June 9, 2015 Workshop Transcript

The “Sharing” Economy:
Issues Facing Platforms, Participants, and Regulators

Hosted by the Federal Trade Commission

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FTC Conference Center
400 Seventh Street, SW
Washington, DC 20024

[START OF WORKSHOP]

WELCOME REMARKS AND ANNOUNCEMENTS

- **William F. Adkinson, Jr., Attorney Advisor, Office of Policy Planning, Federal Trade Commission**

WILLIAM ADKINSON: Good morning. Thanks very much for coming to our workshop. We'd appreciate it if people could find a seat now so we can get started on time.

Great. Thanks very much. On behalf of my colleagues at the Federal Trade Commission, I'm delighted to welcome you to the workshop, The "Sharing Economy": Issues Facing Platforms, Participants, and Regulators. My name is Bill Adkinson, and I'm an attorney adviser at the FTC's Office of Policy Planning.

As previously announced, this workshop will examine competition, consumer protection, and economic issues arising in the sharing economy. We are excited about a high level of interest in this workshop. We believe we have a terrific roster of speakers. And it looks like we have a great audience, as well. Thanks for coming to this workshop in person today.

We're also glad to be able to provide a live webcast. Greetings to everyone who is watching on the webcast. And thank you to our tech team. We will make the webcast and all the workshop materials available online to create a lasting record for everyone interested in these important issues.

There are many people who have made this workshop possible. But I'd like to offer a special thank-you to our speakers, who you all came to see today. I would also like to remind everyone that the public record for this proceeding will remain open through August 2015. It's August 4, 2015. We already have over 1,800 comments. And we encourage interested parties to continue to submit public comments, especially in response to the workshop discussion.

Before we get started today with our substantive program, I need to review a few administrative details. Please silence any mobile phones and other electronic devices. If you must use them during the workshop, please be respectful of the speakers and your fellow audience members. Please be aware that, if you leave the Constitution Center building during the workshop, you will have to go back through security screening again. Please bear this in mind and plan ahead, especially if you're participating on a panel, so we can do our best to remain on schedule.

Most of you received a lanyard with a plastic FTC event-security badge. We reuse these for multiple events. So when you leave for the day, please return your badge to event staff.

If an emergency occurs that requires you to leave the conference center but remain in the building, please follow the instructions provided over the building PA system. If an emergency occurs that requires the evacuation of the building, an alarm will sound. Everyone should leave the building in an orderly manner through the 7th Street exit. After leaving the building, turn left and proceed down 7th Street, across E Street, to the FTC emergency assembly area. Remain in the assembly area until instructed to return to the building.

If you notice any suspicious activity, please alert building security. Please be advised that this event may be photographed, webcast, or recorded. By participating in this event, you are agreeing that your image, or anything that you say or submit, may be posted indefinitely at the ftc.gov website or on one of the commission's publicly available social-media sites.

The restrooms are just down the hall, outside the auditorium. Lunch is on your own today. The Plaza East cafeteria is located inside the building, so you can use it without going through security again. It is open from now until 11:00 and from 11:30 to 2:30. Unfortunately, we have limited ability to provide refreshments, but we do have coffee available just outside the room.

I also have a couple of items regarding our use of webcasting and social media and our question-and-answer process. We've done our best to get speaker materials loaded ahead of time so that they will be available to webcast viewers. If materials are not accessible during the webcast, we will post them as soon as possible following the workshop.

For those of you on Twitter, FTC staff will be live-tweeting today's workshop at #sharingeconomy. We have comment cards available here in the conference room. And audience members will be able to submit questions or comments for each panel. During each session, workshop staff will collect cards and bring them up to the moderators.

We will also monitor Twitter and our workshop email account for additional questions that may be submitted. Time permitting, moderators will select some questions for the panelists. It's very unlikely we'll get all the questions during the workshop, but we certainly will review them after the workshop, as we continue our research in this area. So we encourage you to submit questions and comments. If anyone has questions throughout the day, please feel free to ask any of the conference staff, including our great paralegal helpers at the registration desk.

And now that the preliminaries are complete, to open today's workshop I'm delighted to introduce Marina Lao, who is the director of the Office of Policy Planning at the FTC, serving since February 2015. She's on leave from her position as professor of law at Seton Hall University School of Law. Her scholarship focuses on various aspects of antitrust enforcement.

She has previously served as a member of the advisory board of the American Antitrust Institute and as chair of the Section of Antitrust and Economic Regulation of the Association of American Law Schools. Director Lao has taken an active interest in issues surrounding the sharing economy, even before joining the FTC, and she played a leading role in organizing this workshop. Please join me in welcoming Director Marina Lao.

[APPLAUSE]

OPENING REMARKS: SHARING SOME THOUGHTS ON THE "SHARING" ECONOMY

- **Maureen Ohlhausen, Commissioner, Federal Trade Commission**

MARINA LAO: Thank you, Bill. Good morning, everyone. Team leaders of projects such as this are usually the ones thanking everyone at the end. And they often do not get publicly thanked themselves. So before I turn to my introduction to Commissioner Ohlhausen, I'd just like to briefly thank Bill Adkinson and Julie Goshorn, who are the two co-leads of this workshop, for their leadership and their tireless work on this project. And of course to the entire team, as well. But they'll be thanked later on.

And now it is my very great pleasure to introduce and welcome Commissioner Maureen Ohlhausen of the Federal Trade Commission, who will offer some opening remarks to kick off today's workshop. Commissioner Ohlhausen was sworn in as a commissioner in 2012 to a term that expires in September 2018. For a few years prior to her appointment, Commissioner Ohlhausen was a partner at Wilkinson, Barker, & Knauer. Before that, she had been with the agency for many years, since 1997.

Her most recent service at the agency, before her employment as commissioner, was as the director of the FTC's Office of Policy Planning, or OPP, as it's generally called. While she headed OPP, commissioner Ohlhausen led the FTC's Internet Access task force, as well as its work on barriers to e-commerce. Because of her past tenure as OPP's director, Commissioner Ohlhausen has unparalleled understanding of the work of OPP—my office—and has given our office her unstinting support, for which we are most grateful. And as the current director of OPP I cannot thank Commissioner enough for all of your support.

Before coming to the FTC, Commissioner Ohlhausen clerked on the U.S. Court of Appeals for the D.C. Circuit, where she also served as a staff attorney for a few years. Commissioner Ohlhausen was on the adjunct faculty at George Mason University School of Law, where she taught privacy law and unfair trade practices. She also served as a senior editor of the Antitrust Law Journal and has published a variety of articles on competition laws, privacy, and technology matters. We are delighted to have her open the workshop today. Please join me in welcoming Commissioner Ohlhausen.

[APPLAUSE]

MAUREEN OHLHAUSEN: Thank you so much. That was a lovely introduction. Well, I'm delighted to be here today to help open the FTC's workshop on the Sharing Economy. First, I want to thank all the participants for coming to Washington to share their views with us.

And I also want to thank the staff for their considerable effort in organizing this workshop. As Marina noted, in one of my past lives, as the head of the FTC's Office of Policy Planning, I put together several workshops. So I know how much work and effort and time went into this. So I very much appreciate it. Now although they always make me say that my remarks are offered only on my own behalf and not on behalf of the entire commission, I'm sure I can recklessly disregard that admonition when it comes to thanking the staff for all their hard work that I know went into convening today's program.

I'd like to start by taking a brief moment to put today's workshop into a broader context. When people think about the FTC, to the extent that they think about our little agency at all, they tend to focus on the things that we do that end up in the newspapers. Our enforcement docket tends to draw the most attention from the press. And it can make for exciting headlines when the commission initiates antitrust litigation against a major company or we move aggressively against some fraudulent actor that ripped off consumers.

Now there's nothing wrong with that press dynamic. But it may give outsiders a somewhat inaccurate understanding of our mission. Yes, we do vigorously enforce the laws that protect consumers and competition in appropriate circumstances. But the FTC is so much more than a law-enforcement agency.

We are also advocates for consumers in all sorts of ways that never see the inside of a courtroom. For example, we do competition advocacy and outreach to policymakers across all levels of government. We undertake important research that others could not accomplish. And we educate consumers directly. Our actual mandate is to protect consumers and competition. And there are many ways to accomplish those goals. And I view all of these activities as a critical part of our mission.

In the past, we've looked at the nettlesome public-policy issues in such diverse industries as real estate, contact lenses, and even wine wholesaling. While it is true that some of those efforts later led to some investigations and even a few enforcement actions, I want to assure you that we did not convene today's workshop as a prelude to some planned, big, enforcement push in this space. Rather, I see this workshop as an important part of our broader responsibility to advocate for the interests of consumers, using the full panoply of our tools and expertise.

Particularly in an area like this, where many of the key issues are playing out at the state and local level, we need to tailor our approach to the facts on the ground. And I'm going to repeat myself, here, because I really cannot stress this enough. Interest in new developments in the economy by the FTC does not automatically portend a flurry of future enforcement actions. So for all of the various industry participants in the audience, I want you to understand that your relationship with the FTC need not be an adversarial one. In fact, you may find us a valuable ally in situations where your private interests and our broader public-mission interest intersect.

For example, we regularly provide written guidance and commentary to state legislators in appropriate circumstances. Upon request from a legislator, we can and frequently do provide neutral, unbiased analysis of the likely economic impact of pending legislation. Such analysis can carry a level of credibility that private, self-interested advocacy will never achieve.

That said, just as we strive to make sure we get it right in our enforcement docket, we apply the same rigorous analysis to our use of other tools. We want to hear from all sides whenever we evaluate contentious issues. And we want to understand the market dynamics, possible consumer-protection issues, and economics, whenever we consider weighing in on a specific public-policy question.

It is against this broader background that today's workshop was convened. So, turning now to the topic that brought us all here this morning, I want to say just a few brief words about the sharing economy.

First, as a lifelong advocate for the beneficial effects of competition, I see the rise of the sharing economy as yet another example of how free markets have the potential to introduce transformative change.

When entrepreneurs are free to innovate and compete, sometimes they will succeed, and sometimes they will fail. But over time, the repeated process of experimentation, adaptation, and revision creates meaningful improvement in all of our lives. The sharing economy is causing new business models to be created, and some of those models may ultimately upend existing businesses.

While the particulars may differ, the core of what is happening here is a very old story. The economist Joseph Schumpeter was talking about the value of creative destruction way back in the early 1940s. Change has always been part of free-market capitalism, and it always will be.

Now change is always hard. Even the most beneficial changes can cause short-term dislocations and damage to those deeply invested in the older order. Yet the potential social value of disruptive innovation is no less true today than it was in Schumpeter's time.

For example, there are already some suggestions that the rise of the sharing economy may have disproportionately positive effects on less affluent consumers over the long term. The ability to effectively rent, rather than buy, expensive goods, or to partially defray the cost of ownership through facilitated sharing, may be most valued by consumers that cannot afford to buy those same items outright. While it is still early days, at this point, these potential effects illustrate how disruptive innovation can often bring meaningful change to people's lives.

Now, to be clear, I am neither an advocate nor a detractor of any particular business model. Whether these new businesses will soon spur a major reordering of certain segments of the economy or if they fall short of those lofty goals should not be our principal concern here. At the end of the day, it is not for us in government to pick the winners and losers in the marketplace.

I would also note that just as government should not directly decide how future competition should unfold, so too is it inappropriate for existing competitors to exercise control over the firms they compete with. In all too many situations, we at the FTC encounter these “brother may I” scenarios. And this situation occurs when a new competitor effectively has to request permission from the incumbent firms to enter the market. Whether through effective control of state regulatory boards or by obtaining protectionist legislation, incumbent firms can place themselves in a position to determine who they will compete with.

Whether the state picks winners or losers itself or effectively delegates that role to self-interested actors makes little difference. Either way, consumers pay the price for actions that favor narrow special interests over the broader public good. The sharing economy, pitting a number of long-established business models against aggressive new entrants, appears a particularly fertile ground for such mischief.

But let me be clear where I stand. The evolution of markets should be driven by consumer demand, rather than artificial regulatory preferences for one business model over another. Misguided government regulation can be the barrier to innovation that never falls. So regulators should tread carefully, particularly when considering hypothetical, rather than demonstrated, consumer harm.

While these abstract goals may be easy to articulate, they immediately raise a number of complex and challenging public-policy questions. For example, assuming these new business models may benefit consumers, how can regulators provide a regulatory framework with enough flexibility to allow them to realize their full potential? Do existing regulatory rubrics need to be reworked, or even abandoned, due to these developments? How do we also ensure that these same new business models don’t inadvertently erode beneficial, existing consumer protections in such diverse areas as privacy, data security, health, and safety?

Can the trust mechanisms built into some of these new business models replace regulation? If so, where? How do we best avoid creating two distinct regulatory tracks, with one set of rules for the older, incumbent businesses and a different set of rules for the new entrants they now increasingly compete against? I’d suggest that picking winners by creating a regulatory differential in favor of new entrants should be just as undesirable as retaining regulations that deter meaningful entry. How should regulators appropriately respond to a highly dynamic market where the business models of today may be completely transformed tomorrow?

Now these are all hard questions that defy simple answers. And I do not imagine that we'll resolve any of these high-level issues or the myriad subsidiary concerns they implicate, today. However, today's panels bring together a diverse group of stakeholders and academics to jointly discuss these challenging topics. And that interchange and cross-fertilization can only help to bring us all a bit closer to the nuanced understanding we will need in the future.

Now fortunately the FTC is uniquely situated to help facilitate interchange and dialogue on this important topic. And as I've said in the past, there are useful synergies created by putting both competition expertise and consumer-protection expertise under one roof. And today's topic is a perfect example of the ways in which our two core competencies intersect.

The rise of the sharing economy implicates both our consumer-protection and competition expertise. So there really is no better place to have a detailed discussion of these issues. So thank you all again for coming, and I'm sure this is going to be a very interesting day.

[APPLAUSE]

FRAMING PRESENTATION: THE ECONOMICS OF PEER-TO-PEER INTERNET MARKETS

- **Liran Einav, Professor, Department of Economics, Stanford University**

NATHAN WILSON: Good morning. My name is Nathan Wilson, and I'm a staff economist here at the FTC. And it is my very great pleasure to be introducing our first invited panelist, who will be giving an introductory set of remarks framing the presentation on the sharing economy. And that will be given by Professor Liran Einav, who's a professor of economics at Stanford University and a research associate in the National Bureau of Economic Research, where he is co-directing the Insurance Working Group. Thank you very much.

LIRAN EINAV: Thanks a lot for having me. Thanks a lot for organizing this day. So my mandate is to spend the next 15 minutes, and maybe a little bit more, to steal from my own panel participation later, to kind of give some sort of overview of why we are here today.

So let me start with, I think, just following up on the Commissioner's point. This is evolutions in markets. I think some of us who've traveled in the world remember kind of, you know, rickshaws in India and the floating markets in Thailand – a less-organized market that might be fun for tourists but as participants on a daily basis might not be the most efficient market.

So, you know, better markets. Now we go to shopping malls or go to a taxicab line to find better ways to find what we need for both sides. And I think that the sharing economy is the natural next step in the evolution of markets, where we don't need to go anywhere to get a cab or to find what we need in the shopping mall. We can just kind of sit in front of a computer and find our right match, and in a much more convenient way. So at some level, it calls for a new discussion of how it's going to change the way we think about markets, given that it's sort of the new generation of many regular markets.

You look in the internet. These sharing markets are basically growing like crazy. So we see here, the peer-to-peer lending, that's Prosper and Lending Club. We see Airbnb. We see eBay. Everything is going up like crazy. And this is something that is presumably going to keep rising up.

And one may ask, what makes these markets so successful? And I would think there are three different reasons that these markets are growing so much. One is basically you take regular markets. They exist already, but they have existed very locally. So there were two things.

So if you think about the market for collectibles or the market for used baby items. You know, if you were in a small town, there are so many people selling used baby items or collectibles so to find exactly what you need is very difficult. But once you take the same local markets and just merge all local markets into one internet market, suddenly these markets have much more matches between buyers and sellers.

So the second way that these markets grow is really creating new markets. These are not markets that existed before. If you think about finding someone who is going to do your shopping for you, or sharing rides, or getting someone to put together your Ikea furniture or walking your dog, that's something that you didn't have a market for. You were doing it yourself. And suddenly now you have the opportunity to find someone who is a willing labor supplier to do this stuff for you. And then you can find a useful transactional or efficient production that, before, we just never even imagined that we would be able to transact.

And then the third way in which these markets are growing and generating more business is really replacing or expanding existing markets. If you think about Airbnb and Uber or Prosper and Lending Club, these are markets that – they're not new. You know, Airbnb is partly expanding the hotel industry, partly replacing the hotel industry. Uber is the same with taxicabs. And Prosper and Lending Club are trying to kind of replace, to some extent, and expand credit and investment.

And again, the internet allows us to create new opportunities from transactions, or to overcome some of the limitation of the traditional markets. And how they do this? So what's the value that's being created?

So one value is the idea of using technology to facilitate better matching of sellers and buyers. The idea of big data. You know, there are many potential sellers out there. I need something particular, but now, with big data and more information technology, we can find this kind of potential match that previously was very difficult.

The idea of mobile technology. The idea that—I need a cab, right now, here, and nobody knows where I am. But now, with mobile technology, I know where the cabs are, and I know where I am and where I need to go. You can find this kind of transaction much more efficiently.

Another reason that their value creation here is basically just cutting costs by eliminating intermediation. We don't need different market makers to generate this kind of match between buyers and sellers and then, in the process, cut some commissions and raise prices. Now we can do this much more directly by having direct peer-to-peer interaction. And that makes things kind of cheaper and more efficient.

A third reason. We bypass regulation, whether it's good regulation or bad regulation. I just came in this morning from Dulles, talking to the cab drivers on the way in. Basically, it turns out that about 75% of the time he's coming back from the city to Dulles empty, because he's not allowed to pick passengers, most of the time. This seems like, from an economic perspective, kind inefficient. And something like Uber—one reason they're generating business is because they have the cabs going back and forth, always full, without actually having these kind of empty drives.

Sometimes there are neutral regulations that exist. Prosper, for example. At some point, it expanded the peer-to-peer lending market because they found a way to overcome usury laws that were very different across different states.

So in Pennsylvania, a customer who could only borrow at 6% interest rate suddenly could go transactions through a YouTube bank, where the usury law allows them to get a cash loan for, like, 36% interest rate. Whether we like it or not, it wasn't totally clear that this is good or bad regulation. But suddenly we can overcome this kind of differential regulation to generate more potential transactions.

And I could imagine that sometimes these type of businesses could also kind of generate value or distract value by bypassing "good" regulation that—by violating zoning laws and stuff like that that sort of maybe are not so desirable. And that's exactly why we're here today, to think about this type of things and how they go forward.

The last one that generates for value creation in this sharing economy is less kind of replacement. But basically, the idea is, if you think about many industries that are kind of "traditional" industries, if you think about hotels or taxicabs, they are dedicated resources that have fairly high fixed cost. To build, like, a hotel chain, it takes a lot of investment and big capital. And then you can basically turn over the rooms very cheaply, with really low variable cost.

If you think about the sharing economy, this is—the fixed cost is actually almost nothing. I just basically—I don't need to invest anything in having a room in my house that I rent out. But the variable costs are probably higher, because it's not dedicated resources. I need to do certain things.

So for certain transactions, this is really good. It's really useful when you have really sharp changes in demand for this type of services. And then we need to suddenly supply three or four times more hotel rooms or more taxi drives.

And suddenly we have this kind of available resources that can transform themselves to become sort of supply for this type of business, very flexibly and very immediately. And that's something that basically the more traditional kind of markets find it more difficult to adjust to. So the flexibility of these internet markets is another way by which we generate value.

What makes it work? So how do we make these things happen? There are basically three components that I think we need to think about, when we think about how these markets operate – what makes them work well.

One is levers of market institutions. How we search and match between buyers and sellers, the pricing strategies of different processes, and then trust and reputation that allows credible transactions and not—you know, get around sort of safety consideration and things like that.

The second aspect is various forms of market evolution. You see many of the platforms. They need to kind of think about network effects. If you just get all the buyers to come in and no sellers come in, the buyers are not going to find any match. If you get all the sellers to come and no buyers are on the platform, the sellers are not going to be able to sell anything. So you need to have some sort of scale economies and balanced growth to make things work.

Then basically what happens is, over time, as the platform grows, what gets transacted changes, and how, and by whom. Suddenly the sellers are moving from becoming, like, peer-to-peer sellers to more professional sellers. And you see the evolution—not only evolution from traditional markets to sharing-economy market, but also, within sharing economy, you see a lot of patterns where the market starts off kind of as random people matched together. But as they mature, you see much more professional services operating on the sharing economy. And it becomes much more of a traditional market. And standardization. Basically, the market ends up maturing.

The third aspect of it is things that are—you know, the markets find their way to get around certain types of markets risks and externalities. This one I'm not going to talk about. This is going to be covered mostly in the afternoon.

So let me just go in a little bit more detail to frame the next few panels. If we talk about market institution and platform design, the basic problem is to facilitate search and matching when people have very heterogeneous preferences and the set of products is really large, diverse, and—probably the most important word here is—unstructured. We cannot actually look for a particular sort of catalog number that tells us exactly what it is. So we need to somehow find what we want, in a fairly unstructured marketplace.

And the markets can be thin in very different ways. Either because in eBay there are tons of different things. It's hard to categorize them. So we need to find a way to find what we want without having a particular catalog that tells us what the product that are available.

In Uber, it's the case where we need a cab right now, in a particular location, in a particular time. So now the market is thin in terms of both the location and the time dimension.

Also TaskRabbit—this is a marketplace for local chores. And I need someone to do my grocery shopping or build my Ikea furniture that I bought. And I need it tomorrow at 10:00 AM, because this is when I get it. And you need to find someone who's going to deliver this kind of potential labor supply at a very particular time.

So these are all thin markets. And just by getting a lot of people from both sides of the market, you can find a way to create matches. And from the platform perspective, the different kinds of friction you try to solve. So one is try to solve search issues. Buyers know what they want, but they can't really find it, because the market is too unstructured. You need to help them find it by having, like, really good search technology that finds what you're searching for and find potential sellers.

You need to deal with congestion in a market. All of us want this amazing sort of Airbnb property, but only one of us can book it for a given weekend. So we need to find a way through to get around the fact that everybody is going to try to book the same thing and in the process basically are going to get nothing else.

And the third thing is the case where people actually don't know what they want. They're on the platform, they want to buy something, but what exactly they want, it's hard for them to exactly define. So the platform is in the business of guiding people, not only to find what they want, but also to figure out what it is that they might be wanting. And this is also part of the platform role.

The second part of the platform to think about is pricing. How do we create the transactions? And there are two distinct roles of the platform. One is to define what it is—the transactable unit. Sometimes it's obvious. It's a, you know, taxi drive. Sometimes it's less obvious, when you're thinking about some kind of labor-supply type of transactions.

And the second role of the platform is to think about, once we know what we want to transact, how we are going to find the price. Is it going to be just a fixed price, or an auction, or some other mechanism that sets the terms of trade? In the process of transactable unit, what is a product?

So these are often, in many of these platforms, a trade-off. If you define the product too narrowly, then basically it's hard to search for other products, because you're already in a page where it defines only the things that are very narrow, and it doesn't let you search for things that are similar. If you define too coarse, then it's hard to compare kind of product, because we see unstructured spaces of different products that are kind of similar to each other but vary in so many dimensions that it's hard to compare and contrast.

So in TaskRabbit or oDesk, these are platforms that, over time, they ended up—they initially priced everything by task. It created stuff to be too narrow. And now they're pricing things, basically, by the hour. In advertising, they started by pricing ads by impression. And then they moved to price ads by clicks, so by convergence. So slowly, you see evolution in many of these markets, in the way they define a product that is transactable.

The other aspect in the pricing is the internet facilitates a wide range of pricing mechanism, from auctions to dynamic pricing to posted prices to different risk [INAUDIBLE] on lending sites. And there's a common trade-off between—on one hand, you want it to be really efficient. You want to have—exactly every trade is going to get exactly the right price through some sort of sophisticated pricing mechanism.

On the other hand, the more sophisticated the pricing mechanism is, then the more likely it's going to involve a lot of action on both sides of the transaction to reach to this right price. So it's some sort of trade-off between making things easy and maybe slightly less efficient, versus making things very sophisticated but creating extra inconvenience, in terms of getting to the right price. And different platforms ended up solving it in different directions, depending on the particular transaction.

Finally, in terms of trust and reputation, transactions need to be safe. That's probably—it's hard to imagine these markets operating without a certain level of trust in the other side of the market. The early concern was that asymmetric information between buyers and sellers, in terms of quality, reliability, delivery, is going to be really much more difficult in internet market than in traditional market. Everything is going to happen without seeing and touching the other side of the transaction.

And what that every platform basically needs to think about—and it's going to be the topic of the second panel today—is different ways of running a reputation and review system. You know, you can have a reputation system. You can have grouping, like in oDesk—you basically have agencies that are kind of creating small firms. You can think of diversification strategies in lending sites that allow you to avoid bad experiences, because you are diversified and you are lending to multiple borrowers at the same time.

Or you can have the platform coming in and offering kind of platform guarantees. And this part of it has a lot of design issues. You know, do you want to do one-sided versus two-sided reviews, anonymous versus less anonymous? Who is eligible to post reviews? A lot of the market-design aspect of the platform are about these particular reputation systems.

One thing that we'll see, probably, in the panel today, is a lot of discussion about what can work better for a reputation system. The one thing I would say right now is that, on one hand, a lot of economists are worried about different inefficiencies of these reputation systems. On the other hand, all these markets will probably not work well if the reputation system was really bad. I mean, these markets would have no existence if I didn't trust the other side. So at some level the current reputation system, even though they're imperfect, are probably doing a decent enough job just to make these kind of markets grow as much as they do.

Then one last thing I want to talk about is market evolution. Platform problem is a bit different early and later. Initially, when a platform starts off, you have thin markets on both sides. You don't have that many buyers. You don't have that many sellers. A little bit of a bad experience might make people kind of drop off.

Later, when the market matures, then basically this is where the problem is different. Now, suddenly, people are not dropping off. An eBay seller is going to stay on eBay and sell on eBay. An eBay buyer is going to stay on eBay and buy on eBay. And most of the frictions are going to be in the intensive rather than the extensive margins. And it's also, if you think about optimal regulation, it might suggest for the same reason that regulating a market early on versus later might have very different things to think about.

Then just to conclude. So these markets are going to take over our lives, whether we like it or not. It's going to become more and more important and more and more part of your daily routine—either yours or your friends' or your family. And it's in early stage. And one thing I should say—we can say a lot of stuff today – but in 10 years—I guess everything is getting recorded, and we are going to see this video, 10 years from today. And we can go back and ask, you know, how much of the statements we heard today ended up to be half right?

One thing—you can go back to the early days of the internet. This is from 2000, from The Economist. And they talked about how the internet is going to completely transform markets, and every transaction is going to be priced in a very granular and sophisticated way.

If you look at the internet today, actually it has nothing to do with what this quote from The Economist looks like. Most of the internet is basically like just big shopping malls, where—you go to Amazon, or even today, you go to eBay. Mostly things are kind of priced at fixed prices, and you just shop just like you are in a shopping mall. No auctions as much, and no kind of sophisticated pricing as much, in many of these platform markets.

So it just shows you that when we think about markets early on, we think a lot of stuff. But they just end up having lives of their own and develop not necessarily in expected ways. So if I had to come up with a prediction, maybe 40% of what we'll say today will end up true. But one thing that I think I learned is that things don't have to be right in order to be interesting. So I'm going to look forward to having a fun day. Thank you very much.

[APPLAUSE]

PANEL 1: SHARING ECONOMY PLATFORMS: MARKET DESIGN AND MARKET STRUCTURE

Panelists:

- **Liran Einav, Professor, Department of Economics, Stanford University**
- **Chiara Farronato, Assistant Professor of Business of Administration, Harvard Business School (Fall, 2015)**
- **Joshua Gans, Professor of Strategic Management, Rotman School of Management, University of Toronto**
- **Glen Weyl, Senior Researcher, Microsoft Research; on leave, Department of Economics, University of Chicago**

Moderator:

- **Nathan Wilson, Economist, Bureau of Economics, Federal Trade Commission**

NATHAN WILSON: Good morning. I remain Nathan Wilson, a staff economist here at the FTC. And it is my great pleasure to be moderating the first panel of this workshop, which is entitled “Sharing Economy Platforms: Market Design and Market Structure.”

