

Transcript of the CEPR Competition Policy RPN Online Event

A “Whack-a-mole monopolization machine”? “Ecosystem” theories in digital platform mergers

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Live Webcast with [Annabelle Gawer](#) (Chaired Professor in Digital Economy, University of Surrey and Visiting Professor, University of Oxford), [Mike Walker](#) (Chief Economist, Competition and Markets Authority and RPN Member), [John Newman](#) (Professor, Miami School of Law and Deputy Director, Federal Trade Commission), [Patrick Rey](#) (Professor of Economics, Toulouse School of Economics, CEPR and RPN Member), [Hans Zenger](#) (Head of Unit, Chief Economist Team, DG Competition at European Commission) and [Feng Zhu](#) (Professor of Business Administration, Harvard Business School). [Tommaso Valletti](#) (Professor of Economics, Imperial College London, CEPR Fellow and Competition RPN Director) introduced the event and [Cristina Caffarra](#) (Head of Europe, Keystone, RPN Co-Founder and Steering Committee Vice-Chair) acted as Chair.

* from [AAG Kanter's speech at Fordham, 15 September 2022](#)

Tommaso Valletti, *Professor of Economics, Imperial College London, CEPR Fellow and Competition RPN Director.*

... In academia we say that we strive for impact, and it is our attempt. We are asking ourselves, really, is what we do in academia relevant? Yes, no. If not, why? So, we need to confront ourselves with enforcers and policymakers. And we really hope that this is a useful discussion both ways. So, the policymakers get to know what we're doing and we hear from them what is actually actionable, of what we do in academia today.

In particular, we're going to talk about conglomerate mergers, specifically in the context of digital platforms. Take for instance, Amazon, Amazon recently is willing to pay almost \$2 billion for the acquisition of iRobot, which is the maker of Roomba, this smart vacuum cleaner. And why should anyone care about a large retailer buying a smart, a smart vacuum cleaner manufacturer, apart maybe from iRobot shareholders? Well, the traditional approach in antitrust would be to define some relevant market. In this case, it would be the manufacturing of smart vacuum cleaners. And then, the enforcers would look at market shares, probably, they would find that iRobot has a strong position in this particular, very narrow market of smart vacuum cleaners. However, Amazon, has almost a zero market share in such a market. Amazon has a very strong position, but somewhere else downstream at the retail level in adjacent markets for maybe smart home products, such as speakers, etc. But the competition authority, the traditional competition authority will probably decide that this is at most a merger between companies at different levels or even at in different relevant markets. So, maybe verticals, maybe conglomerate, but this would traditionally be seen as problematic. This traditional approach, if you speak to the normal person on the street, not an expert would say that this is a very narrow approach. To start with Amazon,

it is very big, why should you become even bigger? So is there a problem with size, and this applies not just to Amazon, also to Microsoft, Google, etc. And there's also a sense that Amazon could make, rather than buy. They have enormous resources. Why gobble up another firm, or why not an investment? Society would be better off, maybe not the shareholders of iRobot, but society would have multiple firms competing for this kind of products. And also, we know that Amazon is a gate keeper, with a very privileged position in the economy. And there is a flywheel; the environment, I would posit that Amazon market power grows with each acquisition because its ecosystem, insulated from competition. So, the acquisition of an asset such as iRobot, harms Amazon's competitors, but ultimately, also consumers potentially, in each discrete business line that Amazon offers. So, the competition that the authorities are interested in is this, but they need to prove that the post-merger that there would be anti-competitive effects using specific evidence, not general theories.

So, today, we are going to ask three academics to tell us how they think about conglomerate mergers through the lenses of different fields, related fields, of course, but we have economics and traditional IO, that's going to be Patrick, but also, strategy that is going to be Annabelle and also, business administration, it is going to be Feng. So, they're going to tell us how they think about this. And then, we have enforcers, who will react and tell us what they think about our research and what they think about this kind of mergers, which are going on. Before handing the baton to Cristina, two last things from me. First, disclosure is very important in general, but specifically when there is a lot of money at stake. And so, I'm going to disclose that I'm not involved in any merge. The second is this webinar is open. It is being recorded and it will be posted online. So, keep this in mind. You can ask questions, there is a Q&A function that I will moderate during this remaining one and a half hours that we have. So Cristina? Over to you.

Cristina Caffarra, *Head of Europe, Keystone, RPN Co-Founder and Steering Committee Vice-Chair.*

Thank you so much Tommaso, and a great welcome to everyone and in particular to the panelists. I want to start with a disclosure. I mean, my disclosure is in full glory on the CBR RPN website but for purposes of this particular event. I will say that I've been advising Microsoft in the Activision matter. I want to motivate what we're doing a little bit - Tommaso has given a good overview. But there is no question that the antitrust community collectively is confronted with this phenomenon of large digital platforms which have expanded from the core source of monetization into multiple directions. And we have the usual horizontal/vertical approach in assessing mergers, are they buying something equivalent? Are they buying a potential competitor? Are they buying an input? Are they buying a distribution channel? But is there more to it that we should be thinking about, which takes into account the particular circumstances? In particular, the broader set of assets that the company has developed over time, potentially accumulated presence in multiple markets, sheer size, financial resources, capitalization. So when we look at these deals through the traditional lens, and we apply horizontal and vertical kind of tools, are we missing something quite fundamental here? And there is an anxiety that I absolutely see with regulators because they're saying we don't want to be in a position where in five years, we pass a merger and we are looking back and say, why did we miss that? How did we not see that happening, and particularly the types of acquisition that may enable in some way to shift to new paradigms, new form factors, immersive realities, and so on, it is important to be particularly vigilant now.

Briefly, the title for this event comes out of a talk that Assistant Attorney General Jonathan Kantar gave at Fordham just over a month ago, he made a reference to the arcade game, whack a mole, he was essentially thinking of the mole that comes at you and you bat it back and more come at you. And essentially, unless you unplug the machine, you're never able to win. But even more relevantly, he said,

"I believe our horizontal and vertical frameworks as being limiting in this respect, focusing on that distinction has screened out important information about mergers that entrench market power and tend to create monopolies. Mergers may relate to adjacent market and can have effects without being strictly horizontal and vertical. Our tools however, have not equipped us to analyze them flexibly and comprehensively". So I have asked the panelists, as Tommaso says, they're a wonderful combination of academics in different fields and regulators to think about three or four particular questions, and then I'll leave the floor to them.

