book is not innovation. So it comes by the – well, it’s not at the heart of the system. And I think the way you described it, Kirti, is the right way. What I would just say is that if we translate that into the world of – if you try to ask these kind of questions in the world if IP and innovation, to me we are to reformulate it in terms of intellectual capital. So we say that – actually at the beginning, for instance, we have said that employees in IPR-intensive industries have higher wages because they are more producing because they are better skilled. They have higher intellectual capital because they have been educated, and so on. And I think this is – this is a great factor of inequality. And actually, putting it differently, education matters to access to investment, and so on.

I had one – yes, and I just wanted to close the loophole. So it’s the decentralized nature of the patent system, and this remark you made, Kirti, on women in the U.S. in the patent system. So actually it’s very important to empower people to have access to innovation, to innovate, to bring the innovation to the market, to create value that way. And education is important. And IP, likewise, in that context.

Ms. Gupta  Yeah, next question for both –

Mr. Toole  I guess just quick –

Ms. Gupta  Oh, go ahead, Andrew.

Mr. Toole  Let me just – I just read the question in the chat. And I guess one of the things that the – that Tony Carroll is asking about is this difference between a private return and the social return. At least, that’s part of what I’m reading here. And, you know, we can invest some money in some kind of capital – whether it’s a new plant, or equipment, or financial capital, or something like that. And we can earn a return, right? We know there’s a risk-to-return tradeoff. However, that doesn’t – that’s a private return. That’s what I get from my investment in that particular asset.
What we often get in innovation is a broader – is a broader return – a larger percentage return because other people benefit beyond me from my innovative activities. And this is the point that Yann made earlier today – I think the very dramatic differences in the social and private rates of return. So I guess the answer to the question that I’m – the way I’m reading it is: No, he does not adequately account for the societal benefits of innovation if he is not incorporating the benefits to others from innovation, not just to the innovator him or herself.

Ms. Gupta  Interesting. Interesting take on this.

Let me ask the next question. I think it applies to both of you. Can you share some concrete examples of strategies – of complex IP strategies that bundle patent, trademark, and copyright protection versus those that rely on a more simple or a single type of IP protection? And what contributes to a company’s use of these more complex and IP-intensive strategies? It’s a question from Laura Savatski who’s a tech transfer officer at Versiti and AUTM chair.

Mr. Meniere  Happy to jump in. Actually, I love this question because that’s a question I’m asking myself a lot. And actually when you start looking at these strategies it’s just fascinating. And there are so many examples and so many creative ways of playing with IP and being in business with that, and all that. So I will just mention that we – for that reason, we are – we are conducting case studies and publishing case studies of small businesses that use the IP differently, can be startups, can be family businesses, any sector.

And I can – well, one example I have in mind is Marinomed. It’s a biotech company from Austria. They use a compound derived from red algae to fight the flu and they have a dual licensing model. So they combine patented technology with a strong brand. And actually, they license part of the – they distribute part of the technology under brand. But they also still license the technology to other producers under their respective – for distributing under their respective brands. So that’s one way actually to play with the control of the brand and the – and the patent. And you can use that for different purposes.

Like, for instance, economies of scale. If you produced everything, you can reach economies of scale differentiating in quality using the brand, or there are various other ways – creative ways of choosing, playing with these combinations. So that’s one example among many. And if you are interested in other examples, there is – so these case studies are available at www.epo.org/sme.

Mr. Toole  Yeah. Those are good case studies. I remember you mentioned them before to me, Yann. That’s wonderful.

I mean, I think – just my two cents on this. I don’t pretend to be an expert on the business side of IP strategies. But from what I can see, these forms of IP –
copyrights, trademarks, and patents – are used – and kind of trade secrets – are used together all the time in complementary ways by savvy companies. I mean, just think of the Apple phone, right? I mean, the whole brand – the branding of the Apple phone. There’s incredible trademarking going on there. There’s plenty of copyright on its different materials. There’s, you know, patents in the phones. You know, Coca-Cola has design patents on its bottle shape, which it keeps. It’s got incredible trademarking. It’s got a trade secret, the Coca-Cola formula.

I mean, these companies are using this. This is all over the place, I would say. It’s all over the place. And so it’s very common. And it’s a very smart way. I think as economists – and Yann actually has a paper published on this in the Journal – and this is about strategies, international patenting strategies. And I think that’s a – that in and of itself, even without the other forms of IP, is a really important thing for us to get our arms around as this global economy is continuing to evolve. What’s happening around the world? So international patenting strategies are a very important topic.

Ms. Gupta Yeah. Well, on that note, we are out of time. But thank you, everybody, for the questions. Thank you, Andrew and Yann, for taking the time and taking part of the – our innovation summit. For everybody who joined today, a big thanks. And, again, you can find us at CSIS.org, U.S. Innovation and Competitiveness Summit. It’s going on all week. We have a great set of panels on similar topics. We hope to continue to see you there.

Thank you, again. We’re going to close now.

Mr. Toole Thank you, Kirti. Thank you very much. Thanks, Yann. Bye, everybody.