Joining me is an impressive group of panelists who have spent considerable time contemplating these issues. In addition to Liran, who has already been introduced, they are Glen Weyl, who is a senior researcher at Microsoft Research’s New England lab. Weyl is on leave from the University of Chicago, where he is an assistant professor of Economics and Law.

Chiara Farronato, joining us remotely, who will be joining Harvard Business School as an assistant professor in the Technology and Operations Management Unit. And Joshua Gans, who is professor of strategic management and holder of the Jeffrey S. Skoll Chair of Technical Innovation and Entrepreneurship at the Rotman School of Management, University of Toronto. In addition, Joshua was appointed in 2012 as the research associate of the NBER Productivity, Innovation, and Entrepreneurship program.

In the preceding discussion by Dr. Einav, we were introduced to the underlying fundamentals of what is coming to be called the “sharing economy.” We also learned a bit about how and why these platforms have grown in prominence in recent years, as well as some of the challenges they have met and continue to face. On this panel, we will dig deeper into these issues, emphasizing the lessons contained in an increasingly rich economic literature on the subject. We will also consider how and where shifts to either demand or supply may cause platforms to evolve. Finally, we will think about the long-run importance of these platforms and how policymakers and practitioners should think about them.

Beginning with Glen, we'll hear from each of our remaining panelists about what their own research and thinking on the sharing economy, and platform economies in general, has to say about these issues. After which, we'll circle back to drill deeper into the topics they have introduced.

GLEN WEYL: Thanks so much, Nathan. And thanks to everyone for being here. So my research really comes at these issues related to the sharing economy from the broader and much older literature about network effects, which are, as Liran emphasized, an important part of these types of markets.

Those network effects matter both within a particular geographic market—if you think about Uber, when it first enters a city, it's usually quite thin. It takes a while to get a cab. And they're also true across markets.

So when one of these services first develops, it's usually only available in one or two cities. And therefore people are often unwilling to learn the system, if they can't use it when they're traveling. And the relative importance of those two sort of cross-market, or within-market, geographically, dimensions of network effects differs, depending on what types of services you're talking about. For something like Angie's List, it's much more important to get coverage within a market. For services like Yelp, which isn't exactly a sharing-economy service, but part of this general internet platform area, people are very mobile, and coverage across markets is very important.

And the firms in these markets have traditionally been thought to have a hard time entering, as a result of these network effects. People often talk about a chicken-and-egg problem, where without getting enough buyers you can't attract the sellers, and vice versa. But there've been some pretty creative strategies. And I think Uber has probably been the most successful in implementing these to try to overcome these problems by, when the company first enters a market, charging very low prices for initial rides to get up a rider base, for example, and giving full pass-through, initially, to drivers as they get inducted into the system.

And then eventually, as the system matures, riders face higher prices in compensation for lower waiting times, as the system matures.

So these types of strategies, which are not just, as we often hear about in the media, dynamic within a week but dynamic over the long course of the development of a platform, can be very useful in allowing firms to enter. And they can overcome a lot of the concerns that regulators have often had, that these markets tend to consolidate around a dominant platform that then is sort of immune from potential future entry.

And in fact they can create, in some ways, opposite regulatory problems. Precisely because these strategies allow for such rapid growth of new services, there can be an excessive incentive for firms to enter the market, try to grab some fraction of what has become quite lucrative markets, and in the process actually break up a lot of the benefits that come to consumers from having a thick market. By creating this sort of excess fragmentation, the value of the services can actually be undermined. Not only is there too much waste on developing facilities, but there can also be reduction in the quality of the service to consumers if markets become overly thin.

And while competition for the marketplace—competition to be the best service—is obviously crucial to making these services work, fragmentation within the market is not necessarily desirable and, in fact, in many cases, can be overprovided. And I think one interesting aspect this ends up implying is that a natural dynamic, and perhaps a desirable dynamic, of these markets is for one firm to come to really dominate a whole service category. And as such, a primary role they end up taking on is not the supplier of a service, individually, but rather a regulator of a whole area of the economy.

I guess I'm running out of time much more quickly than I expected. Nathan, would you mind, given that we're a little bit short on people, if I just take a couple of minutes?

NATHAN WILSON: Sure, sure.

GLEN WEYL: OK, thanks. So these services like Uber and Airbnb—through these reputational mechanisms that Liran was discussing, and that we'll talk about later, really become, I think, not competitors to other driving services or other hotels as much as they become competing forms of regulation. So in some ways, they actually compete with the local governments that traditionally regulate these services, rather than competing with the people within the market who supply the services.

And, as such, I think they offer a different role for regulators to think about taking in these markets. For someone like the FTC to think about taking. Because rather than thinking about it being the responsibility of the local governments to be in charge, you might actually think about the local government as being one platform which is competing with these services in providing the service of regulating the market for rides and places to stay.

And I think that that, to me, raises a particularly interesting issue. Especially within the United States and our constitutional order, because the original purpose of the Interstate Commerce Clause that has come to stand behind so much of the active economic regulation was to prevent local governments from excluding national competitors to services that were provided at a local level.

And so I think a really interesting issue in the coming years will be to what extent the FTC and other federal regulators want to step in to try to provide an even playing field for platform competition between different local regulators, both these private regulators, who have more of a nationwide reach, and the local governments that traditionally regulated these services.

NATHAN WILSON: Great. Thank you. And now I'm going to turn it over to Chiara.

CHIARA FARRONATO: Hi, Nathan. Can you hear me?

NATHAN WILSON: Yes, we can.

CHIARA FARRONATO: Perfect. Thank you very much for having me remotely. Glen focused on sort of the benefits of having a central intermediary that aggregates buyers and sellers, or two sides of the market, to create a thick market. I might focus a little bit more on the differences and heterogeneity driving the success of platforms and some of the potential benefits of specialization.

And so if we actually look at—on AngelList there are about 600 peer-to-peer startups listed currently. And they range from the most well-known, like Uber, Airbnb, or TaskRabbit that were mentioned before, to some very curious solutions to find storage space or peer-to-peer shipping of your carry-on baggage. And so one question is whether these peer-to-peer models will succeed across all these possible services.

And probably much of the success will depend on the value generated once the transaction takes place. And of course some services have very different values. Finding a ride in New York City during rush hours or under a snowstorm is probably very, very valuable and much more valuable than other types of services.

Now given the gains from trade, once trade takes place, ex ante there are also some search frictions that prevent peers from just finding each other and trade. And that's actually the role of peer-to-peer platforms, which are leveraging internet technologies to connect individuals who want to trade assets or services. And so, depending on the value of trade, people are more or less willing to bear some search costs—some cost to finding each other and trade.

And the platform can adopt very different solutions to this matching problem. So, for example, Airbnb lets guests browse for options, and hosts actually approve the requests. eBay, an early peer-to-peer platform, lets buyers pick the item, with no say on the seller's side. And Uber actually organizes the matching in a much more centralized manner.

And even when we have, on average, reasonably high gains from trade, and that the platform that can reduce frictions to a low level, the nature of the services traded is very local and time-sensitive. Liran mentioned in the introduction, I might need a ride right here and right now. I'm currently in San Francisco. And the potential drivers who can offer me that service are just those currently available in the proximity of where I am. And because of the geographic and time-sensitive specificity of these services, these markets can be inherently thin.

And the frictions to successful matching can vary over time and across space. So it might be that Uber is very successful in New York City, where the market is thick, or where the platform manages to create a thick market, but less so in another city where market fundamentals like distances are much larger and driving habits kind of different.

So just to summarize, the success and the platform adoption can be highly heterogeneous, depending on the value of the trades that are intermediated, on the existing search and matching frictions of these trades, and how a specific platform chooses or learns to reduce these frictions. And depending on how market thickness and the elasticity of the demand and supply change across locations and over time within a platform.

And so, just to take an example from my own research, TaskRabbit—which is an aligned peer-to-peer platform for chores, as Liran mentioned, where you can find help building your Ikea furniture—benefits from a very elastic supply that helps absorb fluctuations in demand but is also very heterogeneous. Its level of success is also pretty heterogeneous across cities. Where more successful cities are actually those where market fundamentals promote the thickness of the market, where buyers and sellers live actually closer together and it’s easier for them to transact, and where the types of tasks that are requested are more standardized, and where supply might be more abundant.

NATHAN WILSON: Excellent. Thank you. And then finally, but certainly not least, Joshua.

JOSHUA GANS: Ah, yes. Thank you very much. So, as Liran said in his talk, we’re currently in a Wild West of the sharing economy. All sorts of experiments are taking place. And we really don’t know for sure where it’s all going to lay down eventually.

Just to get some precise, let’s just define the sharing economy, first. And I know people have used “peer-to-peer,” and they’re interchangeable. I sort of see this as having two characteristics.

The first characteristic is that individuals own key assets. They own cars, dwellings, their time, et cetera. They’re owned by individuals.

And the second aspect is there exists some sort of market platform that is going to match these individuals who own things with consumers who want to access them. And those platforms, in order to be viable, have to satisfy what’s called the “three principles of market design." These principles came from Al Roth, who, a couple years ago, won a Nobel Prize for his work in this area. And the three principles are that markets are successful if they are liquid, if they solve what we'll call the "temporal agglomeration problem," and if the transactions in them are safe.

Now what's interesting about recent developments is the first condition—individuals owning key assets—has not changed. Effectively, everything has come as a result of changes in market design. And those have primarily rested on mobile technologies.

And this isn't because those technologies were required to allow consumers to leverage the assets they own but because they helped overcome this temporal agglomeration problem associated with matching. And people have referred to it as "search," and other aspects of it, but they're all under the same issue is that suppliers can find customers. A supplier invariably has to signal their availability and their location, in real time, in order for a match to occur. And mobile technologies is what has enabled that to occur.

Now in this Wild West environment, there are two broad fears that I think the regulators have. And I've heard these in various forms. The first fear is around safety. There are all sorts of existing regulations, and we've heard about them, around the ability of individuals to make available their assets, due to concerns essentially about consumer safety. At least, that is how those regulations are currently marketed. We'll come to that.

Those safety issues just don't go away. They haven't gone away in the new world. But the very fact that these new markets have actually arisen without these regulations, or outside of them, to some degree, gives us pause to wonder whether the regulations themselves are necessary and have a rationale. So Uber, Airbnb, all should have failed, if the regulations were making transactions safe. They did not fail, because essentially the platforms substituted private regulation for public regulation, as Glen already mentioned.

Uber and Airbnb are in fact some of the most regulated ecosystems in the world. They have massive regulations that would make any would-be bureaucrat proud. The problem is essentially that we have a compatibility issue between the public and private regulations, not any fundamental disagreement that they should exist for their intended purpose. Again, come back to that.

Which brings me to the second fear of regulators that we hear in the substrate, but no one knows what to do about. The second fear is that we have a fear of market power or dominance emerging. Could the private platforms emerge into a dominant situation in the future?

To be sure, why do we have that fear? It's perfectly legitimate, because that's exactly what occurred as a result of the previous system of public regulation. And because of that, only large-scale entry, facilitated by mobile technologies, has a chance of overturning the current, existing system.

So, like the animals in Animal Farm, the danger is that we turn from one monopoly into another. And if the new platforms write the new public regulatory rules, clearly we're going to have a concern. There are red flags all over the place, or things like that. So we need, sort of now, in this sort of Wild West area, to look for canaries in the coal mine that could signal future danger and be possibly vigilant about them.

One reason to be actually optimistic that we might not end up with this dominant situation is that there is a certain form of competition already baked into the system. It's something that's at risk, but it's baked into the system. For instance, because Uber and Lyft drivers are not employees, they cannot be compelled to work.

A feature of Uber, for instance, is that the drivers are free to come in and out of the system as they choose. The CEO of Uber made a big deal of this just two days ago, as their key feature. Alongside of that, they're currently free to come into and out of the Uber platform. So their ability to platform-shop disciplines the power of those platforms.

What are the risks? Well, consider a situation where the public regulators require drivers to be licensed in a certain way and to have their cars maintained in a certain way. And these involve costs. And Uber, for example, may decide to take on the costs of licensing and ensure that the cars are regularly serviced.

Now they're going to need some sort of return for that service. They're not going to provide it for free. And they may require exclusivity to Uber. In that situation, we've clearly got the seeds of a problem. So instead what we want is we want to show that drivers can fulfill whatever requirements we choose to put them in an independent way to avoid such tying. To be sure, this is the side of tying that's led to taxi drivers being different from the medallions that are owned in the current system and has led to that wedge.

So we don't have to worry about the economics of this. One way or another, the system is going to compensate for the cost of licensing. But it's very important who owns those rights and who has the ability to take and exclude.

So the sharing economy is important. And it's going to rewrite how we deal with transportation. You know, the potential gains, when you imagine a world with this, are huge. But it needs this competitive foundation. And I guess I'm worried that the current valuations of some of these firms reflect a market anticipation that, in fact, they may be expecting dominance. And we should be worried about that. Thanks.

NATHAN WILSON: Thank you. And thank you all. I think that set up a really nice number of things for us to talk about for the rest of this panel. I think I'd like to circle immediately back to some of the things that Joshua brought up, which was perhaps a set of organizing ideas of necessary conditions for what might constitute a successful sharing-economy platform.

And if I followed you correctly, those would be that the key assets involved lie in the hands of individuals, and that there is an organizing intermediary that sits between potential consumers and potential suppliers, and then, furthermore, that the big change—the factor that has enabled the dramatic rise of these platforms in relatively recent years—although I think we could point to some earlier success stories like eBay and perhaps Craigslist—is the increase in mobile technology. And I guess I would first like to ask the other panelists if there are other things that they would like to add to that list, perhaps beginning with Liran.

LIRAN EINAV: So just to go back to Uber. I guess the main question is, should we worry about these platforms taking over in terms of market power? One thing I would think is that many of these platforms are basically market makers. They're not taking a side of either side of the market.

So from a pure long-run view of value creation, the most simple way that I would think about this type of platform is that their value proposition is to cut some fixed percentage of the value created by the platform. It might not be quite right in the short run, but in the long run, the more value that is being created in the platform, basically they're going to benefit some certain percentage of it through commission fees, through other advertising, or things like that.

And in that sense I'm not as worried about the market-power aspect, because their incentives are pretty much to maximize platform value, which is, I guess, if you—the most standard economic framework what basically means some sort of an efficient market. So that's basically my—

GLEN WEYL: So I want to agree and disagree will Liran. In some ways, I really agree with what he's saying. But I think, though, an important thing to realize is that what Liran just described is effectively a private entity becoming the government of some area of the economy that used to be governed by the public. And that might well work more efficiently—and I think, in fact, it does work more efficiently—along many economic dimensions.

But there are many public goods that are supplied by private actors that you might not have an incentive to supply, if you're one of these providers. I think privacy has a lot of that character. I think many features of speech have—you know, speech is probably less important on Uber. But if you think about Instagram and Facebook and many of these other platforms, they're becoming effectively the public space, over things that used to be sort of fundamental to what it meant to have a democracy. How we talk about politics.

And their interests in providing what we consider to be the public good. Things related to free speech, related to equity of how different voices get heard, are not necessarily the same as their commercial interests in extractable value from those areas. Because people are not always willing to pay for public goods. That's the fundamental principle.

So I think, while we should, as Liran said, be much less worried, in my view, about the economic dominance of these groups, I think we should be worried about their democratic accountability. And maybe that's less for economists to think about and more for other types of social scientists. But I think it's something we should be concerned about.

NATHAN WILSON: So I definitely think that those types of issues are incredibly important and ones that the agencies and others will be thinking about, as these things evolve and we start seeing how successful they are going forward. But again, to think about what explains their relative success today and their previous absence of success, relatively speaking, I guess I'm curious if we could—thinking loosely, statistically, here—try and separately identify the role of mobile technology in facilitating search and separate that from some supply-side factors, such as the fact that this is a down economy and that there are perhaps people with fallow assets. And will those people still be as willing to participate if the US reaches full employment, for example? Is there any evidence, in the limited empirical literature that would allow us to say what role one side or the other might have?

GLEN WEYL: I mean, I don't think it's just mobile technology. I think mobile is important. But I think Moore's Law and machine learning and computational resources are becoming very important to how this stuff works.

I mean, I think one remarkable example—which I was really amazed by. My wife recently went to San Francisco. And she took—I don't even know what it's called—the new Uber ride-sharing service. So this service basically matches people up in different locations, they share a ride, it's $7, fixed fee. You can go anywhere from San Francisco airport out to Berkeley. It's really unbelievable. That's cheaper than it costs on BART to get from San Francisco airport into downtown San Francisco.

If that service works—who knows if it will—it could be much more disruptive that Uber has been so far. It could replace most of public transportation. And that is, to some extent, enabled by mobile. But to a large extent, it's enabled by really powerful algorithms, where they're finding routes where it's not inconvenient to people to share a ride along that route. And that's a very complicated matching problem.

And I think that those forces, rather than just mobile—which, maybe, we've already seen the impact of mobile—are going to continue to mean that there are possibilities that these services offer that I think will overcome any transitory fluctuations, like Nathan was referring to.

CHIARA FARRONATO: And if I—

LIRAN EINAV: Sorry.

CHIARA FARRONATO: Sorry. If I can add something from here, it is true that right now these peer-to-peer platforms are kind of leveraging underused assets or time. But it might actually be that, as they grow, more and more of the supply becomes specialized. And so there might be more full-time drivers. And there might actually be taxis listing and using these platforms as intermediary to match with demand. So it’s not necessarily the case that the success of these platforms, even if it might have been favored by the down economy, will just die out as things improve.

LIRAN EINAV: Let me just add to this, I guess, two points. One on mobile. And I think mobile has two roles here. Certainly, I agree with Glen. So one, it just gives you location data to typically—you know, if you’re sitting in a—you know, you don’t have mobile, we don’t know where you are. And if you need to report where you are in every single second, that won’t get the market going. But if the market knows where you are through your mobile, that’s just important data, not for all markets, but for location-specific transactions.

The other thing, that mobile gives you access to the market. So if you need something in real time, all the time, then—you know, Airbnb. Suddenly you’re in a new place, and you want to find a place to sleep. Then I think mobile gives you the permanent access. So for certain transactions, it’s really important.

For peer-to-peer lending, it’s probably less important.

The other point, about the slack—for sure we might have more slack in the economy today than we might have, maybe five years down the road, if everything goes well. But some of the slack is never going to go away. I mean, people are working eight hours, in many jobs. And they have these extra hours to do stuff. So they have, like, three hours a day to potentially either watch TV or do some video games or ride an Uber car.

So I think a lot of times, people have extra rooms in their houses. They are not going to fill them up suddenly. So a lot of this potential slack, I don't think, is going away.

And then the final point, that Chiara was saying, take eBay, for example. They started in the late '90s. It was pure peer-to-peer market. It's people selling their used baby items, other kind of collectibles, and it was, like, consumer sellers selling to consumer buyers.

If you look at eBay today, there's still this consumer sellers selling to consumer buyers exist. But now they're, like, 20% of the market. 80% of the market, these are people who are running their small businesses on eBay. Either only on eBay—they have, like, a full-time person who sources stuff in China, buy a bunch of electronics, and then sells them on eBay to the American customers. Or there is someone who is running a store offline. But then one of his shelves is basically to sell stuff on eBay, because that's where customers are.

So a lot of these markets start as peer-to-peer, but once they have constant demand, then, you know, there's constant supply. And then it becomes not just part-time and, you know, extra room. But then I'm running an Airbnb kind of hotel in my house. So I'm running, like, a full taxi as a full-time job.

Or even a firm. You look at oDesk. I mean, it started with some random guy in the Philippines kind of providing two hours a day of data work or data-entry work. But now you have, like, in Ukraine, people who are running basically 50-person companies that all they do is kind of providing label supply services on oDesk.

So I think what you see in many of these markets, they grow into something which is much more of just generating slack. It's just generating a full kind of marketplace of permanent employment and permanent demand. But it takes time, because you need to show the viability. And it's hard to start the market without using some slack part. And then, once it works, then I think it generates much more supply.

NATHAN WILSON: Thanks. That actually effectively introduces the next question I want to get to, which is—you've just been talking about the evolution we've seen in several of these more prominent platforms. How common is that type of plasticity? And is there anything about the very nature of these peer-to-peer platforms where their relative absence of physical capital makes them more adaptable to changing circumstances or to a need to evolve their business model?

JOSHUA GANS: So I think we've seen, previously, with platforms that have merged with technologies, that they can be quite inventive in finding ways that can stop experimentation. It's hard to believe that airline travel booking is still for businesses in the dark ages, largely because a web of interlocking most-favored-nation agreements, content clauses, other things. Other essentially whack-a-mole versions in private regulation to keep essentially a system from having competition.

So what's really interesting is to think about how the interplay of these sorts of business-model issues actually come up to actually restrain experimentation by other people. As I already mentioned, my main concern with regard to market power of Uber is, in fact, that there could be a significant change in government regulation that may lead to network effects and dominance and actually constrain the sort of business models people can do.

Currently, there's so much freedom in it. And as Liran already said, individual Uber drivers—if you've ever spoken to Uber ex-drivers—they act like small businesses. Some choose to specialize in never driving on a Friday night, because they don't want to deal with their particular car with someone who might be drunk or whatever. And they sort of make these choices according to their own preferences, in much the same way as small businesses would normally do.

And so you want to have this environment where that experimentation is allowed. And I think, in relation to the question, what we would be concerned about is any of these contracts that access the platforms that also reference rivals. This is a term that Fiona Scott Morton came up with, and I think it really applies. And those are the sorts of things we look for.

Other than that, there's something great about the Wild West in sort of allowing different experimentation. But as soon as you have business models and contracts between either consumers or suppliers that restrict what you can do with other people, that's where we start to ring alarm bells.

GLEN WEYL: Just to follow up on what Joshua said, I think the physical-capital point has some relevance. But I think probably even more important is the fact that startup companies don't have existing business that they're worried about being cannibalized by innovation. And there's sort of almost an endless number of books in the business world about this sort of thing—The Innovator's Dilemma, and so forth—about the problems that established firms with large revenue flows have in disruptively innovating. And I think that's one reason why it is really important that we—while I do believe in consolidating existing markets—maintain the ability for new entrants, who are not tied to existing players, to enter the market and not just be swallowed up by existing players.

And so I think one really important aspect is to think about merger policy in the setting, in a dynamic context, that takes into account the fact that new, small firms that may not yet be competing in a significant way with existing players—that if a new business model that might totally eliminate the business model of an existing dominant player but don't seem to be competing in the same market. We should be very hesitant to see those guys getting bought up by existing firms, which seems to be something that has not really gotten the scrutiny that I think it deserves, in many of these tech markets. Perhaps because they're so dynamic and maybe less familiar to regulators.

For example, you know, WhatsApp's acquisition by Facebook, Instagram's acquisition, Waze, et cetera, et cetera. There's been a whole series of these tech acquisitions which are some of the biggest ones around. And they haven't really received the sort of antitrust attention that I think they deserve.

JOSHUA GANS: There's a flip side to that. Some companies seem to have adopted as their identity the ultimate in acquisition stance. Near as I can tell, Uber won't ever acquire anyone. It won't ever acquire any of its competitors.

Now the flip side of that is its response is going to be to compete aggressively with them. So part of the tension that we face in these startup ecosystems is how we want to be permissive towards mergers. You know, I can imagine the reason that Uber doesn't want to do that is it doesn't want people entering, capturing a bit of market, and then trying to get a good price for Uber as its response, which is, of course, the flip side of whatever Facebook is doing, I guess.

GLEN WEYL: Yeah. And I think I agree exactly with what Joshua said. I think that's precisely what we want to avoid. We want to avoid entry that fragments the market but doesn't have the chance to really displace it. And we want to encourage entry that really will displace it. And I think an aggressive merger policy to future potential competitors is crucial to making that work.

NATHAN WILSON: I think that's certainly something we'll think very, very hard about here. Before we segue further, I want to loop back to San Francisco and Chiara, to ask perhaps if your research into TaskRabbit allows you to say anything about how you think a platform could continue to evolve after achieving at least some success. One of Glen's points was that it is this somewhat newness of these platforms that allows them to evolve quickly early on. Once you've got some established base of consumers is that going to change?

CHIARA FARRONATO: I think, at a more general level, it's not just the newness of the platform that allows them to experiment. Although that is very important, because they are trying to challenge incumbents or creating a new market. But it's the continuous existence of potential entrants, not necessarily existing entrants, but the threat of potential entry that allows a platform to continue to experiment.

And maybe we can look these more on eBay, instead of TaskRabbit. TaskRabbit is still a fairly young platform. It's within the new generation of peer-to-peer platforms. But eBay has experienced a continuous—a more continuous—transition and experimentation that led the marketplace towards more retail prices and away from its original mission—or original business models of auctions.

And so I think with TaskRabbit, Uber, Airbnb, and all the other service industries that peer-to-peer platforms will likely enter into, guaranteeing a level of a threat of entry or guaranteeing the possibility that buyers and sellers can easily switch to other platforms will make the dominant or existing platforms challenge their business model constantly.

NATHAN WILSON: Great. Many thanks. I'd now like to bend the discussion subtly back towards a direction that's already touched upon—those of network effects, competition, and the potential for dominance. So I guess I would like to start by asking for perhaps a slightly more granular discussion for the sources of the network effects exhibited in this sector.

JOSHUA GANS: So this is the interesting question. I mean there's a certain—again, this valuation of some of these companies makes you think that someone is thinking that they're going to control the network. Let's take ride-sharing, where is that going to come from? Where a network effect comes from is—or, for starters, where a consumer might search for a ride.

We know with search engines defaults are very important. What happens to be first up can give you some degree of power. But that's not the be-all and end-all. If you open up an app—your favorite app—and you don't find a ride, or it's too expensive, you can just open up another one. So long as there's nothing preventing you from switching, there's no issue. Now loyalty rewards, bulk discounts, whatever, can create that. But we haven't seen any of that arise yet.

The second thing could occur on the supplier side. Again, where are those network effects going to occur? Does it make sense, if you were a driver thinking of entering the market, to join the largest provider in that market—the one with the most customers?

Well, yes and no. Yes, you are more likely, surely—you think you might be more likely—to be matched with a customer quickly. So that's a good advantage. But no, in the sense that all the other drivers could be thinking that. Just because it has a lot of customers, what you're interested in is joining the network that has the biggest shortage of drivers. Which might not be the largest network. It may be another network.

And so there are sort of forces pulling you towards a particular network and also pulling you apart in a way that we're seeing all over the place, that makes it very hard—at least theoretically, without throwing something else into the mix like exclusive contracts or something like that, or long-term contracts—to see where those network effects could arise. In other words, it's not obvious to me that there are insurmountable advantages to being the biggest in these markets. But others may have a different degree.

LIRAN EINAV: So I guess that I would think networks are basically inherent part of these markets. You have the usual network effects that—you know, if I'm selling something, I need enough buyers to want it. And the reason that the buyers are going to be on the market and want it is because they know there are enough sellers offering what buyers want. So more sellers like me on the market are going to generate what people sometimes call in this literature joint direct network effects that buyers would show up. And that makes it more likely that I would want to participate in this market, because I'll find buyers.

And I think one thing—the network-effects aspect—it has very different margins, early on in the platform growth, and later. I think early on it's all about are buyers or sellers. When I sell my room to an Airbnb, is Airbnb going to be my default place to go right? If I tried once, I tried twice, and then couldn't find any taker on the room, it's not clear that the next time I'm going to try to rent out the room I'm going to Airbnb at all. I'll try VRBO or some other stuff, or maybe I won't try it just because it's not worth it.

So early on, can we get the platform to be part of our go-to place when we try to sell something or buy something? Later on, it becomes—I think now Uber—I mean, so many people are using it that people are not wondering: should I need a ride somewhere, do I do Uber or something else? I think most people, their default is to use Uber.

And then the question—you know, how often do I use Uber? Do they sometimes kind of substitute their own driving to use Uber? Do they substitute other mode of transportation to use Uber? So suddenly the substitution is not "Do I use it or use something else," but do I just extend using it?

But it's very common in other settings, too. If you think about grocery shopping, which is totally not peer-to-peer. I mean, initially it's to get people into the store. But then once people are in the store, you just need to get kind of more transactions from them, or more dollars spent in a given trip.