The first one is really this: when we think about merger assessment, we have as ground rule that we intervene if there is some merger specificity to the concern. So either there is a set of assets that somehow elevates the particular product or service that is being acquired into something with more market power, or that particular product or service is somewhat the "rising agent" in a soufflé of existing assets that gives them greater market power. So how do we show that a particular acquisition is going to create that enhanced power? Do we need to articulate a specific mechanism? As economists were trained to say yes? But many on the progressive side say we have a whole history of intervening in these kinds of cases where we are worried about size and presence and we should dust it down. More generally, do we need to articulate a leveraging story? Because are you leveraging power from here to there? And indeed, Pierre Régibeau, the chief economist of the Commission has recently said, I don't know how some of these stories differ from vertical foreclosure. So these are the questions I would like the panelists to address in their own inimitable way. I want to start from Patrick Rey, I will introduce them as I go through though Patrick needs no introduction. Patrick is a giant in the I/O field and has made some super important contribution over the years on so many things one cannot mention, but certainly the way in which we currently in enforcement and I/O think about foreclosure is something that Patrick has contributed to tremendously. So, Patrick, what is your view?

Patrick Rey, *Professor of Economics, Toulouse School of Economics, CEPR and RPN Member.*

Thank you very much, Cristina for this excessively kind introduction. I would like to address the three points. The first one I will try to come back to Tommaso's introduction on this current narrow functional approach to predictability in the marketplace and the need to follow this. The second point I would like to discuss will be more specifically about entry and finally, on the topic of the day, I would like to take advantage of this interesting forum to make some advertising for ongoing research projects on mergers.

For the first point, we need to rethink competition. As Tommaso mentioned, we start with market definition, which is based on the demand or supply source substitution. The idea is to encourage competition between substitutes and encourage cooperation among complements. The problem is that this distinction between substitutes and complements is rare. Some products can be a complement for some users or some uses and substitute for others. In a paper with Jean Tirole, we make a point that for a given product as prices decreased, complements can become substitutes and conversely, substitutes may well become complements. With a couple of papers Jeon we also show that in the context where you have firms offering a range of products and services, the same goods or services can be complements for say one and complements for others. Looking at the purchasing patterns, the goods or services can be complements for say, one social class or single-homers in the context of an online platform, and the same goods may be substitutes for multi-stop shoppers. This is not exactly new, and three co-authors of a wonderful paper documenting these patterns in the context of the competition among the supermarkets in the UK. And they found for example, that the need to attract one-stop shoppers is really a key driver

of competition. However, in the digital economy, these features are exacerbated by the huge number of goods and services that are being offered by the main platform. And by additional features such as network effects, multi-sidedness, economies of scale. So this really calls for moving away from the narrow traditional market-based approach through a different paradigm focused on competition between ecosystems characterized by large platforms and various forms of cooperation between the platforms.

Turning to my second point, so it's about entry. How do you deal with those ecosystems? You may want to foster competition among them, that may require policy intervention, for instance, in the form of interoperability or protection of intermediaries. This may also require meeting the scope for external cause, except maybe when it comes to acquisitions that will enable large players. Cristina asked whether we need a story, a mechanism, I would say yes. But maybe the standard of proof may be adjusted based on past evidence. If you have accumulated evidence that it's likely to go in one direction, then you may adjust. But it may also require paying attention to protecting potential competition. Then as well, the traditional view, according to which the best potential entrants are those that have a close substitute, may need to be revisited. You see why, consider the following stylized example. By the way, this is something that I've started exploring, still ongoing, and I would welcome in any joint effort to explore this further, it's a call for cooperation not competition, okay.

Take kind of product differentiation like the standard Hotelling line. So you have much more that was usually observing the monopoly position, located somewhere on the this line. The usual analysis conjectures that the best positioning strategy, of a potential entrant, depends critically on the role of price competition. Specifically the firms do compete in prices, as in the classical model, the entrant does not wish to position itself too close to the incumbent, so as to soften competition. This is sometimes referred to as a [inaudible]. In the absence of price competition, for example, in the context of you know competition amongst ad-based TV channels, the entrant instead as an incentive position itself as close as possible to the incumbent, so as to eat as much as possible in the customer base of the incumbent. Now, the digital equivalents of ad-based business models may suggest that therefore the best placed firms are the ones that are closest. However, there is another feature, which is important in the digital economy, which is the role of network effects. So let's fill in the picture. The possibility that consumers benefit from network effects so that is, other things being equal, they prefer to join the firm with the largest customer base.

Now, in this context, by positioning itself close to the incumbent, the entrant is pretty unlikely to attract new customers. Because you know, everyone is currently on the platform of the incumbent. When you offer your product that is very similar, it is going to be very tricky to overcome the inertia and the network effects that benefit the incumbent. By contrast, by positioning itself, far away from the incumbent, the entrant can attract those consumers that have the strong preferences for the particular variety that the entrant offers. And this in turn can help the entrant attract consumers and start the snowballing effect. The best strategy here consists in trying to target niche products or services, very differentiated from those offered by the incumbents and possibly completely unrelated to what's offered by the incumbent. But that's, that suggests that you know, when it comes to the analysis of entry and potential competition and so forth, there as well, the specificities of the digital economy and the fact that you are offering multi-sidedness to generate no price competition or who's being offered services in exchange for on the one hand network effects on the other hand, combination of both, complicates the analysis of the merger. Let me turn now to the third topic which is more specifically about problematic merger. These comments were based on research results in a project where we try to highlight two possible competition concerns

related to technical integration. The basic idea is very simple. Suppose that you have two products, a and b, where one of those markets somewhat concentrated. Fix ideas. Support market a there are 2 firms, A1 and A2. And there are plenty of firms in the other market, market B. And suppose that is firm A1 merges with a complement of both A and B. Now, by complement here, I don't mean to imply that A and B are necessarily complements, what I mean is that they may have independent demand but what I mean is that the same purchaser is interested in buying A and B. And suppose further that's a niche market, there are various competitors of perfect substitutes, but some consumers may benefit from one substitute, so one substitute may constitute some synergies, and some customers may appreciate the fact that you can buy A and B from the same supplier may provide some benefits to some of the consumers.

In the absence of any technical integration or pure bundling, you still have competition on a standalone basis. And in that case, the merger will have no adverse impact. You still have strong competition in each market on a standalone basis. So those consumers who aren't interested in the rest of your benefits or the multi-stop shoppers or the multi-homers, they can still mix and match and benefit from competitive prices on the standalone basis. The one-stop shoppers, the ones who benefit from those synergies may get charged for this and the conglomerate may offer the bundle at a premium price.

So the assumption was made, maybe charge more because the one stop shop benefits, but based on preference, they are better off. The picture changes drastically if you introduced through a law, the conglomerate to engage in pure bundling or technical integration, because now all of a sudden consumers have to face a reduced choice, either they go from a bundle of a firm with complement or they need to go to the alternative supplier market A and combine this with the offerings of the alternative and therefore the portfolio differentiation between the complement on the one hand and remaining supplier of market A. And that will always let a number of small firms to charge higher prices, consumers are harmed, multi-homers are certainly harmed, and total consumer surplus can go down. So that that's something we show that, if you have this kind of conglomerate merger, is you need to pay attention to avoid degraded interoperability and avoid any form of pure integration, be it technical or otherwise. The paper by Susan Athey, Fiona about intermediaries that can ensure multi-homing goes in the same direction. At the very least, you need to ensure that you have conditions that ensure that consumers can still mix and match as easily as possible.