And the same here. The margins in which you are going to operate are going to take very different form early on in a platform, like when people are not aware of it, they're not thinking about it as the go-to place to generate a particular transaction. Versus later on, that you want to get some used stuff, you go to eBay. I think everybody knows this.

JOSHUA GANS: Liran, this seems like very old-guy thinking. I mean, if you've opened up Uber, and you've seen search pricing or you've seen it's going to be, oh, my goodness, it's going to be seven minutes and not four, people will switch between apps. I mean, if they know about them, and they exist. They will switch between these things.

I don't see that it's—it's not obvious to me—I think being a default is useful. It's not obvious to me that it is necessarily the path to dominance in these things.

GLEN WEYL: I wanted to try to reconcile a little bit what Liran and Joshua were saying, which is that—

JOSHUA GANS: Because I'm much younger.

GLEN WEYL: [LAUGH] Yeah. Joshua is the new generation. So it seems to me like a really—if you view things as—there's just a homogeneous good that's being sold and being bought, then Joshua's perspective, that you just go wherever the scarcity is, is right, obviously. But I think that what's crucial to these markets, and the real source of network effects, is the heterogeneity of the relevant goods that Chiara was emphasizing earlier.

The point is that even if you double the density of sellers and buyers, it's not as if that doesn't make the market work better. It makes it work much better, because there's much less latency in Uber. There's much greater availability.

I mean, I used Airbnb to go stay in Tel Aviv. If there were fewer buyers and fewer sellers, well, maybe they would have had something by the beach that would've been just as nice as the apartment I took. But I don't care about the beach. I care about being near the shops. And if you don't have the thickness to accommodate the differences in my preferences, then it's not going to be attractive, either to the buyers or to the sellers.

So it's precisely the heterogeneity and the differences in the goods that get filled in as the market gets thicker on both sides that I think avoids the type of dynamic that Joshua's talking about, until the market gets so mature that latency is down low enough that it effectively becomes within each segment a homogeneous good.

NATHAN WILSON: Any response?

JOSHUA GANS: No, no, no. It's really going to come down to an empirical matter for how quickly we get to those points. It's hard to tell.

LIRAN EINAV: I would emphasize different—I think this idea that when I heard Hal Varian talking about Google, whenever people complain about Google market power, it's like, well, every other kind of search engine is just one click away. And it all sounds great in theory. You know, I'm looking at Uber and I'm looking at Lyft. I'm looking at, like, seven different platforms and choose the best price.

But that's just not the way it works. I mean, you basically—you might just—you know, one or two options to look for. But in the end, as long as things are kind of reasonable, you are not going to do price comparison and keep doing—

JOSHUA GANS: That's if it is reasonable. I mean, the scenario I was talking about is that you went onto a platform and you saw, literally, something different. So the problem with Google and Bing and DuckDuckGo is they're all kind of the same. I mean, it's very—so there's no point in switching to another one to find the information. It's going to bring out the same stuff. Whereas if you see something that's not serving you currently on one of these platforms, there's, I think, still value to checking the others.

Literally, because I don't think, at the moment, the same riders, for instance, or the same apartments can be available on the same platform at the same time. So there's this temporal aspect that's a little bit different.

NATHAN WILSON: So let me see if I can—

CHIARA FARRONATO: Yeah, I think—

NATHAN WILSON: Oh—please.

CHIARA FARRONATO: Sorry. I think, to reiterate back on what Joshua has just said, I think that geographic definition of these markets might make network effects not necessarily be there across geographic boundaries. And so, to be more specific, for example, Airbnb might enjoy great network effects because I can use it in New York, as well as I can use it in Tel Aviv. But at the same time, if I'm using a platform for a local service, like a delivery or a cleaning or moving help, the network effects that might exist and the thickness of the market that might exist in San Francisco might not necessarily be reproducible, say, in Houston. And so, depending on the nature of the service, we can have a different source or level of network effect.

GLEN WEYL: Yeah. I really agree with what Chiara said. I think that, within the area, there can be network effects. And then there are network effects across the areas. And how deep or how much saturation you need to achieve either of those is just going to vary widely across different types of services.

NATHAN WILSON: I think that seems like a really important point. And I want to make sure that I understood it. I think what you're both saying is that there's such heterogeneity in what we've been all calling and lumping together the "sharing economy," and that the relevant importance of network effects might quite well vary extensively within this very, very large pool of different markets. And as a result, it's not necessarily going to be the case that observing a single, seemingly dominant provider is either problematic or not problematic. Much will depend on context. Is that a fair summary?

GLEN WEYL: Well, I mean, I'm not sure that network effects to me necessarily mean that's problematic, for reasons that we were talking about before. But just in terms of network effects, I think you can take three examples. And not all of these are exactly peer-to-peer. But if you think about Angie's List, at one extreme, and Airbnb at the other, and Yelp in between, you really see the different types of dynamics you can get.

So Angie's List is like a local-professionals thing. If it's got really good coverage on all the types of professionals in New York City, who cares what it's got in Boston? I mean, unless you move to Boston.

But people use it in a very deep way for all sorts of household services. And what's really important is that there are so many different types of professions. And you want to make sure it covers all of those types of professions. So there's a very deep network effect for it, within a given geographic market. But it's extremely unrelated across geographic markets.

Airbnb is exactly the opposite. Airbnb is completely useless to you if it only covers the city you live in. You never stay in the city you live in. It's only worth getting on the Airbnb platform if it has a wide coverage across the world.

Yelp is somewhere in between, because you use it both for local services and for things within the context of travel. And so it's got sort of a mixed emphasis, in terms of getting deep in the range of services it covers locally and in terms of covering across cities in order to sustain its marketplace.

NATHAN WILSON: All right. So I think a number of important things have been brought up with respect to network effects and whether or not we should associate them with potential problems as well as how they may intersect with competition policy. Thinking about other aspects of how we might anticipate this sector evolving in the future, I'm going to think about how and whether or not, just because you're engaged in what we've been calling the "sharing economy" now, whether that's likely to endure in the future.

So perhaps, given the number of mentions it's already received, Uber is particularly emblematic of this economy. Yet, nevertheless, they have discussed plans for using driverless cars, seeming to segue into a—to me, at least—more traditional business model involving the control of physical capital by a centralized firm. What does the economic literature on vertical integration and organization tell us about the factors that may induce a firm to shift towards more control over its employees and assets, versus one that emphasizes the benefits of a more intermediated platform structure?

LIRAN EINAV: The one thing I'd—just something that came up before—is every time we talked about it so far, I think we thought about this platform as not taking a side of the market and just running the market. And then actually I'm not as worried about a lot of the antitrust things. But the minute you start thinking about the platform the market maker is going to kind of take a side of the market or part of the market—

You see it on Amazon. Amazon is not eBay. Amazon is—on one hand, they're running their Amazon Marketplace, which is a market maker for goods. But they also sell their own stuff.

And then you start worrying about all the usual stuff. Because then you have a professional treatment. You own some of the supply but not all of the supply. You might exclude some people. You might treat things unfairly. You might have market-power considerations that are going to lead you toward the usual stuff.

So I think, in that sense, that would raise a bunch of red flags, I would think. How exactly it plays out, I think, depends on a context-by-context. But the minute they start owning a big chunk of the supply side, I think that's, at some point—then I think all the usual market-power concerns are going to come up.

CHIARA FARRONATO: Yeah. I think within these aspects, as long as we are talking about scale economies and network effects existing in the intermediation of the exchange, it's going to be easy for both sides—buyers and sellers, demand and supply—to switch away from an intermediary. But when the scale economy's then dominance moves to production, then the usual problems sort of arise.

NATHAN WILSON: So if perhaps I could paraphrase and make sure that I understand correctly, it seems like one of the concerns might be that, as these platforms—if they were to pursue a more integrated strategy—there's something about the ease of multihoming that might change—that might reduce the ability of others in this sector to discipline them in the market.

CHIARA FARRONATO: In the sense that, if I can use multiple mobile applications because I know that there will be drivers on both the Uber app and on other applications, then my switching costs are going to be very, very low. But if, instead, we have integration of the intermediary with the supply, or a large share of the supply, these switching costs might be much higher, because I wouldn't be able to find enough supply, otherwise.

JOSHUA GANS: I know we're sort of playing future stuff. You mentioned the autonomous vehicles, which are a fantasy, in this regard, at the moment. I think the prospects for large-scale capital acquisition that could lead to dominance in transportation—you know, that seems a pretty darned tall order. I just can't—I mean, you guys—you guys are the empirical economists. But there's an adding-up problem in what would possibly be dominant, in that sort of a situation.

I think Glen is onto something more with the sort of—own the intellectual property and the machine-learning algorithms. But even that is very hard to tell. That might be the important capital going on here. But I just don't see how the physical capital—it just doesn't compute.

For starters, there are just so many people out there, near as I can tell—at least in the United States; maybe not elsewhere in the world—who want to own their own cars, because they like cars. I just don't see that disappearing right away, you know? It just doesn't seem plausible to me.

GLEN WEYL: I think I will take the opposite side, just to be devil's advocate. I mean, I'm not sure I agree with Joshua's view about why people like cars. I think people like cars because they're status symbols. And if they start becoming symbols of being old-fashioned, rural, et cetera, which I think they could well become, I don't think that people are going to have a lot of affection for having a giant pile of metal rotting in their outdated thing called a "garage."

So it's not, to me, implausible at all that you would end up with these firms that have these unbelievable market capitalizations coming to really own the physical infrastructure. But I also want to push back against what Liran and Chiara were saying, about that being worrying. Is it worrying? Or in fact is it something that we might really be worried if there isn't a dominant provider of that?

So it seems to me, in transportation the greatest potential gains, from a social-welfare perspective, that we have to get out of these systems comes precisely from their being a consolidated, dominant operator. And the reason is congestion. So congestion pricing is really one of the biggest problems with modern urban planning. And these folks really have the opportunity—whether it's Google, through its map system, or Uber, through whatever potential future dominance it has over transport—to manage that in a rational way for the first time. Rather than just doing optimized routing for you, holding fixed the rest of the network, reroute the network to achieve optimal transportation.

And, you know, estimates that transport engineers have done of this is, if you truly had automated systems, you could reduce by at least an order of magnitude average travel times, in many of the major cities, especially during congested periods. And that really does require centralization. Now maybe the state will somehow get its act together and do something about this. But it seems pretty implausible, given that they've had more or less the ability to do this for 100 years, and governments haven't figured out how to do it. So I think that's an important thing to—

LIRAN EINAV: So the only thing I would push back, that there are certainly advantages for centralization, from all the externalities perspective that Glen just mentioned. But the question—do you need, you know—all the bad stuff about market power, of taking a big capital position? And especially if you're trying to run a market.

And I kind of agree with Joshua's point, where we don't expect Uber to basically own all the cars in the world. But suppose they own half of the cars in the world. You know, what about the other half, that want to supply services in Uber, but now nobody's going to direct any traffic to them, because now Uber is both the market maker and owns the other half?

So then you just have the usual market-power considerations. And you want to trade it off against, maybe, potential externalities.

GLEN WEYL: But the other half are not paying congestion prices effectively. And so, in some sense, they're pirates who are congesting up the roads, taking advantage, and not dealing with the externalities.

I don't know. I mean, it's a difficult trade-off. And I think that democratic governance is very important. But I think it would be a real mistake if we don't take advantage of the benefits associated with dealing with those externalities.

NATHAN WILSON: So as a DC native, I am deeply sympathetic to any discussion of the possibility of reducing traffic congestion by an order of magnitude. That said, I'm going to hew back to a slightly less futurist question. I think we've talked about the importance of network effects. We've also talked a little bit about the importance of assuring quality. I think perhaps my comment about driverless cars was a bit of a red herring, taking us into the deep future.

Perhaps in the shorter term I could imagine a platform wishing to increase its quality geographic coverage but unable to find suppliers out there in the marketplace. Is there anything about the nature of these platforms that falls apart if they partially vertically integrate to ensure the existence of some supply of either transportation at all times or of accommodation or the existence of at least a couple of coders out there, available on demand? And could we see a platform sustain itself in a mixed model?

JOSHUA GANS: That's—that's—now you're getting there. The robot cars—that was the easy question. This seems to be quite difficult.

I mean, you know, the problem is, we're dealing with these startups. And if we know anything about the startups that become future successful, they like to stay on mission. And currently all of them, without a fault, have branded themselves as the platform and that they're allowing their suppliers to be free to come in and out. They seem to have that as part of their identity.

There are services that sort of come into play. For instance, in ride sharing, insurance provision is a big issue. Currently, there is informal insurance going on, depending on the jurisdiction, with Uber and drivers. At some point the states will say that has to be explicit. And it may well be that Uber takes the charge to negotiate some sort of new insurance contract that will allow drivers to come in and out and be insured in some way.

Similarly with Airbnb, for any of these things, including also things like health inspections, including policing of noise, and other stuff like that, it may take on those services. So I imagine those are the things that are going to come in first. It's a completely different set of capabilities to actually be like the old firms in this industry—the old hotel chains and the taxi companies—and actually own and maintain the assets yourself. That's just a different set of capabilities.

Could it emerge? Certainly. It may turn out that, in order to keep the system running, if they can't do the machine-learning things that Glen is projecting, they might prefer to have a few people that aren't autonomous and free that they can push around. Or if not any of these companies, it might be other companies that might operate on these ways.

There might be new entrants to come in and say, in fact, our benefit is we don't have these random people from the public. We have our own certified drivers that you can trust, coming in. And for that reason, presumptively worrying about it seems a bit down the track.

LIRAN EINAV: Let me just—I think, one thing. I think the question is, do we imagine, like, Airbnb deciding one day that there's, like, not enough supply of rooms on their site, so they're buying up Marriott and sort of let all the Marriott rooms be coming available on Airbnb? And maybe, but in some sense, Marriott already exists. And if you think that's a viable reason to buy Marriott, then just create enough incentives for Marriott to offer their rooms on the site.

And you saw it with eBay. eBay basically, today—Toys"R"Us have, like, a storefront on eBay. So you go through eBay, and if it happens to be that what you're looking for is available at Toys"R"Us, eBay will direct—you know, cut some commission, but direct people to Toys"R"Us to get stuff.

So in some sense, to me, the right thing to do it is not to just buy Marriott and offer Marriott's rooms on the site but make the market good enough that Marriott wants to be part of these transactions. But it's not that the ownership here is going to be any advantageous. And if anything, is going to be lead to all these potential market-power concerns that we discussed earlier.

CHIARA FARRONATO: I think in terms of early ownership that you were referring to, Nathan, at the beginning, that might be a partial and temporary solution to the chicken-and-egg problem. So how do you attract enough buyers if you don't have enough suppliers to begin with? But we haven't seen at least the largest platforms continuing with this model. But, rather, we have seen some of the e-commerce websites moving towards more specialized supply, later on.

NATHAN WILSON: I think that's a fair point. Although I do think the example of Amazon and eBay are useful ideas to keep in mind. That it seems like we can have some degree of coexistence of a platform that is vertically integrated with one that serves to connect disintermediated individuals. And somewhat similarly, we do see in the overall economy examples where a centralized firm vertically integrates in part but also has a network of affiliated, motivated franchisees, for example. And I think as things evolve, it will be interesting to keep in mind what facilitates that coexistence in some sectors and what leads towards a single model in others.

Kind of moving back towards deep, deep forecasting and prognostication, I am curious. We are in the relative infancy of this sector. Do we have any idea what is potentially contestable for these types of platforms and markets? Any ideas about what share of the overall economy we might be able to, at one point, place under the sharing-economy umbrella?

JOSHUA GANS: I think we take that Economist prediction. They were just slow. 100%. No, I don't think there's any scope at all. I think we have no predictive power in this regard.

This is right at the edge of the economist's usefulness. And we come to the stage where we say we're useful by telling you we can't tell you. I don't know if anyone disagrees. [LAUGH]

GLEN WEYL: Well, I'll give you my long-run guess, but it's just complete guess. I mean, my guess is this is a relatively passing phase and that eventually what happens is just much more centralization, because of all these externality issues. And I think once computers get to a certain level the whole Hayekian thing about you needing a decentralized economy starts to sort of fall away. And there's just an ability to do a lot of computation resource allocation in a very centralized manner. And it becomes very hard to compete with that, given the existence of other externalities.

And so I think the sharing thing is sort of a step towards that harnessing existing resources that came out of the old economy where everyone was owning all this stuff and moving towards a new economy where people are going to own very little, because of the ability to do these centralized computations. And so my guess is it's a transitional thing, and in 10 years it'll be much less important.

JOSHUA GANS: The issue is the nature of work, right? Are people going to prefer a lifestyle that allows them to pick and choose more? I mean, the counter has always been that, you know, there's value to certainty, you need a certain amount to get along, and things like that.

If we're going for the long run, there may be all sorts of reasons why people value a multitude of activities, and things like that. If not here in North America, just think about what is going on in Asia and how those economies are transforming. So it's not sure that we're going to end back up in the corporate state.

CHIARA FARRONATO: I might just even only offer a comparison with online retail, which is less than 10% of total retail in the US. It's still growing, and it saw a huge bump with mobile technologies. But it's still less than 10%.

LIRAN EINAV: Yeah. The only thing I'd say—I totally agree with everybody that, you know, who knows? And prediction is not probably what our comparative advantage is. But I guess the question is why do we care? And is it going to be 20% or 50% or 80% in some sectors?

I think what we really want to think about is, do we want to do anything differently today, given differential predictions about the future? And I'm not totally sure. So, in some sense, we are going to give predictions for others, but we only want to engage in this to the extent that it's going to affect how we approach the regulation of this, or restrictions on this, and things like that.

NATHAN WILSON: That brings up a great point. Glen has suggested that the importance of new technologies should give antitrust regulators some pause when evaluating transactions. Are there other opinions about how antitrust and competition authorities in general should potentially change their thinking, when it comes to firms or actors in what might be considered the sharing economy?

LIRAN EINAV: I guess the one thing I would say came up in the commissioner's presentation, earlier on. I think there are some natural—partly because of different interested parties—but to impose existing regulation to these new players. And I think one thing that I think came up today already is it's a bit of a new way of doing stuff. And a little bit different way that markets operate. Different way that products are supplied.

And so it's completely not obvious to me that we want to grandfather all the regulations to these new things just to have a level playing field. I think level playing field is a good principle. But exactly what should be the level playing field, we should in some sense let it play for a few years, see how things evolve. Have some better idea of maybe how big it is, but, maybe more important, how exactly it's going to operate. And try to customize potentially the new level playing field with new regulations to what the next five years will be, rather than what the last five years were. So that's the way I would think about it.

NATHAN WILSON: So while we continue to see how these things evolve, as you suggest, can we simultaneously look for lessons, perhaps, in parallel or otherwise similar industries, such as those that also involve two-sided platforms or things of that nature, either on the internet or off? Are there likely to be good guides there? Or could we potentially go seriously wrong if we think of that literature as being informative?

GLEN WEYL: I just would push back against what Liran said, which is—like, I mean I agreed, in terms of how you want to regulate it and some details perhaps you want to wait. But I actually think it's wrong to say that uncertainty should lead you to forbearance, as a regulator. I mean, I actually think that, for example, these mergers that I was talking about earlier. It's precisely because of the possibility of the emergence of a very different type of business model that you don't want to allow potential future competitors to get swallowed up. I don't think that the fact that we don't understand how this marketplace works or that it's constantly changing—and, in fact, maybe, in two or three years, once we get around to regulating it, it will no longer be as relevant. I mean, that's one real possibility.

So I'm not sure we have the luxury of simply saying "We don't know what's going on here. Let's wait and see." I think we need to take into account both the dynamic reasons that we'd want to be more active and the dynamic reasons why we'd like to learn before intervening.

NATHAN WILSON: I think that's a really interesting point. So accepting that perhaps—at least for the sake of argument—that greater scrutiny might be needed, what are the limiting factors that folks in my position and others might use to diagnose potentially problematic incipient competition from things that are sufficiently unrelated that we would not be concerned?

JOSHUA GANS: I think we've got these sort of twin issues. The current threats to innovation here are all coming from existing incumbents that are backed by government regulations. And that makes it incredibly difficult to think about antitrust law.

You know, I come from Australia, where, in fact, actually, the governments, in their operation of at least government-owned businesses, were also required to comply with antitrust laws. So there was sort of a mechanism there by which you could bring that into the fold and apply normal antitrust principles. Here, I'm not so sure how that works.

But even so, in terms of all the prospective stuff that we've been talking about—the uncertainties and the issues—there is a real problem that you face, is that antitrust laws are not equipped at all to handle prospective enforcement. In any of these mergers that Glen was talking about, I feel pretty confident in saying that applications of, would this lead to a substantial lessening of competition and increase in concentration, could not have been applied there. In each case, you can point to other competitors, other things going on, and not to mention lack of low entry barriers at the present time. And so how you'd actually structure the current laws, as at least I understand them, to deal with any of this—it's just not possible.

GLEN WEYL: [LAUGHING] So I would push back against both of those things. So first I'd say that, while I agree that antitrust may or may not be the right paradigm to think about these competition between a national service provider, or a global service provider, and local government regulators, we have an even older doctrine that allows us to do that—the Interstate Commerce Clause. The whole original point of the Interstate Commerce Clause, before it was applied to a lot of things like the antitrust laws, were precisely to deal with the problem—I mean, this was why it was put into the Constitution, originally. There was worries about local governments being captured by local providers and not allowing for competition across the states.

So, I mean, if you just go back to the original point of many of our basic constitutional provisions, they were precisely to deal with this sort of circumstance. And I think it’s coming up now, and it’s something that is just a very natural sphere of action for the federal government, to ensure that local governments don’t inhibit interstate competition.

And along the second dimension, I think that while it’s true that you can’t use upward pricing pressure in a simple way to think about a market that’s just a potential three years down the road, you know, you talk to—I’m at Microsoft, now—you talk to anybody in the tech industry, and they know that these guys are buying them up because they’re potential competitors. I mean, the idea that this is not well understood and that this is such an imponderable—that there’s no way of thinking about it—I mean, it’s just—it’s ridiculous.

You go and you talk to any venture capitalist about, why are you thinking of getting into this industry? Well, it will potentially be competing with this guy, and they’ll be forced to buy it up. You have to accept different types of evidence. But the idea that we can’t form a conjecture that if this guy is going to be successful, he’s going to be successful by competing with this other guy, I mean, that’s absurd. If you couldn’t do that, no one could ever start a company.

JOSHUA GANS: I mean, I know what you’re saying, in terms of what we think is plausible, in terms of what’s going on. The evidence that economists normally use in these antitrust matters—which is not so much direct evidence, but market definition, market-power assessments, entry barriers—I’m not going to get at that question.

However, I mean, if you find yourself—

GLEN WEYL: Who is this person?

JOSHUA GANS: If you found the CEO of the acquiring companies—you know, the PowerPoint presentation, and where they’ve signed off that they were taking out a competitor and they had projections that were going to be—that’d be wonderful. I’m sure the people at the DOJ would think that’s wonderful. But it just really seems to exist that way. I don’t know.

GLEN WEYL: Talk to venture capitalists. I mean, they're finding these things all the time. They're thinking about business models—

JOSHUA GANS: If you can get a venture capitalist to testify that that was—I mean, it's just—I'm talking about the practical operation of the law. It just seems like it would be very difficult to do that.

NATHAN WILSON: Well, I think this is unlikely to be a disagreement that gets resolved immediately. And rather than continue to fight it out, perhaps we can do that over the break, I want to take a couple of the questions I've received from the audience for the panelists.

So this one focuses on something you mentioned, Glen, which was the benefits of services like Uber share, which I think is analogous to Lyft Line, for taking cars off of the road. So to this workshop, we received comments from Mothers Against Drunk Driving suggesting that the reduction in cars on the road could lead to safer transportation for all of us. Does anyone on the panel know if that's a topic that has been seriously assessed, as of this time, or its potential to be accurate?

GLEN WEYL: You have to talk to someone more on the technical side than we are. I mean, I'm sure that there are people in transportation engineering who've thought about this. But it's not something economists would have.

NATHAN WILSON: More broadly, is anyone aware of there being analysis or research on broader community benefits to a richer or less densely utilized sharing economy within a given area?

CHIARA FARRONATO: I'm sure Uber and these companies are carrying on their own surveys. But outside of it, I don't know.

NATHAN WILSON: OK, thank you. I want to turn now to something that you mentioned, Joshua, which was that platforms such as Uber and Airbnb are among the most regulated ecosystems in the world. So I think the audience member was struck by the tension of that statement, vis-a-vis traditional command-and-control regulation in heavier industries. How should we think about the relative intensity of that?

JOSHUA GANS: Let me give you an example of where that was coming from. At the moment, if you are an Uber driver, if you ever received other than a 5 rating, they investigate as to why that happens—let alone a poor rating. If your average drops below some extremely high number—4.7 something—you get cut from the system.

Now there are a lot of reasons that can cause you to do that. As a university lecturer, I know that rating systems of suppliers are imperfect. Simple things can go wrong. And so that's a very pressured system. But they've setting in those rules, and they're not disabusing that. That's a fairly public, known thing.

I know it's very comforting to consumers to perhaps have that power. But it's also an issue for suppliers. So that was the reason for my thing. There was a lot of things going on there. No taxi driver faces that discipline, in terms of their quality. You know, given the whole licensing system's supposed to be about quality, that's kind of amazing.

GLEN WEYL: I completely agree with what Joshua said. And I really think that there are some aspects that are regulated differently. But just subjectively, my experience on all these systems has been that there are so many things—that you can have gotten a license 20 years ago, and since you've become a, you know, drunk or whatever.

And who knows who's monitoring these taxis? I mean, someone has to call in and go through a complicated process to do a report. Just clicking on your phone, it's so much more seamless. And they get such higher reporting rates. So I think it's just a much more powerful regulatory system.

JOSHUA GANS: Just to emphasize more, you know, I as a parent trust my children to the Uber system in Toronto. But I wouldn't trust them to the taxi system. And as a parent of teenagers, it's totally changed my experience, in being able to let them go out, and things like that.

But the reason for that is because I know there's no privacy. I know exactly where they're going where, and who's paying for it, and what the ratings are. And I can identify the driver, and I can identify the company, and I know I can get action. That's pretty tough regulation going on there.

NATHAN WILSON: All right. Well, I think that just about exhausts the time that we have for this panel. Thank you all very much for your time and thoughts.

[APPLAUSE]

[SHORT BREAK]

PANEL 2: MECHANISMS FOR TRUST IN THE SHARING ECONOMY

Panelists:

- **Chrysanthos Dellarocas, Professor, Information Systems, Questrom School of Business, Boston University**
- **Andrey Fradkin, Postdoctoral Fellow, National Bureau of Economic Research**
- **Ginger Jin, Professor, Department of Economics, University of Maryland**
- **Chris Nosko, Assistant Professor of Marketing, Booth School of Business, University of Chicago**
- **Steven Salter, VP, Standards and Services, Council of Better Business Bureaus**

Moderator:

- **Andrew Stivers, Deputy Director, Bureau of Economics, Federal Trade Commission**

ANDREW STIVERS: It's not going to be near enough time to cover everything we'd like to cover, but we can go ahead and get started. Welcome to panel two—Mechanisms for Trust in the Sharing Economy. I am Andrew Stivers. I'm the Deputy Director for Consumer Protection in the Bureau of Economics at the Federal Trade Commission, and I'm delighted to have these panelists here with me today. Each of them is going to give a short presentation covering different aspects of these kinds of mechanisms, after which we're going to have a short panel discussion. And then we're going to move on to some more general questions.

To start us off, we have Ginger Jin. Ginger is currently a professor in economics at the University of Maryland, College Park, a research associate for the National Bureau of Economic Research, and a visiting professor at the Guanghua School of Management at Peking University. Her research focuses on information asymmetry among economic agents and solutions to overcome the information problem. During her 15 year research career, she has studied restaurant food safety, health insurance, prescription drugs, online trading, online reviews, and many, many other things. And rather than cut into her time, you can read the rest of her biography. We're very honored to have her here today, and she's going to start us off to talk about what is the problem that we're really trying to solve in economic terms with these mechanisms. So Ginger—

GINGER JIN: Thank you so much, Andrew. Thanks so much for including me in this interesting panel, and also in this very important conference. Since I'm the first presenter of the panel, I'm just going to lay out some foundations for the information problem and solutions we have seen in the field . And then I will leave details to the rest of the panel. In particular, e-commerce faces a classical information asymmetry problem that has been there in the regular market for many, many years—namely, sellers would know more about their own product or their own services than buyers do.

And we know from a lot of well-known economists and economic textbooks if such an information asymmetry problem is not addressed, then we could face a very profound consequence in the marketplace. For example, the buyers may end up overpaying for the product, or they may end up matching with the wrong sellers. The sellers may be low quality sellers. There may be high quality sellers. Suppose the buyer cannot tell the low quality ones from the high quality ones, then whatever the buyer's willing to pay for such a product, the low quality sellers would have more incentive to sell for it, because they have a lower cost by cutting corners. This would generate an equilibrium where sellers are racing to the bottom, which economists often call an adverse selection problem. To the extreme, such information asymmetry could even invite outright fraudulent behavior from sellers and lead to a collapse of the whole market. So this is a classic problem in the traditional market, but I would argue it has some new meanings in this new sharing economy. So I would categorize this as probably new wine in an old bottle.

So in early 2001, I started to look at the frenzy on the internet. I was thinking this is the perfect example of the textbook, classical problem we've just seen in the last slide. And I concluded myself that these markets would not last long because they're exacerbating the information problem. It's one thing to patronize a new store open on the main street. It's another thing to trade with a stranger who knows where in the world, anonymous, and without examining or observing the product he is selling. So at that time I was thinking who will be brave enough to have such a blind trust in this market?

Well, the history has proven me to be quite wrong in many ways. It's also probably highlighted the danger of reading the economic textbooks too much. I guess the reason that this information asymmetry problem does not stop the sharing economy from prospering is because the internet also provides a number of new tools to address the problem. It allows us to access a much larger market. It allows us to see the buyer experiences of those who have bought from the same sellers—maybe 10,000 miles away, maybe years ago—but the system allows us to share those buyer experiences in a very convenient way, and we know that's not easy to do in a traditional economy.

It also allows some external quality certification information to be available at our fingertips. For example, Carfax now allows us to see the repair and accident history of used cars, which was not available or even not imaginable in the traditional old fashioned way of trading used cars. So all these, including some ability for us to utilize the social networks—your friends, your group, your colleagues and so forth—all these tools have been used rigorously by the new sharing economy platforms. So here I give you a list of some trusted mechanisms we have seen used in the field.

So for example, first the platform can define who is allowed and who is not allowed on this platform. It ranges from anyone who has a credit card can log on the platform, or you have to go through a credit rating check, you have to go through even a criminal record check. And the second is reputation ratings. This could be user generated or it could be platform generated. It could be anyone generated, even if that anyone has not used the platform at all. I guess the other panelists will get into that potential problem.

Many platforms have used some platform guarantee policy; they try to assure buyers that they are protected. Some of them may even guarantee some performance of their own money on the platform. They also introduce technical features that will allow you to bring your friends, your group, into this platform. You can link your whatever listing to your Facebook posting. You can use external sources. And lastly, the platform may be very vigilant in exposing resolutions—in dealing with consumer complaints to really weed out the bad apples. So all these mechanisms have been used by various platforms.

I want to end my presentation by saying that we really see an evolution of these mechanisms over time. If you look at, say, early 2000, eBay was positioning itself as an intermediary marketplace only, not an auction house. And there are even lawsuits between Tiffany and eBay. And Tiffany accused eBay of allowing counterfeit Tiffany products to be sold on eBay. But Tiffany lost the suits in both district court and the Second Circuit court. But if you look at Louis Vuitton's lawsuits against eBay—Louis Vuitton actually ends up winning the case raising similar issues in France.

So while the regulators still have diverse views on exactly what role such platforms should play in the economy, the platforms have moved forward themselves. They have become more vigilant in using this whole list of trust mechanisms to try to build trust on the platform. So I'm going to stop here and allow the other people to talk more in detail.

ANDREW STIVERS: Thank you, Ginger. I think one of the things that, if I can paraphrase maybe a little bit—and Ginger could tell if I'm wrong—but I think one of things this has established is that the problem we're dealing with here is really very closely related to the problems in information transmission, and information flows and marketplaces that the FTC has dealt with in consumer protection for a long time. I had some specific questions, but are there comments by the other panelists?

So one of the questions that I think you lay out here is that you started us with the beginning of the internet economy, and really thinking about the reputation issues starting at that point. Is there something different about the sharing platform versus the problems we were facing 15 years ago in trying to—say there's some vertically integrated company that's trying to sell me a service, I would still have some kind of reputation issue. Is something different today? And I'd open this to all the panelists.

STEVEN SALTER: Thanks. From my perspective, and we haven't gotten around to full introductions yet, but I've been with the Council of Better Business Bureaus for 30 years now. And 20 years ago from '96 to '97, we started a program called BBB Online that was intended to help buyers online sort out reliable businesses. And from that perspective of what we were looking at then, I'd say there are a lot more similarities now to then as opposed to differences.

But I think that a couple of things have changed. And two that I would just put out, maybe even as talking points, is that there are far better rating systems now for consumers to rely on. External sources, and a lot have been talked about already this morning, that provide customer reviews and feedback in a whole variety of fora. So that's one difference, I think.

There’s a lot more third party information available to consumers to help them be smarter shoppers.

And second, I think we may have sort of a new set of buyers in the marketplace than existed 18 years ago or so. I think people initially were a little more skeptical about buying online. Things like privacy policies became prevalent at that time to help address that skepticism. It feels to me that younger buyers are far less skeptical and much more willing to go out there and shop and buy online. Maybe it’s age. Maybe it’s a certain naiveté. But it seems to me that a lot of people are simply more trusting because it’s a more established environment, whether they should be or not.

CHRYSANTHOS DELLAROCAS: I agree there are a lot of similarities. This is not a new problem, especially from the trust perspective. There are some second order differences that the sharing economies are introducing relative to the problem of trust in electronic markets. The one is that there is more of a symmetrical information-asymmetry issue. Meaning if you buy, if you sell things—and as Ginger said, the seller knows more than the buyer. And basically the concern is more uni-directional: that the buyer’s uncertain about the seller. The seller has fewer things to worry about the buyer. Whereas in the sharing economy, for example if you’re an Uber driver, the rider has to worry about the quality of their driver; but the driver also has to worry about the quality of the rider in as much detail as if you are an Airbnb host, right?

The guest worries about the premises quality and the host reliability, but the host also has very important reasons to worry about what the guest will be like. So I think the information asymmetry issues are symmetrical. So we need bi-directional trust to be built much more than in the case of electronic markets. The other related issue is that the downside of things going wrong is actually much more severe.

If you send your money to a bogus seller, at most, you lose your money. If you get into a car with a crazy Uber driver, you may lose your life. So I think there are bigger issues there. And I guess—let me see. I had another thing in my mind, but I forgot about it.

ANDREW STIVERS: Well, maybe you should hold that for a second. Ginger, did you have any short comments you wanted add to that before we move to the next presentation?

GINGER JIN: I agree with what Steve and Chris were saying. Probably just to add to what Steve is saying is, not only do we have a new generation of buyers, we probably also have a new mindset of sellers. I think initially when the platform came in, say, late 1990 and early 2000s, sellers on eBay and other places are sort of marginal sellers and not in the mainstream. And now we see Toys“R”Us and other established stores. And they really embrace those online platforms. So I think that changed the landscape as well.

ANDREW STIVERS: Thank you. So we’re next going to move to—now that we’ve maybe got some sense of the underlying economic problem that we’re dealing with here—we’re going to move to a more in depth look at some of the particular review mechanisms that are out there. And so speaking next is Andrey Fradkin. He’s a postdoctoral fellow in the economics of digitization at the National Bureau of Economic Research. He’s also a part time data scientist at Airbnb, and his research interests include the design of online platforms, the economic effects of digitization, and the economics of labor markets. So Andrey—

ANDREY FRADKIN: All right. So thanks so much for having me here today. Today I’m going to talk about the role of reviews in peer-to-peer marketplaces, and I’m going to draw on my research from the Airbnb platform. Before I get into the details of Airbnb reviews, I just want to mention what existed before Airbnb, which was Craigslist. And there, people could post a listing and buyers could see it and they could send messages to that listing asking if it was available, and whether they could stay there.

But what Craigslist did not do was it did not keep track of the transactions and it did not have a review system. And therefore, this market—at least in the Airbnb-style transaction—didn’t work very well. So what Airbnb did was two related things. First of all, it processed the payments and it held them in escrow until the transaction occurred. And then second of all, after the transaction occurred, it solicited reviews from both guests and hosts. And so once this information was available, it was used to help people that came along later to match for the appropriate guests or hosts. And this made the market really have a lot more information than the Craigslist market.

So how do reviews work on Airbnb? There are several pages of questions that people get asked after a transaction. There's textual information. This is very kind of personal—you can see in my slides there's a photo next to the person leaving their review. Then there are the star ratings, and there are different categories of those ratings. So the overall rating and things like the accuracy rating. And those are averaged out. So the individual reviewer is not associated with a given star rating. So people should be kind of more honest than that. And then lastly, there are questions which are never shown on the site but are seen either by the Airbnb platform and/or by the party being reviewed.

So in particular, there's a question that I used for my research, which is: would you recommend this listing or would you recommend this guest? And this answer is anonymous and not linked to you. And so this is a really important question for the review system, because some incentives that people may have not to reveal all the information about their transaction should disappear in this case where the other person would not see that.

So the first thing I want to mention is, this review system seems to be working pretty well just because of the tremendous growth that Airbnb has experienced. So something is clearly working correctly.

And now I'll kind of discuss some of my specific research regarding reviews on Airbnb and experiments that Airbnb has run. So first of all, let's think about the review rates. So over 70% of people that transact on Airbnb leave reviews. That is a very large coverage. So when you compare it to sites like TripAdvisor or Expedia, which also have hotel reviews, their share of the market is probably less than 1% of all stays at those relevant hotels. So we should be really careful about comparing different review systems.

The second thing—and others have noted this—is that reviews on Airbnb tend to be positive. So 74% of guest reviews in our sample are five stars overall ratings. So does this represent an overall positive experience? Well, we can compare it to the anonymous ratings that are seen only by Airbnb. And in that case, 97% of all guests would recommend the listing that they stayed at. So it suggests that people are having a good experience overall. Now what happens in the 3% of the time when people don't recommend the listing? Well, they typically leave a lower than five star rating. So at least on that dimension, the review system seems to be pretty informative.

Now there are some reasons why the review system might not capture all the relevant information. One reason might be strategic—if people are afraid of retaliation in the review system. So if I left a bad review, I might be afraid of being retaliated against. In the middle of last year, Airbnb changed its review system in order to make that impossible. So it did not show a given review until the other counter party left a review, or until the time to review had expired. And so this kind of reduced the strategic incentive.

Secondly, there is a potential social reason why people might not reveal information. So if I became friends with my hosts, I might not say something mean about them. And we study this in our research and we show that, while this behavior does exist, it doesn't seem to be driving the ratings in any significant way. And then lastly, there's sorting. So the people that don't leave a review might have a worse experience on average than the people that do leave a review. And Chris is going to talk a lot more about that. So kind of in summary, reviews seem to work pretty well at getting whether a person had a positive or negative experience.

And there's still a lot of research and development to be done in how to elicit the right type of information and how to display it on the site. And I want to emphasize that we just don't even have an economic framework yet for evaluating these changes. So as far as kind of regulation, it's just way too early, I'd say.

ANDREW STIVERS: Thank you, Andrey. So next, we're going to hear from Chris Nosko. Chris Nosko is an assistant professor of marketing at the University of Chicago, Booth School of Business. His research focuses on the organization of technology and internet markets. Professor Nosko spent the 2011-2012 year working at eBay in its research labs. While there, he pursued projects related to pricing in two-sided markets, measuring the effectiveness of paid search advertisements, understanding repeat buyer purchase behavior, and investigating the effectiveness of its review system. Chris—

CHRIS NOSKO: So thanks for inviting me to participate here. So everything that I'm going to say basically comes out of the time that I spent at eBay working in the labs. And in particular, working internally to think about their reputation system and how well it functions. So the key graph that I want to begin with was the one that we saw when we started looking at the internal data asking this question of: just what did the review system look like overall?

So Andrey gave the number of 74% five star ratings on Airbnb. Here, you're looking at the percent positive ratings that are left for eBay sellers. And what you can see is it's extremely, extremely high. So most eBay Sellers look really, really good when you go and visit the site. And the question we wanted to tackle was: which world are we in—are we in a world where this is a sign that the reputation system is working incredibly well and that eBay Sellers are being disciplined by the reputation system, and so we should be very hands off? Or are we in a world where the reputation system is relatively biased and information is not quite being revealed to buyers in a way that we would like either as eBay or from a broader economics perspective?

So our approach was to try and rely a lot on the internal data. And the metric that we ended up coming up with was thinking about long term buyer engagement. And the idea here was if buyers were really satisfied with their transactions and they were meeting expectations, then they should want to engage with the platform over and over and over again.

And when you start digging into that, what you see is a substantial number of buyers seem to be left out and disappear and walk with their feet, sort to speak. So that led us—that and some other evidence—to start asking the question: what happens if this really is a positively biased system, and what effect does that have both for the platform and for economics as a whole? And here's where I think we frankly have been a little bit lazy as economists, because when you look at the literature that people have written about this, people say, "well look at eBay. Look how well eBay is doing. And could eBay exist without a well-functioning reputation system?"

And to a certain extent, I think that's right. But to a certain extent, I also think that's asking the wrong question. Because the right question should be: how close are we to solving the information asymmetry problem as a whole? And that's where I think it gets really interesting. I think the two crucial questions we want to ask ourselves are: can platforms improve the long term experiences of their buyers either by trying to build a reputation system that reveals more information, or by actively intervening in the market?

And I think that latter point is something that eBay has been doing over and over again. And I think it seems to be the direction that platforms are going. The second and I think most important point from an economics perspective is: what incentives do platforms have to reveal this information, and are we stuck in an equilibrium where platforms don't actually want to move away from them? And I think to Andrey's point, this is a situation that we just don't have nearly enough research on. And I think the open question is: what are the incentives of the platform to actually create reputation measures that reveal everything to the buyers?

ANDREW STIVERS: Thank you, Chris. So I think there are two questions that I would like to have answered before I want to turn this over to the panelists. So given some of the biases you folks have talked about—first of all—do consumers actually pay attention to these ratings? And second of all, are they effective in terms of matching buyers to high quality sellers, and providing some quality discipline?

CHRIS NOSKO: So I think there is a lot of research that shows that the answer is yes to that, and that reviews, for instance, seem to matter in terms of the price that an item will clear at on auction. So higher reviewed sellers get higher prices. And Ginger's done some work on this, so she could speak to that. I think what I would really push back on or ask a question about is: which buyers and who is paying attention in these particular situations? And I think that it's clear that there are a bunch of eBay buyers that really know what they're doing and know how to evaluate the review system, and know how to "unbias" the reviews as they're given.

The question is for all the buyers that are perhaps a little bit less informed who show up and think, wow, this 98% looks really, really good. And I think that heterogeneity is one of the things that masks some of the issues that go into thinking about the platform.

ANDREY FRADKIN: So the other thing that I want to mention is that we oftentimes think about reviews as a vertical thing, where it's good or bad. But in a lot of these markets, and especially the newer peer-to-peer markets like Airbnb, people have heterogeneous preferences. So the reviews should try to get as much of that heterogeneity out as possible. I think for the good or the bad, many of the other things that platforms do to enforce who is allowed to participate or not also play a really important role. And for the heterogeneity, reading the text of the reviews also is very informative for the user. But I would say that the research—we have some research on this—but we need more.

GINGER JIN: I would like to add a few things. One is that consumers definitely look at the reviews. But they do not necessarily look at every word entered in every review. So there has been research showing that people are much more responsive to the aggregated rating than to a particular distribution of ratings or to particular text in the rating. And the second is, actually as a consumer, you may not know that you actually do not necessarily see all the reviews posted. For example, Yelp has an algorithm to filter out the reviews that they think are potentially fake. So some research has shown that the filtered reviews probably account for 16% of all reviews Yelp received.

And I didn't know that number until I started to do research about Yelp reviews. And that's kind of a surprise to me. As a consumer, I think it's amazing that the review system evolved in such a way that it sort of support peoples' consumption choices and so forth. But on the other hand, I still believe they're tons of things that we don't know about review systems yet, especially in a very fast moving pace.

CHRYSANTHOS DELLAROCAS: Research shows that some consumers pay attention to pretty much every aspect of the review system. Meaning that, for example, there's research that has shown that specific words on the text of reviews correlate positively or negativity with prices that sellers can obtain for similar items. This doesn't mean that everybody sees them. It means that some people pay attention to the extent that they make a statistically significant difference.

We also have a research that shows that reviews from identified reviewers carry more weight than those from anonymous reviewers. We have research that shows that reviews from reviewers who have been rated positively by other readers has been useful. They also carry more weight in terms of their sales and prices. So pretty much every aspect of the currently pretty elaborate mechanism seem to be making statistically significant differences in buyers' choices.

Now, does this affect everybody? I'm not sure. But there's also the question of learning. In every new market, there's a learning curve. You enter the market; you're naive. But I like to think that very quickly you understand the rules of the game, and you're able to make reasonably good decisions.

ANDREW STIVERS: So it seems like one of the things that we're doing here is relying on kind of the expert buyer model that we do in some other situations where we rely on the idea that maybe somebody else is vetting these people or these sellers. And so I don't need to write a review, or I don't need to engage too strongly in the system. It does seem like you guys are suggesting that only a small fraction of folks are actually writing substantial reviews. Or am I mistaken in that?

CHRIS NOSKO: I would disagree with that. I think on eBay the percentage of people leaving reviews is between 60% and 70%. I think what Andrey was bringing up—I think that is not an unbiased sample. And in particular I think what's really going on is people who have bad experiences are disproportionately not leaving reviews. But to a certain extent I think that, at least on eBay, there is this sense of engaging with the platform in a relatively deep way, especially for buyers have been around for a long period of time.

GINGER JIN: Well I would add that this is probably heterogeneous across platforms—in platforms such as Yelp. And we do see a skewed distribution in terms of how many reviews each reviewer enters into this system and how many restaurants and other services—this what they call the "elite" reviewer has covered. And that's quite a skewed distribution. As much as I believe that the rating of raters could help the system, I would also want to be cautious of that, as there has been literature talking about information cascade. If a rater cares about their own reputation in the rating system, they may end up not speaking out of their own mind but try to cater to the audience. And to what extent that would drive a danger of information cascade so that we sort of actually deviate more from the truth, I think that's still an open question.

ANDREW STIVERS: So next we're going to hear from Chrysanthos Dellarocas. Professor Dellarocas is a professor of information systems at Boston University's Questrom School of Business and director of the university's Digital Learning Initiative. His research focuses on online reputation, online word of mouth, and social media. Other interests include collective intelligence, online advertising, and economics of media industry. Professor Dellarocas—

CHRYSANTHOS DELLAROCAS: So the design of online reputation systems is not a new question. There is a body of literature and practical evidence that dates pretty much since the year 2000, when the system started to appear in the context of eBay and other early stage electronic markets. So for the most part, those systems seem to be working reasonably well—at least well enough to enable those markets to exist and to grow. But of course, over the years there's been a lot of research that has identified several of the weaknesses, of the challenges, and also there have been several design suggestions for alleviating some of these problems.

So I have five minutes, and I will try to give you a grand tour of those 15 years of research, some of which has been mentioned by the previous panelists. One of the issues that was a bit of a concern in the early 2000s was this whole business of fickle online identities. On the internet, nobody knows that you're a dog—that kind of business. And it has been shown that online reputation systems are basically susceptible to that.

So they really cannot function if people can just get in and out and change identities. But that's not really a big issue, especially in the sharing economy. Because I think in the context of what we're talking about today, pretty much all the parts of the market have to be identified, and I think we're pretty comfortable with that. So that's not really a practical concern anymore.

And then there's been all this story about various kinds of reporting biases. Reporting biases arise for a number of reasons. First of all, we're more likely to engage with products and suppliers who already have good ratings and we're more likely to give them good ratings in return, because they are the best, most likely. So that's one reason why there's a bias towards positive ratings. And also the other bias—which is also through an offline word of mouth—we are more inclined to speak up if we have extreme experiences than if we have average experiences.

So as a result, most systems have a skewed distribution of ratings, which is actually skewed positively for the most part. What can you do about that? Well, one thing you can do is to report percentiles as opposed to raw scores. This can alleviate a little bit the extent to which things seem skewed. The other thing which I think Chris has also mentioned in his paper is to also report to the percentage of silent transactions; the percentage of transactions where people did not report feedback is informative. And that's something that one can also report in the system.

And I guess perhaps the most robust solution is to not just rely on numbers—to rely on text reviews. We have evidence that people are reading the reviews. They're reading between the lines. And those can be much more nuanced and informative than just the numbers. Then there are other reciprocity biases we have discussed. If both parties rate one another, there can be this hold up problem where people are afraid to say anything negative. And this is becoming more of an issue in the sharing economy, as I mentioned before, because both parties are risky to one another—much more than in commercial transactions.

So what can you do? Well, if rating one party is much more important than the other, you can basically just allow one party and do away with reciprocal ratings. But that's not really a very good solution in the sharing economy. Then you can do things like what Airbnb did—simultaneously publish the ratings, so to reduce the mutual threat.

Again, you can report silent transactions because that's also informative. If the market starts penalizing parties for not receiving feedback, then this can actually help maybe put things into some more perspective. And then of course there's the issue of fake or unfair ratings—people rating themselves or bashing their competitors; or people just posting frivolous ratings. And this is a pretty tricky problem. But there are several solutions to that.

So for example, platforms can only allow verified customers to post ratings. So this makes it difficult for someone to just go and post 100 ratings. If you have to transact, just introduce a cost. Of course, you can have a fake transaction, but it's still more costly than just going on the internet and just posting a couple of sentences. The other thing is there's a system, as I mentioned, whereby readers can rate the raters and they can rate the quality or usefulness of reviews. And this is actually working.

My research has shown that reviews which have been rated as useful by readers in a commercial context, they actually correlate with fewer product returns, which is one metric of making a good or a bad decision. So there are algorithms that can detect dubious ratings. And of course, there is, as a last resort, the possibility to have some sort of dispute resolution in cases where there are blatantly unfair ratings.

Then you have the issue of the cold start. How do you gain trust if you have no profile, you want to enter a market—who's going to trust you? How do you basically get through the initial phase of gaining trust? This can be solved by resorting to an alternative mechanism as help. So doing background checks on new members, I think it's a good idea, especially in settings where one crazy driver or one crazy host can totally wreck the platform. And I think that's a good thing.

Theoretically, you can require new members to post a bond. You can use escrow services until somebody has established themselves. But more practically what's happening is newcomers have to offer great service at very low prices until they build a reputation that allows them to be normal members of the community. And then there is the so-called end game or reputation milking problem, which is somebody builds a good reputation and then they can try to milk it. Or when they want to exit the market, then they cheat a few times and then they exit gracefully and take a one way ticket to Brazil or something like that.

So again, one way to the fight the milking of reputation question is to discount all their ratings. So basically you don't allow anybody to rest on their past laurels, so you always have them have to try hard to maintain their good rating. But really the end game problem is something that really cannot be solved very easily by reputation alone. And that's where platform guarantees or dispute resolution or some alternative mechanisms can play a role.

Hopefully those will be exercised very infrequently. So that was my little more than five minute overview of reputation system design challenges. And just a very quick end note, maybe as a bridge to the next panelist: we talked about reputation systems as being embedded in platforms, and that's what Airbnb, eBay, and Amazon have. But perhaps you also understand that there are some standalone reputation systems that are not affiliated with a platform—they're not affiliated actually with a market, maybe because these are platforms as well—like TripAdvisor or Yelp. And there's also an interesting distinction between consumer generated feedback and expert generated feedback, which is what Consumer Reports or scene interviews or the Better Business Bureau are mostly engaged in.

ANDREW STIVERS: Good. Thank you, Chris. So I think one of the questions that I'd ask here—we've been talking about reputation mechanisms bundled with the platform. So there are two things going on here. There's a market-making matching, which of course relies on the reputation. But really we can think about these two as potentially separate, mechanisms. And I'd open this all the panelists. Do you see this as a necessary relationship? Is this something that we're going to see going forward? Is there any opportunity to break these off? And I think going back to the first panel, are there then competition issues that we should be worried about there?

CHRYSANTHOS DELLAROCAS: I can comment.

ANDREW STIVERS: Sure.

CHRYSANTHOS DELLAROCAS: So in principle, it is advantageous to have reputation systems embedded in the platform because as I mentioned, reputation alone has certain weaknesses. So reputation has to be supplemented by the platform guarantees, background checks, some form of dispute resolution mechanisms, and maybe some way of ascertaining that somebody who posts feedback has actually transacted. And it's much easier to do this if the system is embedded inside the platform.

On the flip side, having a reputation system embedded inside the platform raises some potential conflict of interest issues. I would agree with Chris that we haven't fully researched those issues. That's a very interesting area where we need some more research. One issue is reputation is both a trust building mechanism, but it's also an incentive to stay in the platform. It is greater switching costs; it's a lock-in mechanism.

Let me just give you an idea of where this might play out. So eBay, for example, traditionally the mechanism has a reputation score, which is basically the sum of all of your transactions throughout your entire lifetime. And this score has this property that is: the longer you stay in the platform, the higher the score. So it kind of gives you an incentive to stay in the platform. If you go to another platform, then you start from zero.

However the optimal reputation mechanism has to discount the past, because if you just let somebody accumulate score, it's very difficult to detect if somebody has declined in quality. So eBay has this potential conflict of interest: well, if I change my reputation mechanism and basically just only show someone's six months or last year of score, then this reduces the lock-in that I have on them. This is an area where you have a simple case where optimal design and incentives for the platform can be in conflict.

I guess the other potential conflict of interest, which is actually much more complicated and I have to say that we need to research it, is this idea that platforms—they have an incentive to make it seem that things are kind of better than they are. A little better, so that there are fewer dissatisfied customers, that fewer transactions would go bad. There is this conflict of how much information do you reveal. I think Chris touched upon that.

So if we can resolve those conflicts of interest, then I would think that the embedding them into the platform has advantages. But those conflicts of interest exist.

ANDREW STIVERS: If we have a couple more brief comments on that and then we'll go to Steve.

GINGER JIN: Yeah. I would add on Chris' comments that the bundling or de-bundling of the matching function and the review function probably also depends on the availability of third party websites that provide such information. So we have seen people have a reputation on Yelp. a reputation on eBay, and a reputation on Amazon. To some extent, there's got to be some economic efficiencies to aggregating that information together and have a more comprehensive picture of what you look like in the whole world of e-commerce.

Every individual platform may not have the incentive to really collect all that information and get it onto one platform. So that's probably what the third party certification website could do. And we are already seeing a rise of such websites. I guess it depends on how that would evolve. This may redefine the pros and cons of having the review system inside a platform.

ANDREW STIVERS: So I want to come back to this. Because it's an interesting question. But that provides me with a really great segue to our final panelist. Steve Salter is vice president of standards and services at the Council of Better Business Bureaus, a nonprofit organization serving the needs of 112 Better Business Bureau organizations across North America. Steve manages Better Business Bureau customer service and evaluation, and is involved in policy development focusing on BBB programs and standards. Steve helped create the BBB online trust mark program in the mid-'90s and has worked for 10 years in CBBB's dispute resolution division prior to that. Steve—

STEVEN SALTER: Well, thanks. So a disclaimer—out of the 10, 11 people who have sat on this stage today, I'm the first non-economist.

[LAUGHTER]

That doesn't mean I don't have any data at all for you. So this problem of information asymmetry is the core problem that BBB has been trying to address since its inception, which was 103 years ago. When you start work at the Better Business Bureau, you get a little booklet like this that says BBB history and traditions. And the very first thing you read is a quote from Cicero 2000 years ago to his son Marcus that says, "All things should be laid bare so that the buyer may not be in any way ignorant of anything the seller knows." And that is the major concern of Better Business Bureaus from their inception until today.

So the outcome of the effort, though, to balance information asymmetry—the hoped for outcome is to build trust. If you balance and level that playing field, you should build trust. And that is the mission of the BBB today. So we are one of those third party sites that's looking to advance trust in the marketplace. And I just want to touch on some of the ways that we do it, and later I'm sure we can talk about different systems.