Cristina Caffarra:

Great, thank you so much. A takeaway seems to me that you are saying in your recent research you look at technical bundling which is in effect a tie, and that is problematic. This seems in line with the established intuition that with mixed bundling it's more difficult to exclude, because you cannot commit, while with a tie or technical bundling the commitment ultimately to exclude can be more credible. So that is angle that to pursue in terms of thinking of actionable theories. Now let me move on to the next speaker who is Feng Zhu. Feng Zhu is a professor at Harvard Business School. Tommaso and I thought that it was useful and important in this discussion to bring in perspectives that are somewhat different. Now Patrick was essentially saying we need to embrace a notion of ecosystem, not just markets. The notion of ecosystem is something that in the business discussion is well established. It's been around for a long time, even though it has tended to refer to the constellation of companies that may be producing value together. The difference is now we're talking about ecosystems as a single firm with different activities. And so this is the particular version of ecosystem which is of interest today to enforcers because this is

what they're facing. So Feng, how do you think about this and what insights you have from your own work in which is extensive in platform economics, and generally from the business strategy literature.

Feng Zhu, *Professor of Business Administration, Harvard Business School*:

Thank you so much, Cristina and Tommaso for having me here on the panel. Indeed our understanding of platforms even from business strategy literature has advanced significantly over the years moving beyond basically just acknowledgement that such markets often have network effects, And this is really because of the excellent work done by scholars like Annabelle, who is also on this panel, and other people. And my research in this literature is mostly focusing on essentially explaining constraining factors that can help us understand the essentially the difference in platform performance and market competition. Over the years, we can see that some platforms are capturing lots of value extremely well, such as Google, Apple. But there are many other platforms, who are still struggling to value capture. Look for instance at Uber, look at Groupon, for instance. And we all know that many platform startups tend to fail even after burning lots of money,

So, the idea is that, it turns out that, from my own research, they are important kinds of factors that the constrain platforms' ability to scale up or capture lots of value and these factors might be actually pro-competitive but there are other factors that can make these platforms more like a winner takes most, As a result, this may actually make the market less competitive. So, it's actually important therefore for us to understand during any merger and acquisition case: How would that potential merge, merger or acquisition, affect all these constraining factors?

And many of these constraining factors I started are related to network properties. So, for instance, let's go beyond just the existence of network effects, today, it is actually kind of increasing the case because all the products are internet enabled with all these IoT technology, you see these network effects everywhere. But the strength of network effects can differ significantly across different markets. Think of cases, for instance, the home video console market, So, in my own research, I show that in these markets, actually hits are very important, So, a few hits can really drive adoption of these platforms. So as a result, right, we often see like multiple giants competing or coexisting in the markets, including Microsoft, Xbox, PlayStation, or Nintendo, and presumably, new entrants would still be possible if they could acquire enough hits to drive the market adoption.

And another important feature of this market is that consumers tend to play like a limited number of video game titles associated with a particular console generation. But if you look at like other markets, like streaming markets, right, also about video sharing - look at YouTube, look at Tik Tok. All these markets, right, because consumers tend to enjoy, right, hundreds of videos, And the, and the need for variety is substantially greater than on the home video console market. So, as a result, for these markets, the markets tend to be a lot more concentrated. So, the network effects are so different. And so, when you have a strong network effects, right, potentially, like, through the acquisition, it can benefit the acquiring company, like, because it can gain additional installed base significantly, or it can benefit the target company, because the acquiring company has some kind of a user base can immediately like kind of generate large, huge boost, right, in terms of the user base for the acquiring company, right, combined with significant network effects. It could be a significant concern. And so, like other kinds of network factors, such as like, for instance, like multi-homing, like many scholars already kind of have pointed out that there's a tendency to multi-home is actually quite important, And, multi-homing and how it operates

tend to be quite a nuanced, So, for instance, Amazon could acquire some media companies in order to own exclusive IP. And Disney also has exclusive IP. And Netflix has also exclusive IP because with all of Netflix Originals and they could suddenly sign exclusive deals with media production companies, So, on the content provider side or the content side, we see more single homing as a result of more merger and acquisition. But the interesting thing is that because of the two markets like on the content side and on the user side, they are interdependent on each other, right, more single-homing on one side of market can actually lead to more multi-homing on the other side of the market, because the consumers are seeing, like, all these platforms are differentiated, they're more likely to sign up for multiple service providers.

And, as a result, this may actually kind of be making it more difficult for a single kind of a platform to dominate the market because this is almost like a contravening force. So, from an interesting kind of personal experience is that after Disney left Netflix and saying that "Okay! We're going to start our own streaming company, Disney+," and many people were concerned with that "Oh, okay! Like, how does this affect the Netflix?" But I did some quick survey on my friends, and it turns out that many of my friends decide to sign up for both Disney+ and Netflix. Part of the reason is because they have a differentiated content, So, if they're on the content side and they're differentiated, consumers are likely to multi-home.

And, of course, right, during the economic downturn, you have some budget constraints and that is when you start to say, okay, probably I want to single-home and sign up for only one streaming platform. Then, that puts them into a kind of a more competitive scenari., So as a result, when I try to understand how multi-homing exists it's kind of a nuanced. So, another factor that I study on my own research is that, for instance, is the clustering network structure of these platforms, Take like Uber as an example. I mean, Uber is really facilitating mostly just local matching. So, I am in Boston, right. As a Boston user of Uber, I care about the number of drivers in Boston. I probably don't care whether Uber is a monopoly or not in San Francisco, for instance. And, of course, if I travel a lot, I probably care about the Uber's market share somewhere else, but most people don't travel like that frequently. And if I'm the Uber driver, I'm most likely going to serve like a lot of local Uber users in Boston, as well, and I probably care about Uber's market share in Boston.

And but this situation, right, is very different than for Airbnb, for instance, If I'm not traveling outside Boston to another city, right. Usually, I care about the number of hosts on Airbnb outside Boston. And if I'm the host, in Boston, for Airbnb, I care about the number of travellers from other cities. So, this kind of a different kind of clustering structure of the networks can actually generate a different competitive dynamic. In the sense that I mean, if you are all based on this local matching, then the entry barrier could be quite low, because a new kind of an entrant can just concentrate its effort on a local market and try to compete against Uber in a particular city. It doesn't have to, like, scale up everywhere vs. in the Airbnb's case. You really need a bigger scale, right, a global scale, to really compete against Airbnb.