The first thing I have to mention is that we accredit businesses that meet certain sets of standards. About 380,000 businesses across North America have met a set of standards that go well beyond BBB rating that we'll come to in a minute. We do background checks. We validate the histories of the individuals involved. We require companies to commit to resolve disputes that may arise in the future and to be responsive to customer complaints. There's a whole code of business practices to which we hold these accredited businesses. That's sort of the highest level. I mention it because it's the highest level, and I think almost everybody's heard of the Better Business Bureau. In my experience, not everybody really understands what we do. So I'm trying to lay that out a little bit here. And I start by mentioning accreditation as an important feature. We also accredit charities, by the way.

But beyond that then, the second point is that we do rate businesses. We really rate them primarily based on the complaints that we receive about them in the marketplace. And last year BBBs received about 865,000 complaints against all types of businesses. It doesn't matter whether you're accredited or not. We'll process and try to help resolve disputes against any business on which we have a record. Our rating system looks primarily at complaints but also considers the responsiveness of the business to those complaints—whether they resolve them or not. But we also look at external factors like proper licensing, and the presence of government actions taken against the business.

We do our own proactive review of advertising. The core mission of the BBB is to insure honest advertising in the marketplace, both online and offline. We factor that into a company's rating. That rating is on an A+ to F scale—so different from accreditation. Every Business Review that we post—and there are about 4.7 million business reviews on BBB websites, BBB.org—we try to rate that business. If we don't have enough information or we lack certain key fields, we will give them an NR—not rated. So that rating of the business incorporates a lot of what we do.

The next big point that I think is important—I don't how many of you might be regulators yourselves, or might be media who look for background information on businesses. That's really what we are: an information service provider. We provide information on businesses, both online and offline. So all those 865,000 plus complaints that we receive every year, we publish. We publish the text of the consumer's complaint. We publish the text of the businesses response. And then any final back-and-forth between the parties as well. If I had to point to a single source of useful information on how a business resolves problems and where you can really drill down and see the reputation, I would point to that.

Read through some of those complaints and the way businesses respond and handle them, and you'll get a good feel for why they're rated the way they're rated. We also now process customer reviews—different from complaints, because they can be positive, neutral, or negative. We face the challenges that the platforms face in weeding out fake reviews. Everybody faces that: Yelp, whoever. We take some extra steps in verifying that a customer is a customer of the business, that they've had an actual marketplace transaction with that business. We don't publish those reviews right away upon receipt. We send them to the business with the customer name saying these folks said they did business with you on this date and this was the transaction they had. Will you verify that?

If there's a dispute about whether it's an actual customer not, we will mediate before we post anything. Before we even do that, we send an email back to the alleged customer requiring them to validate their email address to make sure that there's really somebody there. We actually lose about a third of all customer reviews right at that point. So we take some extra steps that slow our process down but we think are worth it in terms of validating the actual marketplace interactions.

So those are some of the things we do. We're a third party mechanism. Of course, we report on the very peer-to-peer platforms that we've been discussing today. We take complaints against Uber and eBay and Airbnb. We publish those complaints. We give them a rating just like anybody else. If you look at them—and again, you can just Google BBB review Airbnb, or Uber or whatever—you'll see a rating. A word of caution about that rating—the BBB rating is really most about not just the experience that a customer might have with that platform, but with how that platform results complaints that arise after the fact. It's a little bit of a difference there, and I would just flag that for your attention.

I think that's enough. I would mention that we already partner with the FTC in the Consumer Sentinel database. We feed the complaints that we receive to the FTC. I think we're the single largest provider of complaints that get fed into the Consumer Sentinel database. So we work with regulators and law enforcement regularly. But like everybody else, too, we're moving and adjusting in this new marketplace. We're changing the way we offer the rating.

In fact, just this week our management committee approved—we've been starting to develop a star system of our own in addition to that letter grade rating. So now we'll have a five star system that's based partially on the BBB rating—the expert rating if you will—and partially on customer reviews. 2/3rds, 1/3rd. So we're moving and evolving. But most of all, we hope to be a resource and an information provider to both regulators and consumers. Thanks.

ANDREW STIVERS: Thanks, Steve. So I think it's really important that we think about how what BBB is offering intersects with what the platforms are offering. And it, I think, touches on a point that Chris Nosko raised earlier, which is about the active intervention on the part of the platform in terms of dispute resolution. So it sounds like the roll that BBB is trying to play is to ask, once we have these reviews—we have some potential problems revealed—how does the platform deal with that? Chris, you had suggested that you think this is a really important part of what the platforms do. Again, is this a crucial part that we have, or can we just rely on these reviews and how consumers respond to the reviews?

CHRIS NOSKO: I think part of the evidence is that platforms have been moving more and more towards using these sorts of mechanisms. And you see the newer platforms, like Uber, actively intervening in ways that eBay certainly didn't do in the early days. And just to think about the eBay context for a second, there are some interesting things going on. So, first of all there's what Ginger was touching on. There are some of the obvious things, like if you get defrauded on eBay, you can file a complaint. And I think that's one sort of thing that platforms are intervening on.

But I think the more interesting side of this is actually things that don't require effort from the consumer at all. So for instance, how do we match buyers and sellers together without them even knowing that that's what's going on behind the scenes, because we know something about the buyer preferences and the seller preferences? And not to be like a proponent of machine learning solving all problems, but it is one of those things where oftentimes the platform knows a lot about buyers.

So just as a simple metric, you could say that a new buyer coming to eBay maybe should be treated very differently than an experienced buyer because they don't have the same sort of a set of knowledge that someone who's been transmitting on the platform for while does. I think there's a lot of scope for behind the scenes matching of these things that would really perhaps move us in the right direction—away from reputation systems and toward more active matching of these things.

ANDREW STIVERS: Thanks. So before we move on, I do want to remind folks that we do have comment cards, or question cards. If you have questions, please do fill those out. We won't necessarily get a chance to review them here today given the limited time. But we do look at those quite seriously, and it becomes part of what we consider in terms of the overall impact to the workshop. So again, if you have questions, please do ask them.

So we're going to circle back to Ginger briefly to talk about some of these other mechanisms and widen the picture a little bit to think about: what is the ecosystem in which these particular kind of review mechanisms that we talked about for eBay and Airbnb operate? And the BBB website is an example of that. So if we could pass the clicker back down this way.

GINGER JIN: Thank you. So talking about what the platform can do proactively, one popular tool is the so-called "platform guarantee." You can consider this as sort of an insurance system that the platforms offer to their users. Like a reputation system, it has its own pros and cons. So on the pro side, it shifts the risk from buyers to the platform, or away from whoever will suffer from the information problem. And this shift of risk could be complete or it could be partial. To the extent that it shifts the risk, then it may enhance buyer willingness to use the platform. It may increase their willingness to pay for the products or services sold on the platform, which will be helpful for the platform as well.

And also as Professor Dellarocas has mentioned, the platform guarantee could actually be a complement to a reputation system. For example, if you start a platform and rely on the reputation system, it will take a while for everybody to accumulate some ratings before consumers can actually tell who has a good reputation and who does not have a good reputation. But the platform guarantee can enhance people's trust from day one, so that could be a compliment. On the other side, it could also be a compliment in the sense that sellers who have accumulated a large reputation may have incentive to milk the repetition and leave, and in those cases, they could intentionally try to cheat a lot of buyers. And because they want to milk their reputation, they don't care how their reputation would go down from there. The platform guarantee would probably be a better situation to deal with that problem, because the platform will always be there. And consumers can engage the platform and the platform is on the hook by either reimbursing the buyers or giving other compensation to the buyers. So in that sense, it probably could work better than the reputation system in that particular example.

However, there are also some cons in using the platform guarantee. The first is, while you're shifting the risk from the buyer to the platform—we have to ask the question, why the buyers would trust the platform more than individual sellers? We know this marketplace is still in flux and many platforms may not exist sometime down the road. So I think it's still an open question of why the buyers would trust the platform more.

And also the platform may have conflicting interests here. Maybe this platform guarantee would just be a tool for them to expand quickly, rather than to provide a better incentive for due diligence in weeding out the bad ones. So I think how that plays out depends on how much trust buyers are willing to put in the platform guarantee. Another downside of platform guarantee is it's just like any insurance policy: it transforms the problem of using your own money to using somebody else's money. And that would open doors for users to take advantage of the system.

And on the seller side—and for example, the seller now thinks the buyer trusts the platform more or trusts the seller more—they could charge a higher price. And that could be not welcomed by the buyers. Or the sellers now can engage in strategic default, because the consequence of that default will be covered by the platform. And in the complicated model, we have reason to address the eBay equivalent website in China. We see a possibility that this platform guarantee actually would attract some strategic sellers to enter, because the buyers now trust the platform and the low quality sellers may have more incentive to enter the platform, which undermines the potential value of the platform guarantee.

On the buyer side, we could also have this strategic problem that maybe the buyers of would over-claim: that even if I'm not cheated, I could seek some extra money from the platform and guarantee the buyers may become more careless in transactions. Now that they're insured by the platform, they're less vigilant in checking out the reputation system, for example. And in the extreme case, you could even have buyers and seller collude to defraud the platform, as we have seen with other insurance complications.

And all of these could add some financial and labor costs to the platform. So it gets back to the incentive of how platforms would have full ability or full willingness to use the platform guarantee. So I will stop here.

ANDREW STIVERS: Thank you. So are there other pieces of this reputation system that we should be considering here? And the follow up question to that is: to what extent can we rely on the incentives of the platform providers to provide these things?

ANDREY FRADKIN: So one thing I want to mention is just the complementarity between scale and all of these actions. So for example, if you're a large platform and you observe a large number of customer service complaints, then you can build a model and you can predict which types of buyers and sellers are likely to cause issues, and you can use that in order to improve the platform in a variety of ways. And this kind of goes back a little bit to the question of: what is new now? I think the tools are there and the scale is there now to use these machine learning solutions in a way that wasn't possible 15 years ago.

CHRYSANTHOS DELLAROCAS: Whether the platform has an incentive to have a reasonably well functioning reputation system or arsenal of trust building mechanism? Yes, definitely. What we're not sure is whether they have the incentive to make it optimal for the buyers—whether the solution that is optimal for the platform is also the optimal solution for social planner. But I think that if there's a disparity, it would be a second order effect. Definitely it's a great area for research.

For the most, those systems have worked without them. There cannot be markets without trust. As the first panel has pointed out several times, the fact that those markets exist and they grow exponentially is a testament to the fact that those systems seem to be doing reasonably good work, at least with respect to building an adequate level of trust.

ANDREW STIVERS: Would folks agree that that's a second order issue?

CHRIS NOSKO: So I think it obviously it depends on how you define second order. I think one of the things that reputation mechanisms do perhaps very well is weed out the particularly egregious situations—the real bad situations on eBay where you actually have fraudulent sellers. And I think once you start dropping pretty low in the rating schemes, you're not going to be able to survive on eBay. So there's a strong incentive both from the reputation side and from the dispute resolution side to weed out the really, really bad behavior.

I think the interesting question is: what about those mediocre transactions, or the transactions that are right on the border—where you're not getting great service, but you're not getting really, really poor service either? Now, to the extent that you want to lump all those into the second order claim, I would agree with that. To the extent that you think that those are important for the platform, I think you have to start examining the situation very closely.

And I think that comes back to this question of: what exactly should we be doing from a regulatory standpoint? If your harm function is really about trying to weed out the really bad transactions and the really bad actors, then reputation systems probably do a really good job of that. If you're trying to sort of maximize social welfare, then I think it's a much more complicated problem. And I think it comes down to this question of: how many transactions do you have that are on the fence or on the border between being mediocre versus really bad?

GINGER JIN: I want to add that the incentive for the platform to really build trust probably depends on the extent to which the users or the public know the problem there and are willing to tolerate it. And this probably relates back to the information policy of the platform. If they do not review all information, to what extent is that known by the users? Are we sort of looking at a picture that is too rosy to be true, given the information from the platform? So that would be related to the conflict of interest facing the platform, as well as the competition in the field that could push either on the information side or the other policy side.

ANDREY FRADKIN: Just one more follow-up point. I think this is a very theoretical discussion, like: what are the incentives of the platform? But when you're actually thinking about how to design a platform, you have many possible ways to use your data scientists and product designers and whatnot. And whether making marginal improvements to the reputation system or to other aspects of the platform, how do you make that choice? What is more valuable to the platform—to spend your time running experiments on the reputation system, or improving search, or doing other stuff? And I think that's a much more relevant trade-off for platforms rather than this devious strategic choice about who you benefit.

STEVEN SALTER: You can think of BBB as a platform—as I mentioned, we have these 380,000 accredited businesses. We know they've been vetted and we believe they've met a set of standards. We have an incentive to keep that pool clean, if you will, just as the platforms have an incentive to keep their own pools clean. For years, Better Business Bureaus have had the practice of expelling those accredited businesses who fail to meet standards. They've lost their license. They've become non-responsive to complaints. They develop a pattern of complaints and they don't address it. There are a variety of reasons.

Not only do we expel them from accreditation, but we publicize that. Typically, BBBs will list in their newsletters each month: these are the companies that were kicked out the BBB this month, and here's why. If platforms did that, it seems a bit counter intuitive like it's bad news, but it's actually positive to say: "we're keeping an eye on things. We're weeding out bad actors." And it might actually enhance the reputation of the platforms if they did something like that.

ANDREW STIVERS: So in the first panel, I think it was Professor Gans had suggested that the reputation mechanisms of some of these platforms actually are a harsher market correction on quality than some of the more traditional command and control regulatory structures. Would you guys agree with that? Are there comments on it?

CHRIS NOSKO: I think it's all over the board. I think if you look at the platform like Taobao, I would disagree with that pretty strongly. I think that there's a wide variance in terms of the amount of effort that these platforms are putting into the actual regulation. And I think one sort of interesting question we haven't touched on is: to what extent do consumers see the platform as a whole as something that is an entity into itself, or the individual sellers as being the prime actors here? And I think that if you think about a situation like Uber, which I think is at one end of the spectrum, if you have a bad experience with an Uber driver, you're going to think about Uber as a platform as a whole. If you have a bad experience on Taobao, maybe you just say that particular seller was a bad apple, so I'll keep going to Taobao. And to the extent that these platforms are actually implementing these regulations, I think that's one important component to think about in terms of how consumers view these things overall.

STEVEN SALTER: I would just add, I certainly think that the platforms have a greater incentive than regulators to get it right. It's their business.

ANDREW STIVERS: Is that a comment Chris, or—

CHRIS NOSKO: Just a smile.

[LAUGHTER]

ANDREW STIVERS: So there's been some suggestion that some of the benefits of the sharing economy go beyond the market. Is there any sense that participation in these kinds of reviews and back and forth, and then having these individual transactions, has any greater impact on the market, on trust in the market, on how these things are going to evolve? Or is that way too open ended? This is a question from the audience, by the way—or a paraphrase thereof.

CHRIS NOSKO: I didn't understand the question.

ANDREW STIVERS: People think there's a greater benefit to building trust from sharing economy issues. You have people coming together to share the spare capital they have lying around, and it then becomes useful to other people, maybe at a lower price.

GINGER JIN: I think much research has to be done to understand why people are willing to share. From the economic point of view, I guess we couldn't justify why so many people are willing to spend their precious time entering all kinds of reviews on the platform, even for a transaction they probably will never come back to in their whole life. I think much more research needs to be done to understand the incentive of that sharing before we can answer that question.

CHRIS NOSKO: There's sort of an obvious difference here as well, which is that within the sharing economy, you have a wide variance in terms of the quality of the sellers or the Uber drivers and what they're doing. So just anybody can show up and sell something—you've lowered the barriers to entry, which means you're going to get a distribution of quality that's going to look very different than if you have a centralized firm that actually has control over what's going on here. And I think that in and of itself probably gives platforms a larger incentive and makes it more crucial for them to sort of put these reputation mechanisms in place, relative to other types of businesses.

ANDREW STIVERS: So we just have a few more minutes left to us. Are there any final comments—any points that you folks wanted to make that perhaps we didn't get to earlier on? One of the issues that we had talked about in some of the primary discussions before the panel was issues of litigation. So Chris, I think maybe you were going to talk a little bit about that? Or did you have some points you wanted to make?

CHRYSANTHOS DELLAROCAS: Sure. I have some very brief comments. What about litigation or alternative dispute resolution as a mechanism? What are these mechanisms? I think it's a room full of lawyers, probably, so I don't need to tell you what they are. But basically it boils down to either party trying to recover damages ex-post, following an unsatisfactory transaction. The tricky thing is that those mechanisms involve a costly and, at the end of the day, imprecise discovery and adjudication process, which means that they are impractical to engage in except to when the expected damages are going to be high.

So you're not going to engage in a dispute resolution if you bought a $5.00 trinket from eBay and you never received it. Also, they're pretty resource intensive for all parties—for both parties who transact, and for the platform, and they do not scale. So my take on those mechanisms is that they are good to have—like guarantees, they're good to have as an add on, infrequently exercised option to take care of situations where everything else fails. And they have to be structured in a way that they're not exercised frequently.

So perhaps you could use them in situations where you have irrational parties. We all know reputation doesn't work if people are irrational. Or when you have the end game where somebody just treats a few people and then exits the platform. In those cases, you might have to resort to them. But those things don't scale. They're not going to solve the problem in the large scale.

ANDREW STIVERS: Well, thank you very much. We are out of time. I want to thank all of our panels for participating. And I will turn this over to the next speaker. Thank you.

[APPLAUSE]

POLICY FRAMING PRESENTATION: PLATFORM POWER, REPUTATION AND REGULATION

- **Arun Sundararajan, Professor, Information, Operations and Management Sciences, Stern School of Business, New York University**

JULIE GOSHORN: Just briefly so I don't eat into his time, it's my privilege right now to introduce NYU Professor Arun Sundararajan to help us bridge between this morning's discussions and this afternoon's sessions. Arun is a thought leader on the sharing economy and its issues, and will sit on a panel a little bit later this afternoon. Right now, though, he's going to give us a short presentation that will frame this afternoon's discussions within the context of the issues that we've all heard about this morning. So, with no further ado, Arun.

ARUN SUNDARARAJAN: Thank you, Julie, for that generous introduction. My name is Arun Sundararajan. I'm a professor at New York University. I'm very interested in the sharing economy, I've been thinking about it a lot over the last three years, and so I'm delighted to be here and participate in this discussion. Thank you for putting together such a fabulous program. I know that you've already had an overview of the sharing economy this morning from Liran, so I won't dwell too much on how much variety and the scope of its impact on different sectors of the economy. But I will point out that we've expanded well beyond Airbnb, and TaskRabbit, and Uber, and Lift. Even the diversified labor platforms like TaskRabbit and Handy and HomeJoy. We've now got a depth of personal service platforms. There's this proliferation of platforms of different kinds that are touching different aspects of our lives. If you look at that personal services line, Ship is a platform, that if you take a picture of stuff that you want to ship through the app, will come home, pack it for you, and ship it for you.

Postmates is a service that will pick up anything for you and bring it to your home in less than an hour. Luxe is a service that is valet parking on demand. Anywhere you are, they will come to you and park your car for you and then bring it back to you. When you get home, Washio will have done your laundry and delivered it to you. Munchery would have delivered a meal on demand. If you're not feeling well, Heal can get you a doctor on demand. If you're still not feeling well, Zeel can get you a massage therapist on demand. And if you really want to kick things up, Drizly can bring you alcohol on demand. And I'm not going to talk about what EAZE does. But this motivates cartoons like the following one from the Wall Street Journal a few days ago. And they paint a picture of a divide between the haves and the have-nots. One of the points I want to make, and I want to make six quick points and then frame the afternoon discussion. The first point that I want to make is that the research that I have done looking at the economic impact of peer-to-peer markets paints a picture, projects a story of inclusive growth—of growth where the benefits are positive, but they are captured disproportionately by people below median income, because these are the people who are able to expand their consumption through rental. Where ownership was a barrier, these are the people who might give up ownership in favor of rental because of cost savings. And these are also the people who might start buying better products because they can now make up some of the cost by renting them out on peer-to-peer platforms.

The second point I wanted to make was that there is a clear shift underway in the economy from a traditional model of institutionally provided goods and services and towards goods and services provided through these wide variety of platforms. And so the discussion about platform power isn't merely restricted to retail or to online services like Google and Amazon anymore. They're touching very real- world, very fundamentally important to everybody's life services. In the context of thinking about policy that is inclusive, I think that's an important observation.

The third point that I wanted to touch on real briefly is that, while this wave of peer-to-peer markets was really enabled by the consumerization of digital, the fact that we've got powerful general purpose computers running operating systems with high speed internet connections and GPS enabled. These are a clear driver of the emergence of a lot of these platforms.

The two technological trends that might in part sustain this trend, but also challenge it, are the digitization of physical objects—certainly autonomous vehicles down the road. But even when the physical objects that we own and use now have the ability to tell you where they are and how much they are being used. And so as block chain technologies lower the transaction costs associated with peer-to-peer exchange, we may see the emergence of a much broader range of exchange of this kind. But exchange that may not be mediated by a billion dollar platform, that may be completely decentralized using block chain technology.

The fourth point I wanted to make to frame the afternoon discussion is that—I know that we've spent a lot of time talking about network effects this morning, and we will continue to talk about them this afternoon. And there were many observations about network effects and I may be summarizing some of the points that were made in the morning about multi-homing and about exclusion. But one of the things I've observed about the network effects associated with these peer-to-peer platforms is that they've almost got this fractal structure to them, where you need to build supply and demand in increasingly small local grids. Being the leader, the Uber leader in New York, gives you nothing in Los Angeles. Having a lot of Airbnb homes in Chicago gives you nothing in New York. But a critical determinant of how resilient these network effects are going to be is how localized the demand is for that particular supply. Uber's supply and demand are both localized, whereas Airbnb's supply is localized, but not its demand. A demand for the supply in New York comes from around the world. I think this will be a critical determinant in how durable or how resilient these network effects are.

The fifth point I wanted to make real quickly is that it's very clear, and the afternoon's discussion will probably make clear, that any sort of regulatory framework in the long run that accommodates these peer-to-peer businesses at scale is going to involve some kind of delegation to the platforms that facilitate the exchange. I think it's important to think about that in the context of the fact that *de facto* we have already been delegating things that we used to look to the government for to these platforms. We buy our music and video through iTunes and a licensing agreement, rather than copyright law, mediates that exchange. We're buying books on Kindle, again, through a licensing agreement. Facebook and LinkedIn may be more important forms of ID than a state-issued ID. The observability that platforms like Google and Facebook have on our interactions rivals or exceeds that of any government that I'm aware of. And now we have platforms that are taking on other regulatory responsibility. We have to think about the fact that consumers have seemed willing to embrace this regulatory delegation without actual *de jure* planning.

The final point, and one that I keep coming back to in thinking about regulating the sharing economy, is that to me a central point in this discussion of what should a new policy framework look like is a recognition of the fact that a lot of these platforms blur the lines between personal and professional in the provision of commercial services. We've always given people rides to the airport. We've always accommodated people in our homes. We've often lent our apartments to friends. We've cooked meals for them. We've lent them money to start their businesses. That was all in the personal bucket. In the professional bucket, you had banks. You had bed and breakfasts. You had restaurants. You had taxi drivers. And now we're entering an economy where these lines have blurred. We're trying to fit the models of personal-like delivery, but from money, into a regulatory set of boxes that were designed for full time professional providers. That's an important point I think we need to come back to. I think that's at the heart of a lot of why we've seen a lot of regulatory conflict in this space.

This panel just talked a lot about reputation systems. But put it into the broader context of trust. As Steven pointed out with his Cicero quote that I really loved and plan to use actively in the future, these reputation systems are part of a trust infrastructure. So I thought I'd do two things really quickly to frame the afternoon discussion and inject this morning's discussion with the afternoon. One is to take a two-minute look at a 2000 or multi-thousand years history of trust. To make the point that for a very large fraction of the history of economic exchange, trust was obtained through community. We only interacted with people who we knew well because there were no other trust mechanisms. There were some government provided trust mechanisms. It's only over the last 100 years or so that the dominant trust mechanism in the economy has become brand. People let their kids take roller coasters at Six Flags, but they may hesitate to let them ride the roller coasters at that theme park on the side of the highway. Same government regulations, different brand. We place a lot of faith in brand. And now we seem to be coming full circle back to some form of digitized community that is contained, in part, in these peer-to-peer feedback systems. But it's interesting to contextualize that in the evolution of trust, and to point out that it is a relatively recent phenomenon.

Often this debate between government regulation versus the reputation system seems to be situated as certification by the government versus reputation systems that digitize peer feedback. One of the points that I was glad to see come out of this morning's panel is that this is not the sum total of the digital or the non-digital trust infrastructure. There's a lot more to it. Smart brands recognize that consumers trust brands. And they inject brand into their trust infrastructure. There's a wide variety of independent third party certifications. And even on the digital front—and you've got, of course, as Ginger mentioned, these third parties like Traity that are trying to substitute platform provided reputation systems. But you've also got other forms of digital reputation. You've got digital conduits to individual choices. You can hold your license up and get your ID verified. You can connect to your Facebook profile, which is not purely digital. This is digitized versions of your real world social capital. And so it's more valuable than purely your friends online. And then you've got the digitized peer feedback. The fact that maybe this digitized peer feedback is good at weeding out bad actors, but is not particularly good at signaling who is really high quality—they should be looked at in the context of the fact that is only one component of the trust infrastructure, digital or otherwise.

Let me conclude by foreshadowing some of the discussion I expect in the afternoon, in the context of the building of this trust infrastructure. Because we now have this third party, at least until the block chain changes that—although I don't expect that—I expect it will be co-opted by private interests and we will continue to see platform mediated peer-to-peer exchange. But the mere existence of this third party in industries that were historically peer-to-peer... Taxis were historically peer-to-peer. To some extent, bed and breakfast were historically peer-to-peer. Lots of other services. Doctors have often been peer-to-peer. But you're injecting a third party into this exchange. And so it seems natural to think about the self-regulatory approaches that this might introduce into the economy—that maybe there are things that this third entity, that didn't exist in the past, can now start to shoulder for society that the government had to shoulder in the past. And maybe there are new issues that will come up that the government will have to step up and address. Simply the creation of the self-regulatory opportunities is one important change.

I think that a big part of the afternoon's discussion should be about the relative effectiveness of platform-based regulation in solving two different forms of market failure. One form of market failure that comes from information asymmetry, that comes from adverse selection—quality, uncertainty, or moral hazard, where the platforms seem like they would be quite effective. And other forms of market failure that come from externalities, either congestion externalities that are familiar, or neighbor noise and stranger danger externalities that some people perceive when there are Airbnb hosts in their buildings. Those, it's not clear that the platforms are best suited to internalize them, and there may be other third parties that might have to step in this part of the self-regulatory solution.

We've also entered, in this blurring of lines between personal and professional in the provision of commercial services—I think it's important that we rethink. Any society that puts in place regulation makes a trade-off between perfect safety, perfect solving of the market failure—and there's some error that they're willing to accommodate. And that error changes as you introduce millions of people providing services three hours a week rather than full time professionals providing services 40 hours a week.

So, we have to recognize that maybe there are safe harbors needed for these casual providers of these essential services.

A couple of policy issues that I hope we will have another workshop on—there is a whole host of labor issues that are arising from this on-demand economy that warrant their own discussion. But there's also—and this relates to the existence and the continued popularity of reputation systems—as these kinds of online feedback system start to encompass a greater and greater fraction of our capabilities, there's the risk of what Om Malik from Gigaom called Data Darwinism, where the inability to build a positive reputation early on may cause your exclusion from participating in marketplaces that you otherwise are qualified to participate in. So there's a path dependence associated with this. We may see a strong-get-stronger dynamic start to play in. This has some implications when we're talking about eBay and participation in eBay. It's another when you're trying to get accommodation, get transportation, get food delivered.

Thank you for listening, and I look forward to the afternoon discussion.

[APPLAUSE]

[LUNCH BREAK]

PRESENTATION

- **Catherine J.K. Sandoval, Commissioner, California Public Utilities Commission**

MARINA LAO: Again, good afternoon, everyone. For those of you who are just joining us, my name's Marina Lao, and I'm the Director of the Office of Policy Planning at the FTC. I'm delighted to introduce and welcome Commissioner Catherine Sandoval of The California Public Utilities Commission. Commissioner Sandoval will start off the afternoon session of our workshop with some remarks on the experience of her commission in the regulation of transportation platforms, transportation network companies, such as Lyft and Uber in California.