Now, this would also affect how we think about for instance merger expansion into platforms in different areas. In China, for instance, lots of ecommerce platforms started either through acquisition or investment or to do everything by themselves. Try to say okay, maybe through ecommerce, I want to expand into this a local grocery, kind of like a basic food delivery, right, in the sense that I deliver grocery products to customers. But this grocery business is not, unlike the ecommerce platforms. It is really about local-to-local match, essentially. You're matching local residents with local farmers essentially and try to source these products locally. With this localised network structure, as a result of that, competition is

extremely intense, because there are lots of startups, right, operating in this space as well. And in the end, right, even though if you look at these platforms like Alibaba, JD, as they make profit from their ecommerce business, but they inevitably lose money in this kind of a, basically, a grocery delivery business, because of this localised network structure. So, this is also something to consider, as we think about kind of platform expansion through a merger and acquisition,

And another factor in my research, talks about like disintermediation, is about in the sense that all these big intermediaries, right, what they are doing is about facilitating the match. And ultimately, like, sometimes like, these service providers and users can be connected through other channels, and you can be connected directly, So, the question is, how do we kind of think about the impact of merger and acquisition on the availability of this outside option of enabling disintermediation? But so let me give you a hypothetical example, So, for instance, like, let's say that a food delivery company tried to acquire this white label, like, on demand delivery company, And so, restaurants, right, sometimes do not have to rely on food delivery companies, like DoorDash or UberEats to deliver food. They basically work with all these white labels, like on demand delivery companies for food delivery. And then, in that case, they will connect themselves directly to all these customers, But if a food delivery company is getting rid of that option, I mean, so that would affect their ability to disintermediate. And this would also affect the platform's power in charging commission fees.

So, the last point, before I finish, is we need to really think about the future expansion opportunities, The term I use in my academic research is called network bridging. In the sense that, just another hypothetical example, if you have like, lots of capability in AI already, they have that interest already, Suddenly, like, acquire a map company that would actually allow you to expand into like a driverless car industry, So, I mean, maybe your position is very powerful because you have all these core elements right in your, kind of, ecosystem. This will actually raise cost to compete significantly, So, we also need to kind of be mindful about this future kind of network bridging opportunities. Thank you so much, Cristina.

Cristina Caffarra:

Thank you, Feng. I want to move to Annabelle, Annabelle, professor at University of Surrey, many other affiliations. But of course well known for her work on digital platform. So again, the question is, we are looking at a particular problem, we're not looking at any form of conglomerate, we're looking at conglomerates that are effectively large platforms that have strayed outside of their core monetization focus and are buying additional businesses. This is the exam question. How is the regulator going to take that beyond the standard tools? And what are the criteria that they should be using in vetting that beyond the standard theories, because that is what everybody's grasping for? Have we got something to say that goes beyond the standard, and what is it? Is it they're just very big? There are network effects? I mean, we know there are network effects, so what, that doesn't take us to any actionable standard. So Annabelle, over to you.

Annabelle Gawer, *Chaired Professor in Digital Economy, University of Surrey and Visiting Professor, University of Oxford.*

Thank you, Cristina. Delighted to be here. So, the question is, in what way, the acquisition by a digital platform is going to be problematic; in a way, that's different from a traditional merger? So, when we say problematic, that means that we are observing an activity that is going to impair, somehow, the competitive process. And I think that I would like just to go back for a minute to describing in what way

the competitive process is different in the case of digital platform, and digital ecosystem than in traditional industry.

So, in traditional industries, or the traditional economic model is going to look at firms selling goods or services to users and is going to look in terms of possible harms to competition as to whether for example an acquisition is going to foreclose a particular market, or whether the company is going to be able to charge a monopoly price. These are the signals that are going to tell the regulator there's something potentially harmful here. In the case of a platform-based competition, what we see is that the arena of competition, and from the perspective of the firm, the strategic decisions are not made at the level of separate markets.

Ecosystem competition is going to be characterised by a player, here is going to be a platform that is going to optimise not at the level of the single market, but that is going to try to optimise its profit at the level of a constellation of activities. And it's going to sometimes choose one as a bottleneck and commoditise all the others. So, you're going to have, you're going to have a portfolio of activities that are not going to be limited to one particular product market.

Given that the basically the unit of analysis in which the process of competition happens, does not happen within a particular bucket but within a constellation of markets. That should be the right level of analysis where the regulator is looking at potential harms.

Now, what kind of harms can we talk about? We don't just want to talk about the usual kind of harm that could be addressed by existing regulation. So, if we want to think about harm, when we talk about harm in the traditional competitive process, we say harm compared to how a good competitive process naturally happens, where the consumers get as much benefit as possible for as little price as possible. And the process of competition weeds out all the unproductive and inefficient players.

I think what we need to be more precise about is what is an ideal objective? What does it mean ecosystem competition working well, when we're talking about digital platforms, and ecosystems? Let's think here we have to add one ingredient to what we normally expect firms to do when they behave well. When a traditional firm behaves well, according to the way competition should happen, we know, we know, what they doing. They are buying or selling, they're optimizing, they're being as efficient as possible, then they priced in the right way. But digital platform firms, in addition to that, they also gather a group of, a group of, a group of firms, they actually have a governance role, which is inseparable from their more traditional platform competition, traditional competition. So, that leads me to say, okay, so what would be an ecosystem effect here that we need to talk about? We cannot separate a negative ecosystem effect from characterising what would be a positive ecosystem effect. Okay. So, the positive ecosystem effects, which some of these platforms talk about, to justify their behaviour is that they are able to identify complementarities and exploit complementarities using in particular data. Right.

So that they are basically tapping into sources of efficiencies, by going across particular sectors. And I think that's a very valid argument, that if we look at the negative effects that could come from those acquisitions, we can think of a type of foreclosure effect, which is that because of the action, and here, I'm going to be more specific about it, they're going to make more difficult the engagement of other firms in these markets. But I think we need to talk about more than just entry in these markets. And here is where I would like to present a slide to you.

So, I'm going to share a slide. Here. Do you see that? Okay.

So, this is a slide from a, from a recent paper, which I published, called "Digital platform boundaries: the interplay of firm scope, platform sides, and digital interfaces." And here I'm presenting an example of how the choice of the scope of the firm, which is what we usually look at when you look at merger and acquisition, in the case of digital platforms, is interdependent with two other choices: one has to do with the configuration of the of the platform size, that is which company which, which, which actor, that are allowed to be part of their sides, that's the second type of boundary, and the third type of boundary is the design of the digital interface that connects those actors to the firm. And here the choice is about the, to the direction of data and how much data is being shared between these actors, and the platform.

And just to give you an example that many people are familiar with, when Facebook acquired Instagram, What we see there is not only the expansion of the scope of the firm, of course, we see that: one firm acquires another. But what also happens if you look at the sides of this of these firms, is that the Instagram's user size and advertiser side got eventually merged with the Facebook's user side, and the Facebook's advertiser sides. And that despite Facebook's original promises, two years after the acquisition, the digital interfaces also got matched. Okay.

And the reason why I think that matters to regulator is that the way those companies act is not only about changing the scope of the firm, but in a bundle of actions, looking at the scope of the firm, the configuration of the site, and their interfaces. And therefore, I think, whereas in the early days of a market we tend to see platforms starting with a narrow scope, starting with open interfaces, and aiming to add members to their site. Once they move to a position of dominance, we tend to see them closing or recalibrating the interface as well as expanding the scope.

So, I will finish here, but I think, the point that I want to make is that for regulators to really be able to examine the positive and the negative effects of these mergers and acquisitions in these settings they need to look jointly as at the conduct of those platforms, not only in how they expand the scope of their firm, but what they do to, to the interfaces, as well as which company do they allow or not allow in? And I will stop my remarks here.

Cristina Caffarra:

Thank you. You wouldn't be a business school professor if you didn't have slides. So let me move on to the regulators side, I want to bring in Mike. First Mike, of course chief economist of the CMA, progressive and forward looking agency, which has distinguished itself over time for quite innovative approaches. The academics have given their perspectives, but you are at the coalface having to make decisions and judgments about actual deals where you are having to think, what am I doing, which is not in the Horizontal Box or the Vertical Box? If I got anything to work with? Do I need to elaborate or articulate a mechanism that will stand up? What is the standard of evidence? How are you thinking of this on an everyday basis?

Mike Walker, *Chief Economist, Competition and Markets Authority and RPN Member:*

I'll just start off real quick caveat. Obviously, this is me speaking, not the CMA , but I don't intend to say anything controversial, so that's not really an issue. I want to pick up a couple of things has already been talked about before I come to my remarks.

First thing is, Tommaso started off by outlining this scenario, whereby, you know, we've got this merger, unrelated products that are in different markets so, authorities aren't going to have a problem with that. Obviously, he is setting up a straw man there. I think it just highlights how dangerous market definition often is. Joe Farrell recently made what I think is a really good comment when he said, you should only do market definition when it's really easy. And when it's not easy, you should just get on and do competitive effects analysis. And I think that's absolutely right. And that's what's expected in our merger assessment guidelines where we put market definition, right at the back, there's a reason for that.

I also want to pick up on a point that Patrick made about this horizontal vs vertical distinction or, or substitute conglomerates, again, how that might get in the way. I think it's very, it's similar. It's a really useful framework for thinking about issues. You have a clearly horizontal merger - fine. A clearly vertical merger - fine, different frameworks, but they're not constraining frameworks. You know, if there's any doubt as to exactly how you should be thinking about the merger, as in is it horizontal or vertical, just ignore that get on and do the competitive effects. And we do have parties, in some cases, saying to us, well make up your minds, is it horizontal? Is it vertical? And our answer is you know, focus on the competitive effects. And I think it's really important to get away from these labels. I think some of these labels really get in the way.

So when it comes to ecosystem theories of harm - my concern as an enforcer is all about creating barriers to entry and raising rivals' costs. That's what I care about. And so the framework in which I'm going to be operating in most of these cases is - does this raise any barriers or does this raise rivals' costs? And in particular, does this raise barriers to *innovative entry*, because it's innovation that I'm really going to care about. Actually, this seems to me, a pretty standard concern, it's not a new concern, the idea that you can have, I mean, the Microsoft cases back in 1990, we're talking about the application barriers to entry. That's all about creating an ecosystem that makes entry harder. So I don't think it's a new issue. It just is a bigger issue. You know, because it comes up in more areas. And it comes up in areas that are completely pervasive of how we now live. So it's very important issue, not a new one. But we are increasingly thinking about these in cases because it has become more important. And I'm less concerned about the "increasing market power" theories, because ultimately, I still think they come down to a raising rivals' cost type theory. So I think I'm in Pierre Regibeau's on that one. Not a comment I often make, but I think I am there.

So why, why might some of this stuff be controversial? Well, I'm often accused of supporting efficiency offenses. You know, and obviously, when conglomerate power, portfolio power, these two issues came to the fore in the late 1990s, I'm on record as saying that they were intellectually bankrupt and that there was no coherence to them, but it was 25 years ago, I was young and stupid. You know, I think now we have to actually that there are efficiency offense, they are economically coherent. Now on the facts, they may well not hold but they are economically coherent. And actually, for most of them, it means that the short run claimed efficiencies are essential to the long run theory of harm. That's a super uncomfortable position for a competition authority to be in, you know, we never want to be in that position. But unfortunately we are in that position frequently. And we have to accept that and make decisions on that basis. It's very difficult, it's very difficult. However, when things are difficult, the answer isn't to say, "Oh, this is really difficult, let's do nothing - we'll just allow all these mergers, go ahead". As if by doing that, we avoid making a difficult decision. You still make a decision, it's a decision to do nothing. And that might well be a bad decision. So, I think it all comes back to the need to take dynamic competition seriously, we

know it's innovation that drives economic growth, it's not price effects. So we need to be very concerned about future effects on innovation. And my reading of the economic literature and I expect, also of the business school literature, is actually its competition that typically drives innovation. And if you want disruptive innovation is going to come from outside of the incumbents. And I think that's it, we need to make sure we protect disruptive innovation.

And if we go to Annabelle's point, really important point, I think about the governance aspect to some of these platforms. If ecosystem mergers allow the incumbent to limit the path of future innovation, then that's really bad news. And if we're concerned about that, I think we should be, we should tend to take a position against ecosystem mergers. So now obviously, these are uncertain judgments. But that governance point, I think, is very important.

Now, I think it's also important that I mean, we are talking about concerns about big digital platforms. And it's important that we don't see these ecosystem theories of harm whenever we see an ecosystem. And yeah, I think Feng made that point really well, there's a bunch of ecosystems where there aren't market power concerns. And it's important that we don't start to manufacture ecosystem theories of harm because they become very popular.

This is not CMA speaking, it's my personal opinion, given that I think entry and innovation that really matters, given that I think entry, to compete against the large platforms' core products is already extremely difficult, I am worried by anything that is going to make that sort of entry harder. And so I think that in some of these large platforms, ecosystem mergers, I think the bar to allowing those should be quite high, particularly, particularly if they involve data advantages, that those platforms are able to keep themselves and not share. And at that point, I will stop.

Cristina Caffarra:

Excellent. Let me let me move on to John next. I'm glad you made the points on barriers to entry and dynamics. We were all young and stupid when we were complaining about efficiency offense, I was there too. But I also heard you saying that you think about this mostly as theories of leveraging and raising rivals' costs, though there is a broader setting where entry and advantage can be effectively exploited. Now, John, Mike comes from the advantageous position in the UK where we don't have to define market in a way that is religious. And we don't have to be particularly specific about whether something is horizontal or vertical. I know that there is underway a revision of the guidelines in the US but so far one feels that has been a liberty that you haven't had. That said, what is your take on all of this and give us your views?

John Newman:

Well, first of all, and the same caveat that these are my personal views, of course, and not those of the FTC or the Bureau of Competition. I'd like to pick up, if I could, and I might just steal if I could, with attribution, of course, Mike's comment that we don't get to make the world. That's very true of the US situation, just as it is around the world. And Cristina, your question just now. You know, I think we in the US context, are somewhat more constrained by certain Supreme Court precedent that requires market definitions in merger cases. That said, I think there's still a good amount of leeway, a good amount of law yet to be developed on this point: how precise does the market have to be defined? Is that a sliding scale?