But before I go further in my introduction, however, I'd like to convey a message from FTC Chairwoman Edith Ramirez. Commissioner Sandoval, the Chairwoman is delighted that you're able to join us today. And she wishes that she could be here to welcome you personally. Unfortunately, she's out of the country, but she has asked me to extend to you her warmest welcome. So thank you, Commissioner.

Commissioner Sandoval was appointed to the California Public Utilities Commission, or the CPUC as it is generally known, in 2011 by California Governor Jerry Brown, making her the first Latina to serve as a commissioner in that agency's 100-year history. Commissioner Sandoval is also a tenured associate professor at Santa Clara University School of Law. She is currently on leave from Santa Clara in order to serve her term at the CPUC. Commissioner Sandoval has extensive experience, both in government, and in the private sector.

In government, she has served as undersecretary and senior policy adviser for housing with the Business Transportation and Housing Agency and as the director of the Office of Communications, Business Opportunities, for the Federal Communications Commission. In the private sector, Commissioner Sandoval has served as vice president and general counsel with Z-Spanish Media Corporation. She started her legal career as an associate with Munger, Tolles & Olson.

Commissioner Sandoval graduated *magna cum laude* from Yale, and earned her JD from Stanford Law School. She also earned a master's degree from Oxford, where she was a Rhodes

Scholar. We are deeply honored that she's able to join us today. Please join me in welcoming Commissioner Sandoval.

[APPLAUSE]

CATHERINE SANDOVAL: Thank you very much. Thank you. Thank you, very much, Director Lao, and thank you to everyone and to the Federal Trade Commission, and to Chairwoman Ramirez and to all the commissioners and all of the staff for your invitation to be here. Really appreciate this opportunity and really appreciate this convening.

I'm particularly excited to be here as one of the people who helped to create this whole category of transportation network companies. The California Public Utilities Commission was the first in the nation to license and to regulate this category of carriers in the transportation sector of the sharing economy. I'm here today to share a little bit about our experiences and some observations and questions, as we have seen others states grapple with regulation of this, other localities, and now also, we're very pleased to see some of the federal agencies looking at the implications, in terms of the Federal Trade Commission Act and other federal laws for the growing and burgeoning sharing economy. Let's see if I get this right. All right. There we go.

Somebody was asking me, how in the world did the California Public Utilities Commission end up being the one that created this whole TNC category, and that has exercised jurisdiction that really led to the licensing and growth of Uber, Sidecar, Lyft, and others. So one of the themes of my talk is, what is old is new again. And part of the answer to that question comes in our jurisdiction, and that part of the jurisdiction of the California Public Utilities Commission is over passenger stage corporations. Our jurisdiction over passenger stage corporations as well as charter party carriers is part of the reason why we are able to exercise jurisdiction over these sharing economy transportation network carriers.

So part of the theme is passenger stage corporations, then and now. The California Public Utilities Commission is the successor of the California Railroad Commission. Much like in other states, like Texas, where the Texas Railroad Commission also regulates the energy sector, in California, the California constitution reestablished us as the California Public Utilities

Commission. We were reestablished in 1911. We are a constitutional agency of the state of California.

We have a broad range of jurisdiction over investor-owned electricity, and natural gas, and water utilities, intrastate telecommunications, common carrier gas and oil pipelines. This one has gotten a little bit more attention because, for example, the pipeline that has had a major leak in Santa Barbara is actually licensed by, and holds a certificate of public convenience and necessity from the California Public Utilities Commission. I would add, however, that it is our federal partners that are responsible for inspection and safety of that particular pipeline, but we cooperate.

We are also responsible for rail safety and rail crossings, and in fact, most of our inspectors at the PUC are in the Rail Safety Division and also the divisions dealing with passenger stage corporations, charter party carriers, and now, transportation network companies. So in addition to our legacy from the California Railroad Commission, the 1917 Auto Stage and Truck Transportation Act established CPUC regulation over passenger service on California public highways. This is part of the reason and the answer to the question of how is it that our agency came to be involved in this.

All right. We basically carved the whole jurisdiction of transportation network companies out of our charter party carrier jurisdiction. So really, part of the issue here was, as Uber, and Lyft, Sidecar, and others first deployed in California, the question was, were they taxis? None of them were licensed to operate as taxis, so where they illegal taxis? Or were they something else?

We looked at our definition of charter party carriers, and determined that they could be charter party carriers, and then exercised our jurisdiction over them, which gave them authority to operate in the state of California. A charter party carrier is every person engaged in the transportation of persons by a motor vehicle for compensation, whether in common or contract carriage over any public highway. And I would also note—I won’t read the last statement—but the California Public Utilities Commission code, as well as the Constitution, gives our commission very broad powers to do all things necessary in the exercise of our jurisdiction.

A couple of things that are notable is that, within the law that created the authority to be able to license TNCs there a couple of important exceptions. California Public Utilities Code 5401 prohibits charter party carriers, with certain exceptions, from charging individual fares. So this has become an issue with Uber Share and similar types of services. Similarly, the code prohibits these charter party carriers from acting as taxis. As I always remind my class when I'm teaching, and I am teaching contracts this semester, grading exams on the plane ride back, there's a particular legal meaning to the word "taxis."

One of the things that charter pretty carriers can't do in California, TNCs, is they can't take street hails, and they can't act like taxis. They also cannot advertise themselves to be taxis. They can't park in taxi stands. They are not taxis.

Basically, then, we look at charter party carriers versus passenger stage corporations. All right. So once again, you have a passenger stage corporation, every corporation or person engaged as a common carrier for compensation, or management of any passenger stage over a public highway in California between other fixed termini, or over a regular route. And there are certain exemptions, and then they have certain requirements, including insurance, inspection, and other requirements.

What does all this have to do with the sharing economy? It is the basis upon which we exercise jurisdiction, and it also creates, really, a foundation to ask some questions about these new services. One question about some of these services is, are they just rideshare, right? And so old school sharing economy is an example of rideshare.

Now, I'm not just talking about giving your neighbor a ride down the street, but where you have many cities, like in DC, I think there are places where people just line up on the street, and strangers stop by and pick them up, and get in their cars. And you are all doing that for the purpose of getting in the HOV lane, and it saves everybody time, and sometimes people get to know each other. But it's very casual and recognized. That is rideshare.

And there can be more organized ridesharing, and ridesharing hasn't had as much regulatory jurisdiction. Certainly, they wouldn't be regulated by the California Public Utilities Commission and my sister commissions. But the new school that the TNCs presented was using a personal car to pick up passengers, prearranged through an app or internet-based services.

I should also add to that one flavor of TNC is not the personal car, but the use of limo drivers who are licensed as TCPs. They are commercial drivers that have commercial driver's licenses and commercial insurance. And then the app is just a way to give their excess time and make that available for other people who don't necessarily contract directly with the limo drivers.

The bigger issue really came around what is, not Uber Black, but uberX, and Lyft, and the others, where you have regular people who have driver's licenses, not commercial licenses, and are not licensed limo drivers. One of the regulatory questions is, is the new school app-based match up ridesharing exempt from regulation, or indeed, are they a charter party carrier, or a taxi, or if they're operating in a different way, are you a passenger stage corporation? So among our goals were and remain to balance public safety, consumer protection, reliability, innovation, competition, as well as be mindful of privacy.

And I do want to underscore that we definitely support innovation in this realm. I personally voted a couple of times not only to create this whole category of transportation network carriers, but also ultimately for the system of regulation and insurance that we have adopted. I have been one of the leaders of the California Public Utilities Commission, in terms of the app economy. In fact, somebody asked me if I had a nice weekend in DC, and I did not because I was judging at an Apps for Water hackathon on Sunday night, and then took a red eye here. This is the seventh hackathon where I have been a judge. We've done apps for energy, and apps for water, so we're definitely into the app economy in California. But we need to balance that with these other things, and one of my themes is that the old and longstanding issues don't go away just because of a new platform or to promote innovation.

In 2013, and when you look at our Decision 13-09-045, that code also tells you a little bit about when it was adopted, so in 2013, in September. And 045 is when it was adopted, pursuant to the rule-making that we initiated in 2012 to create rules and regulations, to protect public safety, while allowing new entrants. This is when we declared the transportation network companies as charter party carriers.

One of the things that we specifically determined was that TNCs do not meet the rideshare regulatory exemption. And also, this is very important, we also rejected the argument that TNCs were just an app. This is an issue that is still being litigated around the world, as some of these sharing economy companies, including the ones are involved in transportation service continue to argue that they are just an app. We rejected that and concluded that it was inconsistent with our authority to argue that we are barred from regulating our jurisdiction over a transportation service because of the means of communication used to arrange the service, right?

When telephones were new-fangled, that actually didn’t limit our jurisdiction over passenger stage corporations. And similarly, as we’ve moved to the app economy, that, in and of itself, did not undercut our jurisdiction nor do we believe should it undercut the potential consumer protection and public safety that is available, not only to the consumers of that service, but it’s also very important that to remind ourselves that, as we’re talking about transportation services, that it affects not only the consumer in terms of the passenger in that car, but everybody around them. The drivers of other cars, the pedestrians on the street, and as somebody who has had the unfortunate experience of being hit by a car while I was a pedestrian, it’s really important that the person hits you, first of all, that you survive, but that the person who hits you has insurance.

So we were very concerned about that. The extra concern about this is exemplified in cities like San Francisco, where, because it is a relatively small city in terms of geography, there are a lot of people in San Francisco who actually don’t have insurance. If you’re a pedestrian walking across the street, you can’t count on, as a regulator, that the pedestrians are going to have uninsured or under-insured motorist coverage to make up for any under insurance or underinsurance that a TNC driver might have. So one of the major things that we addressed, and really, a major sticking point in this regulation, was about insurance. We’ve had a lot of discussions within the proceeding about insurance, when insurance should be required, how much insurance should be required. And ultimately, our last decision in 2014 modified the previous decision to tighten the insurance requirements.

One of the things that was very important is that we also concluded that TNCs could not rely alone on the driver's personal auto insurance policy, because many personal policies include livery exclusions. This whole issue of insurance is actually a big issue for the sharing economy. And in fact, I think if not properly addressed, really could be the Achilles' heel. And that this comes up, not only with transportation, but also with things like hospitality with Airbnb.

One of the questions, is you get a place through Airbnb and you have a slip and fall, are you covered? Something happens, are you covered? Now, for those of you who have had the pleasure in law school of going through the whole thing of invitees, licensees, all of those things, there's some very complicated property law issues, but also insurance issues. I haven't had the opportunity or the need to look as deeply into the insurance exception for your homeowner's insurance. If you're renting out part of your home on a regular basis through one of these apps, does your homeowner's insurance cover you? I don't know, but as a homeowner, I would want to make sure. I've come to actually view, like, when I stay in San Francisco for the PUC work, I have the pleasure paying for hotel rooms myself, if I choose to stay overnight, such is the state government. But I view a hotel room as coming with insurance. In the price of the room, it includes insurance, as well as all of the other services.

This is a really important issue. We also had a lot of debates about the different periods within which TNC insurance was an issue. And one of the areas that was the area of greatest contention was the issue of the app-on period, which, in California, we call "period one." And then you also have the period when the passenger and driver were matched. We were quicker to come to agreement that, at the time when the passenger and driver were matched, that it was really important to make sure that there was insurance for that ride.

And I believe that this insurance is absolutely critical for the growth of the industry, as well as for everybody else, because the lack of insurance will undermine confidence in the industry. But one of the biggest sticking points was about the app-on period, when they weren’t yet matched with a passenger. Would there be insurance requirements? What would they be? Would the California minimums work out OK? But it was important to say that you couldn’t just rely on the personal insurance policy, because with the livery exclusion, then, if the driver gets into an accident, their insurance company may deny them because they were acting as a livery, or basically, in common carriage for hire. And so, we did conclude that insurance was necessary for that first period, when the app is on. And after all, really, that is what the TNC is advertising. Hey, there are cars available, and that’s the app-on period. The legislation also codified that. One of the things that’s an exciting development, we work very, very closely with the commissioner of insurance for the state of California, Dave Jones. We really wanted to thank Commissioner Jones and his staff for all their work on this. And working with the California insurers now, there are some new products that have just been announced within the last month, where TNC drivers will be able to buy a policy to add on to their personal insurance to be able to address this issue and not create the gap.

Now having regulated TNCs in 2013, address some of the insurance issues in 2014, now we have new wrinkles in what is, like, already old fabric of 2013 or 2014. One example of this is Hitch. This gets to the issue of sharing and multiple passengers to share rides to a destination along a similar route. You remember, I showed you that California Public Utilities Code 5401 prohibits charter party carriers from charging individual fares. If you’re going to be selling individual tickets or individuals seats, you’re a passenger stage corporation. That’s a whole different level of regulation than as a charter party carrier. The CPUC denied Hitch’s TNC application because of this, then later Lyft bought Hitch. Now we’re in a situation where we are aware that a number of the TNCs in California are offering rideshare. To date, we have not initiated enforcement, pending possible legislation, and we’ve sort of worked out a pilot thing to see how it goes. But this is definitely one of the issues that we need to address in the regulation, where, in part, what we’ve tried to do is squeeze new services into old regulatory forms.

Another new wrinkle in the old fabric is Leap. Leap Transit was offering, as of a couple months ago, premium bus service in the city of San Francisco that included coffee and a pressed juice bar. One thing that they did that caused consternation was that they removed the wheelchair lifts from their buses. I would also like to add that one of the things that we included in the transportation network company jurisdiction was the requirement for disability access. And so the fleet as a whole has to meet disability access standards. We also included nondiscrimination provisions, and a variety of other provisions. And the whole issue of meeting disability access standards continues to be one of the points that the TNCs are still working on.

So Leap applied to be a passenger stage corporation, because they were selling individual seats. We were initially going to deny them, because there's a particular rule for passenger stage corporations that you couldn't be licensed if 98% of your service was within the boundary of a city or county, and San Francisco is a city or county.

Then, Leap amended its application to include transport outside of San Francisco. We approved their passenger stage corporation certificate. This started the clock on Leap fulfilling certain obligations, such as submitting insurance, getting the California Highway Patrol to inspect their terminal and vehicles, submitting drug and alcohol testing, and submitting a letter of acceptance of the PSC certificate. So we await their filing. Leap began operating even before their filing, and so the CPUC has ordered Leap Transit to stop operating until the requirements are met.

This is a pattern that we've also been through multiple times with some of the TNCs or the newfangled PSCs. At one point, against uberX, we had a cease and desist order. Against a number of these services, we've gone through this pattern of cease and desist orders, and then regulation, and enforcement, back and forth. One thing I would really urge the providers in this space is, that I know that there's a school of thought, offer first, license later. But that really can create a lot of problems, and is not only illegal, but it really can put you in a very bad spot, in terms of insurance, as well as, I think, public confidence. So please work with your regulator and we look forward to receiving their application. Not just their application, but also their certification that they've complied.

As I've mentioned during this discussion, that the TNC, as well as sharing economy technology and model as a whole, they raise a variety of legal issues. We've discussed, in part, jurisdiction, state, local, federal. I shared with you some of the questions about state jurisdiction versus local taxi jurisdiction. We are here to discuss the interests of the Federal Trade Commission in this, and the Federal Trade Commission Act. I thought it was a very important that Commissioner Ohlhausen repeated that the FTC is not, at this point, contemplating enforcement action, but is very, very interested in consumer protection, antitrust and competition, and privacy, and indeed, that is their mission. We look forward to coordinating with federal agencies, as we have with our sister agencies, such as the California Department of Justice, and the California Department of Insurance.

Liability, that also doesn't go away. Insurance. One of the big issues that's being litigated is, is the driver an employee or an independent contractor? One of the panelists this morning repeated, seemingly with confidence, what the CEO of Uber said, which is that, emphatically, the drivers are independent contractors. Well, that issue is being vigorously litigated in courts today. Compliance with state and local laws and regulations, including disability access is an issue. Environmental regulations, such as about crowding, or the type of cars you have, intellectual property, just some of the issues raised in these models.

If you'll forgive me, a couple of hypos. In dealing with this whole area, a TNC incident caused me to say, Mrs. Palsgraf, in a sentence for the first time since I graduated from law school and studied for the bar. And if you haven't had pleasure of seeing the LEGO animation version of Mrs. Palsgraf, I've got the YouTube link there. If you have a few minutes to see what creative things bored law students can now do with LEGO animation, there is a wonderful, though not completely accurate, reenactment of Mrs. Palsgraf as they added a TSA agent, as you can see in the top-left.

But of course, the question is, when poor Mrs. Palsgraf, as depicted in the top-right, is hit by the scale after somebody else brings a suitcase filled with dynamite to a train station, then is the Long Island Railroad responsible? And the issue was, was this accident foreseeable? Was the causation too remote?

Here's the hypo that made me say Mrs. Palsgraf in a sentence. A TNC without a passenger, broadcasting that it's available. The TNC collides with another car. The other car spins around, hits a fire hydrant. The fire hydrant cover pops off, flies hundreds of feet, hits the leg of a lady who's on the sidewalk at the other end of the street and breaks her leg. Who's liable? You feel like you're back to law school? Then the question is, if you add additional things on that, what if the TNC local manager emails drivers daily events information? And what if the accident happened near the location mentioned in the daily events calendar? Does that affect our liability analysis so that it actually ends up being within the *Palsgraf* exception or not?

Earlier today on the panel, we also discussed autonomous vehicles. And someone brought up autonomous vehicles, and then the other panelists kind of laughed and said, oh, that's in the distant future. Well, I welcome you to the city of San Francisco, where my telecommunications advisor, Bill Johnston, took this picture of an autonomous vehicle on the streets of San Francisco. It's actually funny when you look at the faces of the people in the background, only two people are kind of looking at, and the rest of them are like, yeah, well, you know, how do I cross the street? So they're doing something else. It's so common there. The streets of San Francisco, the streets of Mountain View, where, actually, Google just reported that their autonomous vehicle got hit yet again by somebody else. And if you really want to see autonomous vehicles, the place where they're most widely deployed today is on farms. John Deere is the largest operator of autonomous vehicles, and you have many pieces of farm equipment that are operated autonomously. They can do tighter rows, you can get more yield out of them, and actually, the biggest constraint there is the lack of communications infrastructure in farm fields. So if you have some AVs that can't operate through satellite, that's a real problem. And updates are also a problem because of communications infrastructure. So when somebody was saying, if you have a car, you look like you're rural and you're not cool, in fact, the rurals are much cooler, because they're the leaders in autonomous vehicles.

Here's what we can see coming down the streets of San Francisco, that in the near future, TNCs may seek to use autonomous vehicles. And even before we get there, we get a number of questions, right? We do have an agreement with the California Department of Motor Vehicles for a test of autonomous vehicles. This is being done in a controlled, licensed, and studied way. But there are a variety of issues that they pose about liability, jurisdiction, insurance, consumer protection. There are also some really interesting issues. What about the embedded choices in the autonomous vehicle code? I mentioned that the accidents that

Google reported have been other people crashing into them. What if other people crash into them and somebody is hurt in the vehicle? Would there be a suit about the embedded choices in the coding, that the vehicle didn't take evasive action? Now, apparently, these things could be programmed to protect themselves above all others, but that would really create a lot of issues if you coded it to protect the car. Or to protect the car occupants above others. So there's all these ethical choices that are really embedded in that code. And so, making that also known and the subject of public debate as well as consumer awareness, I think, is important, and is an area that I would commend to the FTC for their consumer information, as well as privacy and consumer disclosure issue. But also, when you have an accident, who do you sue? The maker of the hardware, the operator of the software, the operator of the service? Who carries the insurance? In California, because we have initiative and referendum, insurance is determined based on your driving record. There's no driver, so whose insurance, Google's, the car's driving record? This is one of the issues. Who is licensed to drive? Licenses are granted to people. There's no person. And then also, with regard to riders, privacy issues, and this comes up with any form of TNC where you have tracking, and in fact, some of the services have mentioned that they have a God view, that they can see everything, but who else could be tracked?

And then when you look at other emerging issues, so is a licensed driver required in a driverless car? Any license or insurance required for passengers? Access insuring a passenger data or trips, privacy issues, which is, I think, both a federal and a state issue. Terms of service and scope of contract. Again, a classic Federal Trade Commission deceptive conduct concern about the contract, as well as, this is an issue that we really looked at, at the California Public Utilities Commission, in terms of contract. What I call the internet of things and the internet of dings, right? The unpredictable, people, events, bicyclists, and mother nature. Google reported several times that it's been hit by other cars. I have really bad luck. I was hit as a pedestrian. I was hit two years ago on the freeway by another car on the way home from a commission meeting. I was hit by another car last year, right before Christmas. And then this year, a bicyclist hit my car and tore off the side view mirror. I swear, it was never my fault, any of these things. And then birds, all kinds of things, but who's responsible? Software embedded choices, software upgrades. What if a passenger overrides the route the car chooses for a variety of reasons? Navigating road obstacles. What about a tire blowout, maps, navigation, loss of signal to the car. There are a variety of issues that need to be looked at.

Here's why I'm bringing this into this discussion, is that we can see, coming up the street from Mountain View, that there will be a time when TNCs and perhaps passenger stage corporations will seek to use autonomous vehicles. So one question is, we're talking about this within the context of the sharing economy. Is this really the sharing economy? Would that depend on who owns the autonomous vehicle, and who operates the autonomous vehicle? Just because somebody licensed as a TNC operates the autonomous vehicle, are they still a TNC? Does that change anything? And should it change our thinking about the sharing economy? Would these autonomous vehicles be used for hire as passenger stage corporations, charter party carriers, or TNCs, whether offering individual fares, or a set of rider-designated routes? These are some of the regulatory and legal issues that we need to address.

I've given you an overview of our experience in California, we have consulted with other states as they have gone through some of these issues. I remember when I first suggested to my colleagues at the National Association of Regulatory Utility Commissioners that we should have a forum on transportation network carriers and this whole sharing economy regulation, one of my colleagues said, you know, Commissioner, I am inclined to say, only in California. Well, by the next year, we had a panel called "Uber, Uber, Everywhere, What Are Regulators to Do?" This is an issue that a number of states, and now countries, are handling. As we look at these issues, one of the basic themes here is that, what is old is new again, and that just because the technology has changed and the platforms have changed, it doesn't mean that old-fashioned issues go away, like consumer protection, insurance, liability, and making sure that people are safe? And I think getting these things right is going to be critical to consumer acceptance and use of these services, to the growth of the services, and to creating new choices for competition and service.

Thank you, very much.

[APPLAUSE]

PANEL 3: THE INTERPLAY BETWEEN COMPETITION, CONSUMER PROTECTION, AND REGULATION: BUSINESS AND REGULATORY VIEWS

Panelists:

- **Matthew Daus, Partner, Windels, Marx, Lane & Mittendorf, LLP; former Chairman, New York City Taxi and Limousine Commission**
- **David Hantman, Head of Global Public Policy, Airbnb**
- **Ashwini Chhabra, Head of Policy Development, Uber Technologies**
- **Brooks Rainwater, Director, City Solutions and Applied Research Center, National League of Cities**
- **Vanessa Sinders, Senior Vice President and Head of Government Affairs, American Hotel and Lodging Association**

Moderators:

- **Julie Goshorn, Attorney, Office of Policy and Coordination, Bureau of Competition, Federal Trade Commission**
- **William F. Adkinson, Jr., Attorney Advisor, Office of Policy Planning, Federal Trade Commission**

JULIE GOSHORN: Panel Three. So is that the number we're on? Panel Three, please—OK. We've got your seats set up for you.

[SIDE CONVERSATIONS]

JULIE GOSHORN: Yeah, I saw them just a few minutes ago.

WILLIAM ADKINSON: OK. Thank you, Commissioner Sandoval. It's a great way to start the afternoon as we address some of these regulatory problems that have arisen and challenges too—We will have the same procedure on this panel that we had for the morning panels. If you have any questions or comments, please write them on the cards that have been made available, and there will be a paralegal walking through to pick them up and bring them up here. So thank you, very much.

And now we will introduce Panel Three, which is The Interplay Between Competition, Consumer Protection, and Regulation: Business and Regulatory Views. We've put together a panel that primarily addresses two sectors, and I'll let you figure that out from the introductions of the panelists.

We have Matthew Daus. He's a partner at Windels Marx Lane & Mittendorf, and he's former Chairman of the New York City Taxi and Limousine Commission. David Hantman, Head of Global Public Policy, Airbnb. Ashwini Chhabra, Head of Policy Development at Uber Technologies. Brooks Rainwater, Director, City Solutions and Applied Research Center, National League of Cities. And Vanessa Sinders, Senior Vice President and Head of Government Affairs, American Hotel and Lodging Association.

JULIE GOSHORN: So let us just start off the panel by asking our panelists to give us an overview of the important issues they'd like to discuss. Maybe one idea is to tell us about your perspectives on regulation and competition in the sharing economy. But really, this is for you to tell us whatever you want to tell us. Ashwini, go ahead please.

ASHWINI CHHABRA: Sure. Thank you to the Commission staff for the opportunity to be a part of this very important conversation today. I'm Ashwini Chhabra. I'm Head of Policy Development at Uber Technologies. My pleasure to talk to you today about the many consumer benefits of ridesharing and the role of smart regulations in ensuring that these sorts of innovations flourish.

Prior to my current role, from 2010 to 2014, I was the Deputy Commissioner for Policy and Planning at the New York Taxi and Limousine Commission under Mayor Bloomberg, following Matt's tenure there. I held that role in a very interesting time for the industry. Uber was founded in 2010 and first came to my attention when it entered the New York market in 2011. I've been grappling with some of the questions we'll be discussing here ever since.

I believed then, and I believe now that what we need for the 21st century innovation are equally innovative 21st century regulations. Uber's been working closely with legislators and regulators across the country to achieve just that. Now, more than 40 jurisdictions, including 20 major cities, 19 states, and Washington, DC already have in place smart, forward-looking regulations that both ensure public safety and consumer protection, and embrace the innovations that Uber and others have introduced.

Smart regulations require thorough vehicles inspections. They require rigorous criminal background checks and driving history reports. They require adequate and appropriate insurance in place to protect passengers and the public. And they require that drivers will not discriminate in the provision of these services. And that's exactly what these 40 jurisdictions have in place today, smart regulations that protect consumers while permitting innovation. I'm happy to share each of those pieces of legislation with staff.

It's important that these regulations permit peer-to-peer ridesharing platforms to flourish, because they represent one of the first real, purpose-built innovations in an industry that hasn't seen much innovation for decades. The establishment of platforms that tap into a broader supply of vehicles and drivers than was previously possible, largely due to artificial regulatory barriers, and the resultant ability to provide a reliable cost-effective service at scale bring with it a whole host of positive effects for riders, drivers, and the cities where these platforms operate.

For example, having a large scale flexible service allows people to find a ride even if they live farther out from downtown areas, in neighborhoods with poor or nonexistent taxi service. In Chicago, for example, one out of every two Uber trips starts or ends in an area the city deems to be underserved by taxis. One African-American commentator noted, quote, "the quality of our lives improved tremendously once we found a workaround to dealing with rude and racist cab drivers." Another appreciated that Uber's guiding principle, quote, "is based on the color of the money in your pocket, and not the color of your skin."

Reliability and affordability also translates into fewer incidents of impaired driving, as riders are able to make smarter decisions when they most need to. The 10% decline in DUI arrests in Seattle after Uber entered the market and a 6.5% decline in alcohol-related crashes involving under 30-year-olds in California following the launch of uberX are two examples of that impact. Data also reveals that a significant number of rideshare trips start or end at mass transit terminals. By connecting communities with few or no mass transit options to the transit network, the crucial last mile, ridesharing helps reduce commute times, increase productivity, and bring more job opportunities within reach of more people.

Rideshare platforms also provide people a new option for earning. These platforms support flexible and short-shift work schedules in a way that traditional models simply cannot.

Drivers choose when and for how long to work. When surveyed, this is an aspect of the Uber platform that over 2/3 of drivers found to be compelling.

The safety of Uber's platform also expands women's economic opportunities, in particular, by insuring a safer and more respectful work environment, allowing them to pursue entrepreneurial work opportunities in what has historically been a male-dominated industry. A recent survey revealed that approximately 14% of Uber drivers are women. That compares to less than 1% of New York Yellow Taxi drivers.

Ridesharing also benefits small businesses throughout a city. Because riders know they can rely on an Uber ride back from wherever they're going, the platform encourages people to travel more widely through their city, visiting a more diverse range of neighborhoods than they otherwise would, and patronizing small businesses that can't afford prime downtown real estate. In Chicago, one in three trips on the Uber platform last year began or ended at a small business.

And finally, competition from rideshare platforms has also encouraged service improvement by existing providers. Taxi fleets across the country are now using e-hail apps to dispatch taxis in an intelligent manner. In addition, a report released by the Technology Policy Institute concluded that, faced with competition from Uber, taxis are improving their service. Examining New York City taxi complaint data, the researchers found that the number of complaints per taxi trip in New York has declined alongside the growth of Uber in that market. Looking at comparable data from Chicago, they found that certain complaints, driver willingness to turn on air conditioning, and acceptance of credit cards, driver rudeness, talking on cell phones, all have decreased along with Uber's entry and competition in the market.

So as we consider what regulations and safeguards are appropriate here, it's worth noting that cities and states are already making this determination, and those jurisdictions are already seeing the positive effects of that determination. In a manner of speaking, the legislative marketplace is already solving for this. Thank you.

JULIE GOSHORN: Thank you. Matt, would you like to give us your thoughts please?

MATTHEW DAUS: Sure Good afternoon. First of all, I want to commend the FTC, Marina, and all the staff for doing this. I think it's great to have a dialogue on these issues, and to also deal with the hotel and Airbnb part, because we've never dealt with each other before. But it's good to be here.

My name's Matt Daus. I'm the former Taxi Commissioner of New York City. Was there for a very long time. My perspective is one which is very unique. I've been doing this for 20 years. I worked for the government for a very long period of time in a variety of capacities. I was General Counsel of the TLC for many years. I was there for 14 years. I was commissioner for 8.5.

Now, all I do is live and breathe this issue, and transportation. I'm a distinguished lecturer at City University of New York where, day in and day out, we do research, symposia, and I teach a variety of courses, including transportation history, policy, sustainability, and tech transportation technology. I also have been recognized by courts, legislative bodies around the world as a transportation technology expert.

My viewpoint is that now I'm in business, I'm in academia, and I was in government for a long time, so I think I've seen it all. I've spent my entire lifetime fighting with the incumbent industry. Now, I think for the first time, on some issues, I've actually sided with them, which I found unbelievable.

But my viewpoint is very simple. Let's just break this down to the common sense aspect of this, OK? And maybe this is not a topic for the sharing economy. I don't really know what we're sharing. This is about a person getting into a car, going from point A to point B, and paying money for it, and a company making a profit.

That is called transportation for hire. In my view, there is absolutely, positively no difference between taxis, limos, jitneys, Ubers, Lyfts, TNCs. It's all the same stuff, yet we're coming up with these incredible definitions and clarifications, and I'm just try to throw some water on everybody's faces—here to just listen to what we're talking about with these new laws.

I mean, this is not about the sharing economy. It's not like Airbnb, and taking someone's property. And if you looked the definition up of a sharing economy, sharing economy is to take existing resources that people own and share it, and to try to help the environment, OK? By creating and flooding the streets with transportation network company vehicles, we're hurting the environment.

So I love when millennials approach me and say, well, we need to use TNCs because it's the future, but we also want to stop climate change and help the environment. Yet, you're flooding the streets as a result of this hostile entry into the market with vehicle after vehicle. And you know what? They're not sharing, until recently. Three years went by where, until Uber created uberPOOL and Lyft Line, and the first person to do it was a company called Via. There's no sharing going on.

These are one person, on average, one driver. So I'm not really sure if this is the right platform to discuss the issue. It's not the sharing economy. It's about for-hire transportation. There's some real—and I'm sure we'll get into the details, I don't want to take up the intro time too long—but there's close to 30 or 40 lawsuits around the country on anti-competitive behavior by the companies that have entered the market.

There's a variety of different lawsuits that are going to mold this debate. There are laws that are being passed. And finally, finally, a couple of cities, I think, woke up to the reality that, you know what? Why do we have different background checks for different drivers? Why is it that the life of somebody who gets into a car that's a, quote, unquote, "rideshare car" needs to have less of a background check.

And I authored a report, which I've entered into the public record at the request of the FTC that is 150 pages or so, comparing the self-regulatory driver background checks that are being done by private companies that are authorized by these new laws, only for the TNCs, as opposed to the ongoing requirement under these new laws that the taxis and limos that are doing the same thing have to get these biometric, more accurate fingerprints that are being done by the government. The government makes the decision for taxi and limos on whether you're safe or not. Under the TNC laws that are being passed around the country, they're allowing private companies to hire private background checks that are not as accurate, and are inferior. And I have John Jay professors and people from around the country, criminalists, criminologists, people who know more about this than me that authored a report that say just that.

It's in the record. I encourage you to read it. There needs to be a level playing field. I don't care where we end up—well, I do care where we end up, somewhere—but we need to have the same standard for all. "One Standard For All" is the name of the report.

That's all that I ask. I represent the regulators internationally, the ITR, and that's all that we care about. Public safety, consumer protection, like the FTC does, and you know what? Whatever we decide, it needs to be the same standard for everybody, and that's my main point. Thank you.

JULIE GOSHORN: Thanks, Matt. Brooks, would you share some perspectives with us from the city?

BROOKS RAINWATER: Sure. Good afternoon, everyone. Great to join you here today. My name's Brooks Rainwater.

I'm from the National League of Cities. At NLC, we're the nation's oldest and largest organization devoted to strengthening of promoting cities as centers of opportunity, leadership, and governance. We represent 19,000 cities and towns, and more than 218 million Americans. And through our Center for City Solutions and Applied Research, we provide research and analysis on key topics and trends important to cities, creative solutions to improve the quality of life in communities, inspiration and ideas for local officials to use in tackling tough issues, which I can confidently say, encompasses the sharing economy, and opportunities for city leaders to connect with peers, share experiences, and learn about innovative approaches in cities.

So we are very interesting trends surrounding the sharing economy, and have thus far released three reports, which I'll cover briefly in just a minute. So city leaders across the country are working to understand and incorporate the sharing economy into their cities, and are being presented with a new set of challenges and opportunities. Community residents crave these new collaborative opportunities in commerce, and at the same time, expect these on-demand services at their beck and call. The sharing economy is thriving as a result, and its upending traditional industries, disrupting local regulatory environments, and serving as a bullwhip for innovation and growth all at the same time.

And so, when we've kind of gone into our research, what we were doing is really looking at ridesharing and homesharing in particular, starting out late last year and doing a sentiment analysis around the top 30 cities by population. And what we're trying to figure out is what cities were bringing in the sharing economy, allowing these companies to operate, either through regulation, or through just practice. And what we found is about nine of the top 30 largest cities were allowing the companies to operate, and the other 21, it was a mixed sentiment.

And so, this kind of led us to wanting to do a bit more on research, and so, we worked together with the University of Pennsylvania and released a report just a few months ago, "Cities, the Sharing Economy, and What's Next." And this was the best practice examination, and what we were trying to do is, we looked at about a dozen cities throughout the country, had in-depth interviews with city officials, and what we're finding there is that, many cities really want to welcome the innovation that comes from these companies. But at the same time, they're concerned about the regulatory disruption that comes about.

And so, you really have a mixed bag on cities that are bringing the companies in, allowing them operate. And others are looking at issues, whether it be zoning issues on the homesharing side, whether it be all of the issues that come up on the transportation side. And so what we're really trying to do is serve as the focal point at the national level where we can have a conversation, both with the operators, as well as people from the nonprofit and academic community, and at the same time, allow cities to look at it from that national perspective. Because when you're on the ground, sometimes, it really gets caught up on what's happening in your individual community.

And at the same time, we really do think that local control is what matters, that we're finding interesting things happening at the city level, and sometimes we get a little bit concerned when operators are going to the state level to try to pass laws, because maybe the city level isn't really operating, and things aren't happening the way that people might want. We really think that there's real nice kind of interrelation that needs to happen between the state and local level. But at the end of the day, as I mentioned, local control matters most, and we want to see cities be the place where the sharing economy opportunities and innovations happen.

And so I think that the big takeaway that I would have is that cities can learn from one another on the regulatory front, what works and what doesn't. One of the things we've heard continuously is that cities want data from the providers, particularly the transportation network companies. And so what we found in our latest research piece, Shifting Perceptions of Collaborative Consumption—which is our survey on the sharing economy—is th[e] concerns about the sharing economy. At the top was public safety. 61% of cities saw safety issues as their primary concern.

On the benefits side, there were three key areas. Improve services, increase the economic activity, increase the entrepreneurial activity. And these really came in right about concordant with one another, at 22%, 20%, and 16%, and then we had a few trailing other issues as well.

One of the other areas I'd mention, as I close out, is the city growth and support of the sharing economy. We're seeing rapid growth of the sharing economy happen throughout the country, particularly on the ridesharing side. 19% of cities throughout the country said that they'd identified rapid growth happening within that space. On homesharing, it was 11%. And finally, I'll close out here saying, that local governments broadly support the sharing economy. 71% of local governments have identified—well.

[LAUGHTER]

JULIE GOSHORN: Sorry about that.

BROOKS RAINWATER: That's all right. Let me see. So we can go through a few of the slides here in my final 30 seconds. Yeah. What I'll do, actually, is go through to some of our findings from our latest report. Just give you the overall numbers.

So here you go. As I was mentioning, public safety was the key concern, while you saw on the benefits side, improved services, economic activity, and entrepreneurial activity. Moving to the next area, we saw city growth in the sharing economy happening quite a bit. When you look at combined overall growth, a majority of cities saw growth in that space. And then on the support side, we saw more support for ridesharing than we did homesharing, broadly speaking, at 66% versus 44%.

And then the final piece here I'll talk about is our regulatory response to the sharing economy. We often hear about all the regulation happening in cities around this space right now, but it's really kind of started out at the larger city level. What we were doing is doing a survey of all cities over a population of 50,000, because we want to see how the sharing economy's percolating throughout the entire country. And what we found here is, still the majority of cities are not yet regulating this space.

And when the cities rate the importance of developing new sharing economy policies, by and large, cities see it as incredibly important, with a bit more on the ridesharing side than homesharing side. And with that, I look forward to talking more about our results here. Thank you.

JULIE GOSHORN: Thank you, Brooks.

WILLIAM ADKINSON: The slides will be available on the website, if they weren't clicked through here.

JULIE GOSHORN: Switching now over to the accommodation side of the table, David, please give us your remarks.

DAVID HANTMAN: Thank you. And thank you for holding this panel today, and for taking the time to request and review online comments, as well. I think those of us in the room often spend our time advocating on behalf of the people who are really engaged in the sharing economy. But the most important thing government can do is to hear from them in person, or in this case, online, and I know thousands of people have engaged in this forum who aren't in the room. So I'm very appreciative of that.

This is a critical time for government and for these platforms, because now's the time when government and industry can develop best practices. To develop these practices is going to be tough, but we need to figure out how to encourage innovation and personal empowerment. We're all engaged in these discussions around the world. This is an important step, because we found that the more people learn about the sharing economy, the more they support it.

The biggest foe we face is not any one industry or any group. It's actually misinformation about what's going on in the world. And as we've already seen today, there's even a dispute within people dealing in the sharing economy with what the sharing economy really is and what companies are doing, in terms of sharing versus profit.

So the good news is, for government regulators, that online platforms like Airbnb have, I think, lessened, probably not surprising, I think, that the need for strong government intervention. Consumers now have more information and choices than ever before, and it's increasingly the case that online reputation systems that reward good behavior and punish bad behavior are serving much of the purposes generally served by regulation. In the past, customers had no choice but to hail a taxi, or use a hotel. They didn't know much about what they're getting into, but now they have choices. They can understand the pros and cons of those choices.

So the government has a role and can play a strong role, but that role, I think, must change with the times. As consumers have more information, consumers need less protection. I am the Head of Global Public Policy for Airbnb, and I travel around the world on behalf of our hosts and our guests. And I've seen firsthand, for about three years now, how many regular people are being helped by the sharing economy.

Tens of millions of people are benefiting with a little extra time, a little extra money, and more social experience. They spend more time with their family. They can pay for medicine. A majority of our hosts say they rely on the income from Airbnb just to stay in their homes.

So they get to stay in the neighborhoods they grew up in. They get to pay the rent. They get to pay the mortgage. That's a big deal.

Our company was founded in 2008, and is pretty simple. It's a trusted community marketplace for people to list, discover, and book unique accommodations. Since 2008 over 35 million guests have had a safe and positive experience on Airbnb. 35 million guests. More than 25 million of those guests are in the last year alone.

We've worked hard to provide tools and resources that promote transparency and trust, and we're proud to be a global leader in providing education on these issues for our community. To us, trust is the most important thing. The only reason people use our platform is for the transparency and trust. Our only product is really that transparency and that trust. We provide tools, but the real transaction is between guests and hosts, travelers and people who live in cities, and all we're doing is helping facilitate those transactions.

Through sharing economy platforms like ours, consumers have access to more services and more information about those services than ever before. Millions of people are now empowered to help make ends meet, whether it's with apartments, cars, power tools, or their own time. A lot of people just use their own time and downtime to provide services to others now, where they couldn't before, because they can connect with people who need those services.

Data shows pretty clearly that Airbnb attracts new visitors, who stay longer in cities. They spend more on local businesses. They stay in locations different than traditional hotel districts. And they're more likely to return to that city, based on their experience.

All the while, hotels are as full as they've ever been, and are able to charge historically high rates. So there's a pretty clear proof in the data that we can all live amongst each other. It's not a zero sum game. More and more people are coming into the tourism market, partly because of us, probably because of hotels, partly just the nature of the world getting smaller, and everyone can benefit.

Cities benefit enormously from Airbnb stays. We've brought more than a billion dollars into New York alone last year. And that's even before they're allowing us to pay hotel taxes, which we've asked to be able to pay, and so far cannot. But the broader economic benefits are not just the cities. It's actually to the individuals.

So many hosts, as I said, depend on this extra income to avoid foreclosure, stay where they grew up, spend a little more time at home. The lists of how people use this time and money just goes on, and on, and on. People have started businesses, written books, become musicians, spent that last year with their parents. Just an incredible list.

Bottom line is, roomers and boarders have existed for hundreds, and probably thousands of years. It's an age-old activity. Governments haven't paid much attention to it in the past. The irony is that, now that it's more public, and more transparent, and safer online, governments are paying more attention. And I think it's at the very moment that governments are paying the most attention that they don't need to pay as much attention. And so, I think the most important thing is education and forums like this, where we can get the word out about what the sharing economy is and is not.

We do think regulation—fair regulation—is needed around this. Not every company is responsible. Governments shouldn't stop paying attention. But I think this new information sharing between consumers, ratings and background checks, online reputation, really makes it a lot easier for consumers to get what they need.

So we've seen San Jose and Amsterdam and Paris and London, and a number of other cities come the right way, and pass laws allowing homesharing, that we think there's going to be a lot more in the future. There is a balance to be struck here to differentiate between businesses and individuals. People doing something once in while with their own property to make ends meet is something very different than someone doing it full-time as a business, in multiple locations, or multiple cars, and I think it's important to get into those differences here today. So I'm glad we're here, and I look forward to the discussion.

JULIE GOSHORN: Thank you, David. Vanessa, please give us your thoughts.

VANESSA SINDERS: Right. Thank you. Thank you for having me here today. My name is Vanessa Sinders, and I'm with the American Hotel and Lodging Association. We represent the entire hotel industry across the United States, from traditional bed-and-breakfasts, small properties, independent hotels, to the big brand companies and major ownership groups.

Competition is a hallmark of the lodging industry. We welcome it. It makes us better and stronger. It drives growth, more jobs, innovation, new technologies, and new models on how to better serve our guests. And as one of the most competitive industries out there, we see this every day. And it's a great time to be in the hotel business. We're experiencing dynamic growth and opportunity.

Our industry is responsible for 1.8 million jobs in communities across America, and has been one of the few bright spots of job creation during the recent economic recovery. We have also contributed billions of dollars to federal, state, and local coffers. Last year alone, we generated $134 billion in business travel tax revenue.

Our industry remains successful because our members embrace a highly competitive business model where everyone plays by the same rules. And that is what we are here today to discuss. Right now, there is an unlevel playing field that is compromising consumer safety, endangering the character and security of residential neighborhoods across the country, and changing the housing market in some negative ways. The hotel industry is all about the guest experience, and providing our customers with extraordinary service and a safe and secure environment from start to finish. Indeed, we in the hotel business are guided by certain overarching principles, insuring the safety and security of our guests, providing quality guest service, being good partners in the communities in which we operate, grow, and develop them, and importantly, provide jobs and a pathway to upward mobility for our employees.

Yet, increasingly, we hear concerns about new market players that undermine these principles and raise questions about consumer safety and the changing face of communities and neighborhoods. Market players handling transactions, especially ones like Airbnb, which is an estimated $20 billion enterprise, have certain obligations to uphold, such as ensuring that the fair share of taxes are paid, not picking and choosing what taxes to pay, ensuring that common sense, safety, security, health, and fire standards are followed, not picking and choosing what standards are important. Hoteliers follow a strict set of rules and regulations to ensure the safety and security of our guests and communities, and we take these responsibilities seriously.

But there are a lot of questions about whether the same can be said for some of these new companies, such as Airbnb, even further, their mere existence may violate the law in some places. New York is a prime example. The state's attorney general found that 72% of short-term online rentals listed on Airbnb in New York City are illegal. And his report also showed that this is not about the mom-and-pop or grandmother occasionally renting out their apartments to make some extra money on this side. The report revealed that 6% of hosts on Airbnb dominated the site, generating nearly 40% of total revenue.

This is a clear indication that Airbnb is making a substantial amount of its revenue off of illegal hotels and those that are doing this as a business. These are not mom-and-pops. These are individuals and companies operating multiple properties as a business.

These are not students making ends meet. They are rogue commercial interests. They are simply illegal hotels, and they should have to meet the regulatory obligations of the jurisdictions in which they operate as hotels do, to protect the health, safety, and well-being of their guests, as well as the safety, security, and character of the neighborhoods in which they operate. Simply put, we believe that if you look like a hotel and if you act like a hotel, then you should be treated like a hotel.

Today's discussion here at the Federal Trade Commission, a body whose job it is to protect consumers, is an important one. It will set a path on how best to ensure that, as new platforms come to market, engaged in commercial transactions, they respect the rules of the road and protect the safety and security of guests and surrounding neighborhoods. Consumers, homeowners, and communities are counting on us to get it right. Thank you.

JULIE GOSHORN: Thank you, Vanessa.

WILLIAM ADKINSON: Great. Thanks, very much. We plan to run through several key issue areas today. And since there are two sectors to discuss, we're going to do it pretty quickly, and counting on our panelists to be succinct. One possible way to address the first question, which is a question of how providers in this space, both the traditional suppliers and the sharing economy suppliers, address consumer protection and third-party protection concerns.

And as Brooks mentioned, there is very strong evidence that safety is a key concern among regulators and cities, and that regulatory disruption is a key concern. So maybe if I'd start with David, since Vanessa had a chance to lay out some of her thoughts. Your comments, Airbnb's comments set out some of the mechanisms you adopt to help protect consumers and third-parties, like a verified ID and payments processing. So perhaps you could describe those, and perhaps you could also expand on your distinction between full-time and part-time people working on Airbnb, because that might also go to some of what Vanessa was talking about.

DAVID HANTMAN: Sure. Thank you. And I will say, it's interesting, I mean, I agree. I think we find ourselves pit against each other, but I actually think, I really think this, that over time, we'll realize we're on the same side.

We and the hotel industry are both growing tourism. We care an enormous amount about safety, to your point. Obviously, companies can't function if things are unsafe. No hotel could function if people were getting into trouble in that hotel, nor could the sharing economy work if these, sort of, mechanisms of trust weren't engaged.

So we have a verified ID system, where hosts and guests can connect and verify who they are, based on their offline identity, which is, like, a driver's license or a passport, and their online identity, like Facebook or LinkedIn, just to make sure you know you're dealing with. We have a team of a few hundred fraud, and prevention, and safety experts, who constantly monitor the site to make sure that people aren't cheating each other. We do hold the payment when a guest books. The guest gives us the money, we hold the payment until about a day into the stay to make sure that person actually showed up and turned over the key, that there wasn't any funny business, and then we turn over the money. We obviously know who people are, and so there's a big trust there.

But the most important thing is not something we do. It's simply the tool we offer, like eBay, which is the rating system. Every guest and every host rates each other on a five star scale, not just on overall stay, but also on cleanliness, and accuracy, on location, price, to get us that communication just so that when I want to stay with someone or I want to host someone, I can understand, sort of, who they are. There's also a period where you can ask questions of each other.

How many people are you bringing? Do you smoke? Do you have pets? What kind of person are you? Do you have references?

Can I look at your Facebook friends? Whatever you want to feel comfortable to let someone in your own home. And I think this gets to the point that Vanessa made, which is, if you look like a hotel, and you act like a hotel, maybe you should be treated like a hotel.

But more than 90% of our people in New York, for instance, have only their own home that they list. It is people who do this for a once in a while, right? And I think AG report aside, and the fact that there are a small number of people who go across these sites with multiple listings, many of whom we've already taken off, the vast majority of people doing this are in the sharing economy, earning a few thousand a year, and we should be figuring out what to do with those people. And so our tools are designed to help them develop this trust between each other.

WILLIAM ADKINSON: Vanessa, you have any thoughts on that in terms of regulation of hotel-like entities?

VANESSA SINDERS: Mm-hm. Well, I might just start by saying, from the hotel perspective, safety, again, is of utmost importance. I think David and I agree on that point. But let's just talk about what a hotel does when they have to open. Say, they're opening here, in Washington, DC.

Before they open, they have to have a basic business license, a certificate of occupancy, which is only given after various safety, security, and zoning regulations are met, a fire marshal inspection, as well as, once they open, they have to have regular food service inspections, keep an updated fire egress plan, and abide by a whole host of other safety and security rules. When a guest checks into a hotel room, they know that they are handing over their credit card in a safe and secure way. When they walk into the hotel room, they know they will have clean sheets and a sanitary environment, and that they also have recourse if it doesn't meet their standards. And I think, from our perspective, that's just not necessarily the case with Airbnb and the rentals facilitated through Airbnb. It can be a different experience.

DAVID HANTMAN: So I think just two points to that. One is, does anybody really think that, if you're hosting someone and your family, or your friends, or someone's just borrowing your apartment because you went to school with them for a week, that you should have to do all of the things that a hotel has to do? I don't think people would agree with, and that's sort of what's going on here. There is a scale.

There are people who do this for one day for free for their mom. Obviously, they should not have to get a business license. They should not have to get central sprinkler system, security, et cetera. And there are people who do this in multiple units in the same building around the clock for money, like a hotel. And those are two incredibly different things.

And I think the problem we face, and which is why it's so important to be here today is that not enough people are differentiating between that. It's easy to say that there are some bad guys. Let's treat everyone with the same brush. Why don't we focus on the thousands and thousands of people who need to do this to make ends meet, who do this for a couple weeks a year. It's very different than a hotel environment.

And we keep trying, and we keep failing, and I get there's some competitive pressure here. Look, in New York, for three years, the hotel industry, the lobbyists said, it's not fair because they're not paying taxes, it's not fair because they're not paying taxes. So we said, fine, we'll pay taxes.

And they said, don't let them pay taxes. So we face this problem where we try, and try, and try, and we are working on all these safety initiatives, but we can never get quite far enough to please people who, I guess, are competing with us, or think they are. I think I would say, we're not competing, and so we should all be together on this.

WILLIAM ADKINSON: Brooks, I was wondering whether you might speak to the question of whether cities need more data in order to make the sorts of distinctions that were just described, distinguishing between people who are doing it around the clock in multiple units. Do you have any sense of how cities want to address that?

BROOKS RAINWATER: Yeah, definitely. With the interviews that we've had with cities, this is something that comes up time and time again. That we've heard some great claims here on stage today from both Airbnb and Uber about the data that they're seeing in cities. But it's one thing to hear, kind of, specific issues and, kind of, hear from a couple of cities. Being able to actually delve in and look at that data across the country would be amazing, and I think that's where kind of a partnership between cities and many of these platforms could really grow and could really flourish.

Because some of the stories that we're hearing, whether it be on quality issues, whether it be on how many people are actually renting out their spaces for just a short period of time, they sound great. But I think we really need to, kind of, verify that that's actually happening. And one thing that's interesting with the commentary that just happened here is, it kind of reminds me of what's happened in a few cities on ridesharing, where you have people that are driving just a few hours a week regulated in a different way than those drivers that are driving full-time. And I wonder if there might be, kind of, a regulatory structure that could take place that would be similar, if we were able to see what kind of data actually shows what's happening in the homesharing space as well.

WILLIAM ADKINSON: Great. Matt, I'd like to turn to the taxi and ridesharing arena. And I guess, in particular, two things. Could you talk about how consumer safety, and quality concerns, and pricing concerns in your market are addressed both by taxis and by regulation. And also, I wonder whether you had any thoughts about Commissioner Sandoval's point about, I'll call it the enter, then license sequence?

MATTHEW DAUS: Sure. Well, first, as a nice segue from Airbnb and hotels to transportation, very scary that we're on the same stage. The FTC has assembled Uber and Airbnb. I'm afraid there's going to be, probably, an app after this is over, where people can, like, sleep in their cars or something.

[LAUGHTER]

So anyway.

DAVID HANTMAN: Working on it.

MATTHEW DAUS: I figured that.

[LAUGHTER]

But seriously, there's a lot—I mean, Commissioner Sandoval, I think, was the one commissioner, if I remember correctly, that listened and actually held a hearing and convened everybody to talk about the issues. I don't agree with that law. Our regulators don't agree with that law, even though the California PUC is a regulator. We don't think it goes far enough.

And really, what the problem is with regulation is that it's disjointed. It's local in nature. That it's done at the very local level. And there's been a push now to get state regulation, but without any real teeth, and almost in a way, to deregulate the market. And we talk about the regulation in our industries. There are the basics, and then there's entry. I don't think there's any question that Uber has entered the market, and is taking it over completely.

I probably think the competition argument that they may have made three, four years ago no longer holds water. It's the tail wagging the dog. But I think the big issue is the basics, the spin, the debate. I correct myself. The only thing that is really the part of the sharing economy with Uber-Lyft is that they're sharing drivers with the taxi and limo industry.

Basically, they've taken their limo drivers, they've taken their taxi drivers, they're using them for the peak hours and the cherry-picking times of day, but also, they created a lot of jobs for new people coming into the market. But the basics are the basics. I don't care whether it's an app, or no app, or whether it's a horse and carriage, it's somebody getting into a vehicle. And is the driver safe? Is the driver going to cause harm to you?

There's this spin about the traditional industry versus the nontraditional, the new innovators. And those distinctions are being made up by the folks that want to say that they're new and different. There are several levels of regulation, some of which are unnecessary and overkill, and there are others that are the basics that never should change, regardless of what century we're in. And that comes down to criminal background checks, the safety of the driver, people not getting ripped off, consumer protection, and insurance.

On the insurance issue, I think there's some wiggle room there to come up with a solution, but it should be for everybody. Because at the end of the day, if there are part-time drivers, maybe the insurance companies can reduce the risk of somebody, from an underwriting standpoint, driving less. But when it comes to the criminal background checks, that's non-negotiable for regulators. And remember, that's the basic form of regulation. That's where, I think, we kind of draw the line.

There's the other type of regulation, which is the open and closed market. Do we have medallions, do we have a cap. The reasonable minds differ on these things, obviously. I think that all of these laws that are being passed around the country allow for further entry, and I think the good news is that Uber and Lyft agree that they need regulation.

Four years ago, right? I mean, there was a debate about just having no regulation. So now, at least, we're arguing about what type of regulation to have, but they're still so far apart, I think the licensing that are being passed have the bare minimum, and the industry's arguing it should be something completely different. I think the answer is somewhere in the middle.

And I do agree with Brooks that we need data. As an academic and somebody who represents the regulators, we don't want everyone's personal data, like they have. We don't want to be tracking people. We want to get dots on a screen so that we can make policy, so we can figure out where the potholes are, where the traffic flow is.