Should it change based on the type of theory of harm? I think those are more open questions. So, there's still some freedom, even though we don't get to make the world.

You know, I guess, I was struck sitting here as a sometime academic, now, enforcer, by the reality that, as enforcers, we are operating, in these mergers, particularly, I think, under conditions of less than perfect information, especially compared to a sort of standard "three to two" horizontal merger. We're just not going to have as much information. We're not going to have as much certainty, in general, around these mergers, and exactly how they might end up harming competition or harming trading partners, or consumers, etc.

So, for a variety of reasons it is not immediately obvious what the relevant market is. The markets tend to be in motion. We've heard about innovation being important. And I think, companies themselves when they're doing these deals, oftentimes don't know exactly why they're doing the deal. They may have a variety of possible mechanisms in mind when they enter into one of these transactions.

These ecosystems, I think we could all probably agree, do lend themselves to multiple possible avenues for harm. If you control a lot of different levers, that changes your ability as a company. And so, to breaking this up into liability and remedy, two questions we have to think about as enforcers. And, Cristina, your questions at the outset are exactly the right ones on liability. How do we tell whether this deal is going to supercharge the target or the acquirer? You know, I think that leads right into the next question, do we need to say a specific mechanism for that?

Practically speaking, I think the answer is yes. With the caveat that you know, that doesn't mean we have to articulate exactly perfectly in a pristine manner every time. But I do think we're going to need to tell a story to a judge at the end of the day. Now, listening to a lot of the questions posed by the academics on the panel, I think solidified my thinking around the idea that we should strive I think, for an approach where we focus on capabilities. How many levers do you wield, not necessarily internal company preferences or desires or even intent so much? You know, there's this great FTC case from 1961, where the Commission said: It's not the exercise of the power that counts. It's the power itself.

I think that's a good first principle for these acquisitions. You know we're thinking about things like reviving what's often called actual potential competition theory in the US. I think that, you know, if an acquirer operates a large ecosystem, I'm just speaking hypothetically here, but if an acquirer operates a large ecosystem, oftentimes, there is a nonzero chance that that acquirer has the capability of building whatever it's about to buy, instead of buying.

Some more good economics from a lawyer: I'm, of course a little biased as a lawyer, but more good economics from a 1960 lawyer and judge, the Supreme Court in the US, internal expansion is more likely to provide increased investment, more jobs and greater output. I tend to think that's right at a high level. And so, for thinking about this build vs. buy choice, and oftentimes these companies have the capability of building I think that theory offers a lot of potential utility to enforcers. A lot of work for academics to be done, I think, explaining contours of the theory, what are the right standards, what quantum of evidence should enforcers be looking for, but the theory itself are potentially useful. I also think getting to an approach where we're not looking for, again, precise, pristine theories of exactly what's going to happen. But instead of, kind of set of plus factors may be useful. So, I'm, you know, thinking of things like whether the acquisition target is a market leader. Presence of network effects came up, I think, I think, just about every speaker mentioned network effects naturally. That is a plus factor. Does the acquirer

have a monopoly position somewhere? Building on something Feng mentioned, I think he used the phrase, future network capabilities. I kind of think about like: is the underlying technology in a state of flux at this moment? If so, I think that heightens the kinds of concerns that Mike mentioned around innovation, making sure that entry is easier.

So, you might think about the shift from desktop to mobile, earlier this century, as a time when the underlying technology was in flux, that made it all the more important for regulators to make sure that the runway for innovation is clear. Data advantages, I think, Mike mentioned right at the end of his remarks, that might be another plus factor. There's some kind of unique data advantage given to the acquirer by this transaction. But that's all. That's all on liability.

I would also like to talk a bit about remedies. We've been talking a lot, I think exclusively, about the question of liability: is a merger illegal or not? Perhaps the most marked shift in my thinking, brought on by my turn as an enforcer, has been thinking about remedy from day one. I don't have the luxury of really totally separating the two questions, because it's only worth deploying our scarce resources if a meaningful remedy can be had.

And I want to get back to that visualization of someone who can wield a lot of different levers, as ways to harm rivals, as ways to block innovation, etc. You know, those multiple leverage points, especially in a context where regulators don't have perfect information about exactly which lever might be pulled, I think militates extremely strongly in favour of structural remedies: block the deal, rather than a behavioral remedy that tries to identify which levers will be pulled and tries to sort of tie the acquirers' hands. Oftentimes, there's just going to be too many potential avenues and we're just not going to know for sure which ones need to be tied up. Getting back to the idea that internal expansion will oftentimes create more innovation, more jobs, more output. You know, I think, again, block the deal. If it's, if it's justified on the facts, of course. But I think there should be, again, a very strong presumption on the part of enforcers in favour of a structural remedy. And with that, I will close out.

Cristina Caffarra:

Wow, John, I want to also pick up on some of what you said in multiple ways, again, we'll leave it after Hans. But what strikes me is this idea that you have the multiple levers, okay, so you know, the capabilities there. But what you're going to be confronted with is essentially a push back that says, But what exactly is the lever that is going to accelerate the power? And how is that going to be used? And that is the sense in which the debate is between a vision that says, of course, we think of capabilities, that is what matters, And another that says, No, you need to show me a mechanism through which that is going to occur? Not very precise, perhaps, but still a mechanism is it bundling? Is it raising rivals' cost? This is some form of tie? Is it some sort of price discrimination? You yourself, say, we will need something to go in front of a judge, let me go to Hans before reopening the general discussion. Hans, of course, you patiently waited, but I'm really keen to hear how you come at this and what you think.

Hans Zenger, *Head of Unit, Chief Economist Team, DG Competition at European Commission.*

Thanks very much, Cristina. So I have the same disclaimer as the other speakers before and speaking for myself. Now, I want to start off by perhaps reacting to one very important thing that that Mike has mentioned. And that's the issue of efficiency offenses, because of course, that's something that's raised a lot in this debate, harking back to the old portfolio type theory. Obviously a competition authority

should only prevent conduct that will harm competition. And obviously, lots of complementary mergers in the tech space have brought enormous efficiencies. So let's just get this out of the way first. Mike said very rightly that most of the theories that we have in the economic literature about dynamic effects start off with something which is a short-term benefit. So if you think of Carlton-Waldman or whatever, there's usually some small benefit in the beginning, followed by a very large negative. Of course that's our burden to prove in the end. But it's not just because there's some small benefit in the beginning, that it's necessarily an efficiency offense.

Now, as other speakers have said, in these portfolio theories it's about a dynamic forward looking exercise, it's not the old sort of portfolio strength of, you know, let's say, Guinness grand metropolitan works about beer in a larger portfolio of beer, that can create 10 cents of harm for the beer drinker. It's more about the Nvidia-ARM type of dynamic foreclosure theory, and how different markets are linked. And so at the essence, it's about denying entry points for rivals, both at the core of an activity and at the periphery, and create some impermeability of the position of the firm across markets. So if you will, you know, I would say it's a "foreclosure plus", if you will. There's often an element of foreclosure as a basis, but usually laced with other issues, like potential competition, innovation, entry returns, two-sided foreclosure. So at the heart of it, you know, it's a horizontal theory, not a vertical theory, even though it has vertical elements.

Now, how should we look at these things? If we look into the future, and Feng has mentioned this, John has mentioned this as well, we can't look at products, we have to look at capabilities and firms' abilities in a developing space. And, you know, as Cristina has mentioned, this is something that's quite natural in the business research community. However, there is a small literature that's growing on capabilities in network economics, I'm thinking of papers, like Matthew Elliott, from Cambridge who started to produce some research about ecosystems and capabilities. And I think that's very relevant. And if you look at this in an applied space, you know, the basic point you can go back to is things like innovation competition, so you know, probably cases like Dow Dupont, where we look not at the product market overlaps, but about the basic capabilities about firms in entering into new markets and competing in that in that space. But I think this concept of scarce capabilities that are added by merger, I mean, it has much broader applicability than just innovation competition, it goes to potential competition, and it goes to additional leverage possibilities, things like the kill zone. So I think that lens of capabilities and scarce capabilities is a very useful one.

The second thing that I want to mention is, and that's something that Annabelle has also raised is that, of course, once we're thinking about the future, we'll have to think about counterfactuals differently than we do normally, in competition policy. We cannot look at the past, we have to look at the future. So we have to think about what will this merger mean in the future, not only for the merging parties, but also what would have happened for other people, if this merger had not been there? Now, one thing that was mentioned already is the make-or-buy decision I think John mentioned that. Parties are still submitting to us these documents where they say for us it's make or buy as though it was an absolutely innocent thing. In many situations, that may not be an innocent thing if you're combining some really scarce capabilities, because then issues of potential competition can arise. You know, a case that the Commission brought, I could point to is Deutsche Boerse LLC where this was a big topic,, two firms basically having platforms that, you know, where each was probably the most promising entrant for the other. Another example would be platform annexation. I mean, it was mentioned, I think, by Patrick before, the paper by Fiona Scott Morton and Susan Athey where you buy a scarce capability, not because

you want it yourself, not you want to make your own product better, but you want to avoid that that firm makes other people better, for instance, by helping a multi-homing, you know, a case that's often mentioned, here is Google DoubleClick, you know, that, you know, that had some of those characteristics in people's minds. Now, the most extreme example of this, I think, would be a preemptive merger where you buy something, not because you want it yourself, and it doesn't help yourself. But you buy it in order to brands that somebody else buys it and, you know, takes it as a useful tool. Now, of course, in business, this notion of a pre-emptive merger, I mean, it's a very standard notion, and we see it in internal documents, but in competition law, I think it's underused; we have some cases. So I mean, the issue was raised, for instance, in another merger, which was abandoned ultimately, where there had been concerns that that how they, you know, might have been purchased in order to prevent other people from using that as a springboard to increase competition.

Now, of course, in all of this, I think we have to have a different understanding of efficiencies. It's not only about efficiencies in terms of weighing harms, versus efficiencies, but we have to understand the efficiencies because we have to understand which efficiencies might a non-merger bring to third parties in the market. So we have to think about the business models and the efficiencies in a much more proactive way, I think in order to understand and develop good theories of harm. Now, finally, on this, I want to mention that this literature often says that combining scarce substitutable capabilities is a problem. But also combining complementary scarce capabilities can be a great problem. I will give an example hypothetical, just imagine 30 years ago, you would have had a merger between Microsoft and Intel. So Microsoft at the height of its power in, in operating systems, Intel at the height of its power in CPUs - this would have been very hard to bring with standard merger guidelines, you would say, well, they're not actual competitors. They're also not potential competitors, because they have, you know, their capabilities of scarce. But they're, but they're very different. And foreclosure, well, there's really nobody to foreclose to raise rivals' costs. So you know, the parties would have argued, well, there's a lot of EDM and a lot of technological integration, it's a great merger - is it great? Well, I would argue it would not be great. Because if you think about it, who is the company, with the most interest in there being competition for Intel, it's Microsoft, and who is the company with the most interest in competition for Microsoft? It's Intel. So such mergers can lead to two things. First of all, if the two firms go together, a potential entrant all of a sudden has to innovate in two markets in order to be able to enter and compete, which makes it much harder. And second of all, you also lose the sponsor that would help you create an ecosystem with them, because they benefit from more competition in the complementary market. So I think that's why we have to think about capabilities, not only in a substitutable, but also in a complementary way.

Finally I can still say something about the standard of proof and the mechanism and so forth. And I think, you know, obviously, I think we cannot just say "you have some advantage", there are too many efficiencies around, we have to show competitive harm. But I think the standard clearly, you know, should be linked to the expected cost that you see.

And so, so what does that mean? Well, you know, I want to give you an example from foreclosure. When you asked economists about the ability and incentive to foreclose, then very often, the economists will say, Oh, you know, it's the same thing, I just write up an incentive formula, and it's more or less that will tell me them, you know, what's the benefit? What's the cost? And then at the end of the day, the equation tells you what the problem is. Or is not, and then we look for a solution. Now, from an academic perspective, that may make a lot of sense. But I think, as John has emphasized, in the real world, you

have a lot of uncertainty. Now, let's imagine, you know, Patrick writes me wonderful submission, in in a case. And we'll say, Well, let's say this, in this particular merger, there's the cost of foreclosure of 100. And the benefit is 95. So, you know, it should clear, Well, should I always take this at face value, I would say it depends a lot on the ability. So if you have some merger, where maybe, you know, like the Guinness Grand Metropolitan that I was mentioning, at the beginning, where the risk of getting it wrong, is that beer prices are five cents higher, then maybe I should be very precise, and the burden of proof is on me. If, on the other hand, I have something like Nvidia-ARM where, you know, when you get it wrong, all of a sudden, you have potentially a messed-up situation in the vast majority of chips that people use in modern life, you know, then you have a very, very different risk. So, you know, I would agree with John there, it's not only about the incentive, it's also about the ability and the higher the ability is, you know, that that should factor into whatever an authority needs to show to discharge its burden of proof or its standard of proof. And you know, what you could apply there is a better you know, what you could call the Liz Truss Rule, you should wonder, what's the worst that could possibly happen? And that's my comments.

Cristina Caffarra:

This is wonderful. Fantastic material there from foreclosure plus, to your view on foreclosure standard. Now I will give the floor back to the academics just in the last few minutes, the enforcers have put a very concrete - very real - perspective, which is, I think should be transcribed, made obligatory reading to all advisors out there in the City and elsewhere. So - let me ask Patrick, Feng, and Annabelle, whether you have any comments on what you heard - any observations, any further final comments that you'd like to leave us with? Patrick?

Patrick Rey:

Thank you. This is exactly why this kind of initiative is really important, and it's important for us academics. Can be, I hope it's useful on the other side as well, but very well done. Two and a half points: the dynamic innovation - I agree. I had this paper with Marie-Laure Allain and Claire Chambolle. <...> It's on vertical mergers. It's the idea of vertical mergers and the hold-up problem. It was well known in the literature, that vertical mergers can look at a solution to the holdup problem. The holdup problem is that you will you innovate and then your partner will call you up and ask for bigger share of the pie. And anticipating this, the innovation is discouraged. You put the two partners under the same roof, vertical merger, problem solved. In this webinar, we emphasize that it might be a solution for the merging parties but it may well create an exacerbation of the concerns for the <wider group>. So indeed - look at the GPS saga. So when Garmin, the main challenger of TomTom handheld GPS devices, who was learning that Garmin was going to be integrated with one of the two providers of digital maps, whenever I come up with an idea for innovation, I need to go to the map provider in order to implement it. And then you know what the innovations is about and so on. And so now that the map provider is vertically integrated with my rival, I cannot do that anymore. No, it's impossible, they would manage to implement innovation before I get to market. And this was in the hands of the remaining alternative provider that is going to discourage the innovations. So it was we developed a formula that captures the situation and confirmed the intuition. I would expect it to be transportable in the context of complement mergers, where you have different complements in the system and we shall have some integration among the complement providers, The incentive to help support innovations from other providers or other complement providers is probably going to be significantly affected. So I think that may provide some kind of analytical framework for this kind of concern that was raised by several of you.

On capability I understand, you know, I fully agree that capability matters, and the more capability you have the more levers you have. But that will not necessarily eliminate the need for having a story. In particular, if the reason why we want to be tough is based on the presumption - the presumption has to be based on past experience. So I can't say no, we shouldn't look at the past, we should look at the future - we can look at the past, you know, saying how was the future? Looking back then and so on and if we have taken another decision. And so forth. If there is a presumption, it mustn't be because we have seen in the past that mean bad things happen time and time again. So we should have an idea of the kind of story that is likely to work. So I believe, I would maintain, some neutral story that of course, you know, a lot can be adjusted. I'm not against it, enforcing some laws of scholarship. Maybe Hans' suggestion was a bit extreme? But I'm certainly open to kind of precautionary principle. Hans, on the last scenario that you mentioned, I think your paper might show us this was precisely capturing the financial issue, the need to innovate in both markets.

Cristina Caffarra:

Thank you so much, Patrick. Feng - two minutes.

Feng Zhu:

Thank you so much. And I really love the discussion around the capabilities just like what Patrick said, and I completely agree that as companies having a bigger ecosystem, then there are multiple levers, you can pull. And just to kind of build on, kind of a point that Patrick just mentioned that it might still be useful to have a story, right, telling people how exactly these different levers may create some kind of competitive advantage or raise rival's cost.

I think, one way to think about it is to apply some of the thinkings, like in the business literature called the first principles thinking, in the sense, that if you're looking at a particular industry, given the industry, you can always ask yourself, like, what are the fundamental forces that drives competitive advantage in your industry. These fundamental forces tend to kind of be quite stable,

So, places in the retail industry, it's all about the cost efficiency, variety, customer experience, In the retail industry. So, you could ask yourself, like, okay, given all these capabilities, how do you drive like a gain competitive advantage in these fundamental forces, And even if like, for instance, we don't know the right business models for driverless vehicles, for instance, But we could also imagine that we are in the driver's world, what would be the fundamental driving forces, right, in that world, So, it's going to be like most like a customer experience like when they are in the car, A car, the variety will come down to be the user's real cost, the cost of using these vehicles,

All these factors, right, could also drive our thinking about, like, for instance, like, how companies can gain competitive advantage in kind of gaining their affinity, their ability to deliver this content, and also how fast the content can be delivered. All these things, So, there could be like some first principles thinking that can help us make a build reasonable stories to argue whether this is triggering some competitive concerns or not. But and also related to that, is also the idea that, okay, you are acquiring different data, datasets where you do the merger and acquisition.

And even though sometimes it's actually very difficult to accurately measure the additional gain from this data, there are actually some useful frameworks we could think about, okay, where you combine these kind of different datasets together and how much the additional value you could get, right, all of

this combined data sets in thinking about for instance, or whether they're reasonable substitutes for similar data set, and how faster this data may perish right over time. And how much like this data is enabling learning about the individual user or learning across users, which may generate greater the kind of impact or lobbying for the whole network,

So, there are some useful frameworks at least can help us kind of understand that the value of gaining additional data right similarly about value, okay, additional users.

Cristina Caffarra:

Last Word to Annabelle, please take us away, and then we'll wrap up.

Annabelle Gower:

Okay, so I'll make it very short, I thought it was incredibly valuable to hear from the enforcers. And, for example, Mike's point about how simplified you know, that question about harms, we don't have to try to find anti new types of harms, you know, raising revenue cost and raising barriers to entry. This is the harms that we're looking at. I thought it was very insightful to remind us of the applications barrier to entry with Microsoft. Another point, which I think is really important is the way I've heard about dynamic competition and the future. And, therefore, in particular, whether an acquisition is going to limit the path of future innovation. So I think for us academic, there is an important area of work to do here, which is, how can we find ways to, to get better at answering this question? How can we tell whether an acquisition will indeed limit the path of future innovation? I'd like to finish on perhaps a provocative note, which often people say, you know, innovation is, you know, necessity is the mother of invention. And what seems to be preventing something from happening sometime, you know, opens up new doors, so I'm not sure I'm not sure we do have today, the capabilities to really predict what could limit the path for future innovation. We have one, I think, one dimension, which has to do with opening up interfaces, or making sure that multi homing is possible. But it will mean that interoperability is possible that I see that at least one first way in which we can make sure that potential third party integrators can access some resources. But I think we can probably do better than that in the future.

Cristina Caffarra:

So we are at time, I will hand over to Tommaso to wrap up, finally. But let me on my own behalf thank you all. I think this was an incredible discussion. And I think it is exactly an illustration of why we have RPN because these discussions don't happen often. The regulators and enforces having absolutely the ability to lay out there, what it is that they're confronted with and how they're thinking about things and academics trying to take it on board. So, this is the nature of the discussion we want to facilitate. And we are going to be writing this up I'm sure in in the coming days. Thank you all from my side, I thought it was very insightful Tommaso over to you.

Tommaso Valletti:

Thank you. Thank you, Cristina. Thank you, everybody, as well as for very refreshing discussion. That is lots of ideas I'm sure that many of you had. We'll just conclude by saying thanks again. I will also put in a plug for the CPR RPN on competition policy. We will put there also the recording of this event. If you go back we did one on inflation and corporate greed back in July that generated lots of interest before tha

on e-commerce platform, on the privacy and given that there is a lot of response from you guys in the audience, I think I can just say watch this space for the next one.

Cristina Caffarra:

Thanks again everyone. Bye.