We want to know a little bit about what's going on, and we need to have a reasonable approach. When Google came out the other day and basically said that their autonomous vehicle accidents are proprietary, I thought I was going to fall off my chair. I mean, since when is a motor vehicle accident proprietary? Everything's proprietary.

Look, there's a lot of stuff that is proprietary, I give you that. But there's a lot of stuff that shouldn't be, like making sure that your policies involving privacy are being enforced, OK? There's a middle ground, I think, somewhere in here.

But that's not the basics of regulation. The basics of regulation, to answer your question, are, do you regulate prices, OK? Two different viewpoints on it. Do you regulate the number of vehicles? Two different viewpoints on that.

I think you need to have some type of limit on the vehicles. It can't just be unchecked growth, because of the environment, OK? Cities are struggling with the issue of transit, and congestion, and people having asthma, and global warming, and we have an unlimited amount of vehicles being placed on the road. And I think, from a National League of Cities point of view, that they should be against that. I don't know what your position is on it, but I think you should be against unbridled growth of automobiles.

But when it comes to the basics, there can be no compromise. There has to be inspections of the vehicles. There has to be some form of acceptable insurance. And drivers need to be safe. Everyone's entitled to rehabilitation, but there needs to be a process where the government, not self-serving private companies that have an interest in putting drivers on the road, make the decisions—an objective third-party—on whether someone who committed a DWI, an assault, or some type of crime in the past is safe to drive. And that's not much to ask for, really, and that's kind of my viewpoint. And I'm sure the others will differ, but that's my thought.

WILLIAM ADKINSON: Ashwini, what I'm going to ask is that you a provide little bit more information about the mechanisms that Uber uses to protect consumers, much as Airbnb has a different set of mechanisms, including the mechanisms that determine price that differ from the way that taxicab prices are determined. And also, I did think, at the end of your talk, you were emphasizing that there were certain areas you really believed that regulation was needed. And so I'm wondering how much gap there is between what you're describing, and what Matt's describing in certain of those areas. At least, are there certain areas we can keep the gap smaller?

ASHWINI CHHABRA: Yeah, yeah. No, I'm happy to. So I think there's probably a gap when it comes to our philosophies on the role of regulation in 2015, when it comes to the things we're talking about. There may not be as much of a gap on the substance. As you noted, I had a litany of things where I think you need to have clear regulations on those topics.

And those 40 jurisdictions I mentioned, those laws address each one of those points. Those are all ones where we've worked alongside legislatures, alongside the regulators, and alongside the incumbent industry to come up with those rules. And those, I think, do touch on safety, and they do touch on consumer protection. They address the requisite insurance that needs to be in place. And I think we'll talk about it a little bit later, but when it comes to insurance, we've been working closely with the insurance industry as well to develop those new products.

Matt rightly points out, if this is a market that is attractive enough to the insurance industry, they will develop products for it, and they are. So I don't think there's a huge gap in the areas that we all can agree on that need to be addressed in the regulation, or need to be addressed through platforms. I think there's a difference in philosophy on just how involved the government needs to be in doing that, and how much we can now rely on technology to do some of that.

WILLIAM ADKINSON: I'm intrigued. Please elaborate.

ASHWINI CHHABRA: Yeah, so let me just finally get to it already, right? No. So something that Arun Sundararajan raised earlier, and I think he's written about this, this concept of delegated regulation, right? So in the same way that sometimes people talk about software eating the world, there's this way in which technology can eat regulation. You don't need the same rules on the books today as you did in 1972, when there were no cell phones, and the landline you had was the only way you would request a black car to pick you up. You don't need the same rules on the books when it comes to pricing as you did when the most robust machine you could come up with to calculate that price was a mechanical meter.

So I think there has to be some acknowledgment that the things that we're talking about are not all the same. A taxi is not an Uber vehicle, is not a jitney, is not a black car, because they do different things. You can't street hail an Uber vehicle. You can only street hail a taxi. There are very different rules in New York for Yellow taxis than for black cars.

There are different rules for black cars that have corporate accounts than there are for black cars that you call because it's a community car base, as well it should be. There's a different degree of consumer protection involved from one product, to the next, to the next. To lump all those things together and to say that there should be a national standard, I think you miss some nuance in the difference between markets as varied as Tampa, and New York, and Chicago, and New Haven, Connecticut. I think you lose some of the nuance between what a Yellow taxi can do and what we look to a Yellow taxi to do, than what a corporate account car is doing, versus what I with my Uber app am able to do.

So a word on how platforms accomplish what, previously, regulations were required to accomplish. So let me start by saying that on safety, I can really only speak to that mechanisms that Uber has in place.

WILLIAM ADKINSON: Right.

ASHWINI CHHABRA: I can't speak to ridesharing generally. And Uber experience was designed from the ground up, with rider and driver safety in mind. So only drivers who pass strict background checks are granted access to the Uber platform. Drivers have to pass a multi-layered federal, multi-state, and local criminal background check, and they're cross-check against the national sex offender registry, and have their state DMV driving record reviewed. Great.

But what does the platform do that you couldn't do in 2008, before the advent of smart phones, right? So if you've ever used the app, you know that, as a rider, you get lots of information about the driver who's going to pick you up, even before they come to pick you up. You see what they're rating is. You see who the driver is, so that you know you're getting into the right car.

When you request a car, you can do it from inside. You don't have to wait outside on a curb at night, or in a low foot traffic area. So there are various ways we're addressing safety that didn't exist before. You can share your current location and your ETA with anyone.

You can rate the driver at the end of the trip so that you know that there's some accountability. All of this didn't exist more than five years ago. Those mechanisms were addressed through regulation. You don't have to address those through regulation anymore.

On the driver's side, you know the name of the passenger who's going to get into your car, so you can make sure that the right person's getting into the car. It's a cashless system, so the need to carry cash has been reduced. And likewise, there's rating at the end of the trip. So these are all mechanisms that previously didn't exist, exist now, and you then have to go back and look at which of our regulations that are addressing safety and were the product of the time when they were passed, and which are no longer needed.

WILLIAM ADKINSON: Thanks. Matt, do you have any final thoughts about how these technology developments that Ashwin—

MATTHEW DAUS: Yeah.

WILLIAM ADKINSON:—has identified should affect regulation in your view?

MATTHEW DAUS: Sure. No, I mean, there's one or two things I agree with him on. Let me run through real quickly. You know, Ashwini mentions part-time, and that's really the issue here. It's a part-time economy.

But if there is going to be an insurance solution for part-time drivers, it should apply to everybody. Taxis and limos should get the same—you know, there should be a certification process with the insurance company as to the number of hours that you're being logged, and it could be tracked through apps. And number two, self-regulation. Let me just say something about that.

I'm not saying self-regulation is something that can't be done. On certain things, in my view, it can't, like background checks. There are certain things, maybe vehicle inspections, but other things you probably could. And a good example of that is the Federal Motor Carrier Safety Administration. For interstate trucking and for interstate limousine travel, stretch limousines, and buses, the FMCSA prescribes, I can think of two rules offhand, the requirement that you don't drive a certain number of hours continuously, so you don't get tired and have an accident, and also medical certifications.

The companies are required to do that on their own, OK? And basically, they keep files on this information. But then what happens is, there's a real enforcement mechanism, with real inspectors which go in there, and real fines, where you could be shut down if you don't do the right job. So if you are going to have a self-regulation mechanism, which I believe these TNC laws around the country do not do, there can be a way by which certain things, not everything, can be delegated for self-regulation, where there is an enforcement mechanism and strict fines in place. And so that's the point on that.

The other thing is, yes, taxis are different from limos, but I find it hard to find a distinction between what Uber and Lyft are doing, and limos and liveries, and why we should be drawing distinctions with them. They don't have rates of fare that are regulated. They don't pick up street hails. They're kind of doing the same thing, and you're using the same drivers.

But I mean, yes, a taxi system is kind of viewed as a utility, and people hail it, and yes, it is different. But when it comes to public safety issues, it doesn't matter whether you're calling in ahead of time or hailing it on the street. Doesn't matter what your paying when, on the criminal background check side, it's wonderful that you can look at their picture, but what if it's a mug shot? I mean, on your phone. I mean, that's really the issue here, and that's where I completely disagree with Ashwini on the issue of the safety. I think it's great that you're doing the private checks, but they should be done in addition to the government vetting these folks.

There's been a lot of misinformation out there around the country about how long it takes. And we should know this, we both worked for the TLC. It takes three days, potentially, and somewhere between $15 and $75 to do a background check and get the results back. And I actually think you're opening yourself up to tremendous liability by saying you want to do it yourself, and then if you screw it up, then there are multimillion dollar lawsuits being brought against your company. So I don't get that.

But this is a very small thing that people are asking. And quite frankly, the tide is starting to turn in the other direction. Connecticut, Florida, and Texas all rejected TNC laws at the end of this session because of this report, and because of the efforts made by lobbyists and media people on the other side, against all odds, with three or four lobbyists against an army of 50 people, you know, David and Goliath, saying, you know what, we can't do this. I can't go to sleep at night knowing that I'm creating potential harm for people.

So I disagree with you on that, but there's some good points in there. Yeah.

WILLIAM ADKINSON: But on that, hopefully—

[LAUGHTER]

—we can agree that everything's been vetted on the discussion, because we do need to move on to the next issue.

MATTHEW DAUS: Yes.

WILLIAM ADKINSON: Well, thanks.

MATTHEW DAUS: We're vetted on this side of the table.

[LAUGHTER]

JULIE GOSHORN: Before we move on, I just wanted to check and see if Brooks had anything he wanted to share about cities, in the transportation space.

BROOKS RAINWATER: I think what I would just share on cities, in the transportation space is, this is the key factor that cities are focused on within the sharing economy right now. I showed the numbers earlier that 64% are supportive of the idea of ridesharing coming into their cities. But at the same time, what we're hearing from interviews reflects a lot of what I'm hearing here, which is, how are these services different from taxis, or how are they different from livery services? And so I think it's trying to figure out what that difference is, and kind of explaining that a little bit more clearly.

And that's happening more and more through conversations like this, and through national conversations that we're having at the National League of Cities. But I think, to kind of bring it back to the data piece again, figuring out a way to share that data would help, kind of, solve a lot of these conundrums, would bring it back and cities would feel a lot more comfortable knowing what's happening on the ground. They want to also show that these ridesharing services could actually bring added value beyond what's happening right now with taxis, because you would be able to prove that something different is taking place.

ASHWINI CHHABRA: I can speak to that, actually. So we actually have an open offer to any city that would like to have data from our operations, that's willing to work with us on the rideshare regulation, to have access to that data. We currently are sharing this with the city of Boston, where what we will provide is trip data, each trip that happens on the streets of that city, you'll get a bundle of information. It'll be the pick-up location, obscured out to zip code levels for protecting privacy, and the drop-off, and the duration of the trip. And we'll work with the chief data officers of any cities that are interested in that.

Because, look, coming from the government, coming from the Taxi Commission where we had taxi data, I get that this is of value to cities that are thinking about, how do I improve traffic planning or city planning, generally? We have to weigh that against privacy concerns of our users. And those privacy concerns are going to trump the desire of governments for more data, but we understand that we can do this in a way that protects privacy, but also provides that data to the cities. And we stand ready, also, to help those cities make sense of this data. These are large datasets, and so we've initially done this partnership with Boston, but happy to do it with more markets as well.

MATTHEW DAUS: Would you be willing to do that for the universities that actually support the cities, too, and make data available to academics so that we can do an Uber hackathon and maybe look at some data? Because, really, the cities are relying on universities, too, to do some of this interesting transportation data analysis. And I know that they're very much clamoring to get some very protected—you know, all the proprietary stuff taken out—some data from Uber to analyze trips, and where people are going, and how often, and.

ASHWINI CHHABRA: And—

MATTHEW DAUS: Is that a yes?

ASHWINI CHHABRA: And we've shared data with transportation academics previously as well. We actually have a whole lot of data scientists internally. And so, we will periodically put out analyses that, I think, people will find it helpful. But, no. With the idea of city planning directly in mind, that's a partnership, I think, it does make sense for companies to help cities figure out what the flow of traffic is on their streets.

BROOKS RAINWATER: That would be very helpful.

ASHWINI CHHABRA: Yeah.

JULIE GOSHORN: Thanks. So we've covered a lot of points about liability and insurance. So I'm going to short-circuit this a little bit. And Ashwini, let me just ask if there's anything that you want to share that you haven't already shared about insurance or liability allocation? And it's OK if your answer's—there's nothing else.

ASHWINI CHHABRA: You can't talk too much about insurance.

JULIE GOSHORN: OK.

ASHWINI CHHABRA: So—

JULIE GOSHORN: Go ahead.

ASHWINI CHHABRA: No. Well, it is worth spending some time on, because—

JULIE GOSHORN: Yeah.

ASHWINI CHHABRA:—even though it's sort of the driest part of the conversation, it seems to underpin a lot of what the gap is on both sides. So as I mentioned before, we've been working a lot with insurers, and the insurance companies didn't always see eye-to-eye on what the requirements were. And I think the insurance industry's actually evolved its position on this topic, so as of a few months ago, where we actually reached a national compromise with the insurance industry that sets out the parameters for effectively insuring TNCs and TNC drivers. And so now there's model legislation that's being implemented in several states that puts the onus on Uber and any other TNC to carry coverage for all instances where the driver hasn't purchased his or her own TNC-specific policy. But it also allows personal insurers to continue to innovate by developing insurance products specifically for TNC drivers.

So far, we're aware of nine different insurers that have filed policies to cover TNC risks in 11 different states. The companies include some of the largest personal insurers in the states, such as Allstate, Farmers, USAA, Geico, and Progressive. So there's clearly a growing market, and I expect we'll see more. The agreement with the insurers also made clear that it's not necessary for a TNC driver to carry a commercial auto policy the way that taxis do. That's because a taxi and the TNC is a different thing. A taxi is a vehicle for hire. The sole purpose of that vehicle is commercial use. The TNC vehicle's a personal vehicle that's occasionally used for a commercial purpose, similar to how a Realtor, pizza delivery guy, or a lawyer might use their personal vehicle.

The national model provides clarity for the consumer and the public about which insurance is in effect at any given time, and it provides riders, drivers, and the public with substantially more insurance than is typically required of taxis. TNCs carry a million dollars in coverage while they're engaged in a prearranged ride. Taxis vary from city to city, and sometimes are strikingly low. Philadelphia, Atlanta, Boston, and here in Washington, DC, taxi limits are no higher than $50,000. So TNCs carry 20 times more coverage than taxis in some places.

In the analog world of the taxi, there's really no way—and Matt's right, with technology, you now can, and so maybe you will see insurers developing specialized products for taxis—but right now, and historically, you've not known what a taxi was doing. Was he on a trip, was he cruising, was he heading home at the end of the shift? And so the insurance requirement of necessity had to be all-encompassing. It had to, by definition, be excessive. But that's not the case with TNCs.

MATTHEW DAUS: Yeah. I just have a question. Why couldn't that model legislation apply, in your view, to the taxis and limousine companies that have part-time drivers if it's so good for them? I mean, I'm trying to understand the rational basis for having a distinction. I mean, you pointed out some distinctions on taxis and regs. I don't understand what the underwriting difference would be, and why we couldn't do that. Is that something you'd be open to?

ASHWINI CHHABRA: So with TNCs, I think we've identified a period one, a period two, and a period three, and the technology allows you to determine what period a driver is in. I believe, in sort of the analog world of taxis—

MATTHEW DAUS: Mm-hm.

ASHWINI CHHABRA:—there isn't a way of knowing that. There may be in the future.

MATTHEW DAUS: But if they have apps, then you wouldn’t have a major problem with that.

ASHWINI CHHABRA: I would not have a problem with what the insurance requirements are on taxis.

MATTHEW DAUS: Mm-hm.

ASHWINI CHHABRA: That’s—we’ve never stood in the way of—

MATTHEW DAUS: Right.

ASHWINI CHHABRA:—changing the regulations on those.

MATTHEW DAUS: But I mean, just to clarify one thing, though, there may a couple of cities that have really low taxi insurance, but most taxi liability minimum limits are higher than personal limits in many states. And the limos are off the charts, I mean they’re $1.5 million, $1 million in excess. So the folks that are driving around in limos have much higher insurance, and I think, there’s a real issue, it’s making its way through the courts as well, on whether the existing policies – what are we doing with them? Forget about the new policies, but you have commercial exemptions to personal policies that are winding its way through the courts for the last two years, irrespective of any new solution.

So I mean those issues are kind of percolating out there, too. If you and I drive our cars, and we start picking people up off the street, typically, they will say you have no coverage because there’s an exclusion in that policy. And there were, basically, almost half the states’ insurance commissioners have issued insurance gap warning to this effect. Now, I don’t know whether this new compromise, how that sits with them, but I’d be curious to know what they think of it.

JULIE GOSHORN: So let’s just bring it down to the other end of the table for a short discussion from David, and a response from Vanessa, if you please.

DAVID HANTMAN: So I actually think the insurance issue in our world is very instructive for two reasons. First, we’ve offered a million dollar host guarantee for a few years now. When we started out as a company, we didn't offer anything. And so, basically, hosts were on their own if some damage occurred to their property.

We learned that that was a bad idea, and that we had a responsibility to help, and so, we instituted a million dollar host guarantee. It rarely comes into play for a significant amount of money, but if someone spills coffee on your couch, or steals something in your apartment, breaks a door, whatever, we cover it basically. And we're insured by Lloyd's of London, and in turn, we sort of cover these things.

So that was, I think, an example of us learning what we could do to help, one of the many tools we could provide. But then, for a long time, we kept hearing about liability insurance, and how people were afraid that their own individual insurance would not cover slip-and-fall with someone who was staying as a result of an Airbnb stay, not only for the host, but also for the building, if there was a landlord, if it was an apartment building. And we went out into market. We tried to get insurance for a long time. And insurance companies kept telling us, we have no data, we have no idea what's going on here.

We don't know how to judge how much this should cost. We have no tables. We work on tables. So we couldn't get it. We then, now, 35 million people later, who have stayed on Airbnb, we went back and we tried again, and we shared, sort of, an anonymized statistics, and the insurance company said, oh, basically, nothing ever happens. Great. Here's an insurance product.

And that took a while, but it's something that we wanted to offer, we needed to offer, we thought it was important to offer, and it's just a matter of the market catching up. And I think the best thing about it was that we showed the data that indicates that the insurance should be cheap, which it is. And so now, people have this back-up insurance if their insurance doesn't cover it. I think that's a critical part of these platforms.

VANESSA SINDERS: And I would just add, from the hotel perspective, I mean, we are businesses that have been operating for decades, and our companies carry a multitude of different insurance products, from employment practices liability, and Workers' Comp, to commercial property insurance. And really, this insurance covers every possible contingency, and it’s all about protecting the guest, our employees, our properties, and the surrounding neighborhoods.

JULIE GOSHORN: Thank you.

WILLIAM ADKINSON: Great. Thanks. And we want to move on to, as we’ve been discussing, ways in which there’s protection of consumers and also of third-parties from harms that might impact them. But there are additional public policy goals, public accommodations, one might call them, that also arise and raise issues in this space.

So first, I want to talk about three of them that arise in the accommodations area. First is zoning and restrictions on short-term rentals that impact neighborhoods and neighbors. Dave, what challenges do these restrictions place on hosts, and how should these restrictions be tailored, and what is Airbnb doing to try to address the sorts of concerns, like noisy neighbors, that may arise?

DAVID HANTMAN: Sure. So again, I think we get right into that difference between people doing this once in a while in their own home, and people who do this for a living, whether it’s multiple listings in a building, multiple listings throughout a city, or just doing it around-the-clock, even in one listing. I think if you look at what’s really happening out there, most of these people do it once in a while. We feel pretty strongly that that’s not a business, and so, if it’s a residential zoned area and someone is renting out their apartment when they’re away on vacation for a week a year, that shouldn’t change and doesn’t change the nature of that listing. And I think many cities have agreed with that around the world.

It certainly makes us a little nervous when it’s hard to define, and it’s basically, these zoning laws may be on the books for 100 years, and only now are governments trying to figure out whether to apply them to roomers and boarders who were there for a week. They haven’t before, but with pressure, maybe they will. And so, we are working hard to make the laws clear, and to work with governments to make the laws clear.

We’ve advocated pretty consistently around the world for a few years now, just to exempt people in their primary, and maybe, in some circumstances, secondary homes. We don’t argue that people should be able to have 50 listings. We’ve said, you should increase the penalties and enforcement on people who are doing this as a business without a license. The question is, people who are doing this when it's not a business, once in a while, how do we get those people exempted from either the short-term rental laws, zoning laws, in some cases, laws that have nothing to do any of this that were passed 80 years ago, for some other random reason, might apply to short-term rentals. And we're just trying to clear that path.

We're in 34,000 cities. We have, I think, a million listings now around the world. It's not easy to address every single one of those at once, but we are working really hard to do as many as we can.

WILLIAM ADKINSON: Let me ask you one other before I ask Vanessa. Another one's that pretty important to cities, which is, local governments' interest in tax collection, and what your approach to that is, in terms of where you step in and, well, I guess, collect and pay taxes on somebody else's behalf.

DAVID HANTMAN: Sure. So we've, for a long time, I'll just take this country, since we're in this country, we offer 1099s, and so, all income earned on Airbnb, we offer the tax forms for. There are separate transient occupancy taxes, hotel taxes, sales taxes. In New York, I think it's between four and six taxes, depending on who you are and what you're doing in New York City. It's very complicated for hosts to understand whether they owe anything, and in cases where they think they owe something, to pay it.

So we went through a couple years of just trying to figure out how to help and what to do. We don't always think that the tax is owed, because someone doing this a week a year is not a hotel. But we've said pretty clearly, if a city thinks it's owed, or a state thinks it's owed, we want to help collect and remit it. We are doing so, I think, in Portland, and San Francisco, in a couple of other cities.

We offered, as I said, to do it in New York. There's a law that prevents us from doing so right now, because we're not the proper party to collect the tax. We've asked for a simple change in the law. And as I said, the hotel lobbyists came out and said, please don't let them change that law. We don't want them to pay taxes, all of a sudden.

So we're in this weird world of a company that wants to collect and remit more tax. In New York, it would be about $65 million a year right now. We can't figure out how to do it, but I think we'll get there. It's hard to see how governments will continue to say, we don't want this money.

But that's our position worldwide. We're going to as many jurisdictions as fast as we can to strike agreement on understanding what the tax is, who we're going to give it to, and collecting and remitting it, as much to prevent our hosts from having to deal with this as anything. But we want to also embrace and help cities that we're in.

WILLIAM ADKINSON: So do you have any sense of how much the total revenue is taxed on Airbnb? I mean, host-generated revenue.

DAVID HANTMAN: I don't. Again, in New York, it would be 14% or so percent, if we were allowed to collect and remit it.

WILLIAM ADKINSON: So Vanessa.

VANESSA SINDERS: Right. Well, on the tax issue, it's great that Airbnb is collecting tax in certain jurisdictions. But again, from the hotel perspective, we don't get to pick and choose what jurisdictions we pay taxes in, or where we collect and remit occupancy or sales tax from that guests that's stay in our rooms and in our hotels. And that tax revenue is important to the communities where the tax revenue is collected, providing them with the resources they need to provide the various services.

And I would go back to the zoning issue for a second, too. Again, I would give just the hotel perspective. You know, when a hotel is built in any community, those neighbors are aware of the project, and they have an opportunity to make their concerns known and have them addressed. Hotels are built in commercial areas.

In contrast, I think of a family who buys an apartment in a big city, like New York or Los Angeles. They don't expect that living next door to them, and that, next door to their apartment, they're going to have folks coming and going every day, or a couple times a week. That's not what they signed up for. A revolving door of strangers is not what they signed up for.

But increasingly, as a result of Airbnb and other new market players that facilitate these rentals, that's occurring.

We hear countless stories of that happening, and I think New York is ground zero. And you know, I don't think we're talking about the individual who rents out his or her home a few times a year. That's been happening for decades. What we're talking about is large commercial interests basically creating rogue hotels and skirting the commonsense rules, regulations, and privacy rights.

WILLIAM ADKINSON: Great. Oh, sorry, please.

DAVID HANTMAN: I just want to say, so, I mean, if you listen carefully, it sounds to me like we're agreeing, right? I mean, we are also not talking about rogue hotels, or defending rogue hotels, or a law passed to do anything other than punish rogue hotels. We are talking about trying to get a law that allows people to do this once in a while, and we can't get that done. And I think that's why I have so much hope. It's a little frustrating right now, because we seem to always be arguing against each other, while agreeing at the same time.

But that's why I hope this is going to work. Because we really only want, I think, the same thing, which is, we want to collect this tax. Although, it's a little interesting, you say, you can't choose when and where to collect and remit tax, but you are actually choosing not to let us collective and remit tax in New York right now, your industry.

We'd love it if we could do that and be on the level playing field that you've discussed. So I think we basically agree, so maybe we'll get there. Maybe not today, maybe tomorrow.

VANESSA SINDERS: I would just add one point on New York. I think, from our perspective, different states and cities are going to decide what is best for them, in terms of how to protect their communities in dealing with these rules. And in New York, it's illegal for a short-term online rental. In Santa Monica, they passed a law that allows for homesharing, but you have to have a license and pay occupancy tax, but it doesn't allow for rentals if you're not home. So different cities and states are going to address it differently in their best interests.

WILLIAM ADKINSON: I also want to mention that there was one—actually, several comments—that came in discussing the impact of Airbnb on the stock of affordable housing. Expressing your concerns about that. And I also wanted to give you a chance to respond to that and what Airbnb's view is regarding its impact on affordable housing, in New York City in particular.

DAVID HANTMAN: Sure. So look, our company was founded in 2008 by a couple of people who couldn't pay their rent. They're incredibly familiar with what it's like to live in a city that's unaffordable. They hosted people on their floor, on air mattresses, during a convention because they could not make their rent. They were very concerned about this.

It's why, I think, the company has succeeded over time, and why so many people open up their own homes on Airbnb, because they need that money to make the rent. And so, as a company founded and, sort of, increasingly dependent on people who are doing this, at least at first, to earn a little extra money to stay in their homes, we're incredibly concerned about the impact we would have on cities, and we look into this all the time. We would not want to be a company that drives up rent or decreases supply. We've commissioned studies. We've looked into this issue at length.

It's pretty clear we don't have that impact, certainly not a significant impact, if any. There are a lot of market forces right now in big cities like New York, rent control, rent regulation, and people making more money, people moving into cities, cities becoming much safer, attractive places to live, that are driving up rents enormously. And I recently moved to New York, and I can attest to that. It's impossible to find a place.

If you look at the percentage of how Airbnb, even taken to its extreme, growing to infinity right now, would impact rents, it's still very small. That said, you know, if you're in your own home renting out a couple weeks a year, you could not possibly be taking housing off the market. Just by definition, you're in your home, you're staying in your home, and that's actually good for affordability. For instance, if we heard that someone had an entire building on Airbnb, and there, they were transactioning short-term and taking housing off the market, and driving down supply, even if we thought that wouldn't impact the overall cost because it's such a small number, we're concerned about it.

WILLIAM ADKINSON: OK. Great. And I'm going to ask Ashwini and Matt to spend one minute each on what we have discussed as the large issues of handicapped access, and also the question of duties to serve all communities. Because we don't have much—

MATTHEW DAUS: OK.

WILLIAM ADKINSON:—time left.

MATTHEW DAUS: Oh, you don't want to talk about taxes anymore. New York is a strange place for taxes, by the way. Three truths are self-evident, death, taxes, and high-tech companies that can't figure out with the government how to pay them. But we have an unequal playing field, actually, which I think is very relevant here in New York.

There's the MTA tax, this where the taxicabs, the passengers are taxed to pay the competition, which is the subways. And now, you know, the limos, and Uber, and some of these big companies doing the same thing, but they don't have to pay the tax. And then some companies pay sales tax that are doing limo services, but livery services don't. It's just, it's all over the place.

But on the accommodation issues, we didn't talk a lot about surge pricing here today, and that's one unfair advantage that Uber has over the cabs, because they can surge price, because they have closed, regulated taxicab fares. And you know, what that does is, create a situation where people who are disabled, and people who are in underserved communities, and who are poor, like the people who started Airbnb and can't afford to rent, they can't use an Uber. Everybody wants to use an Uber, right? They want a beautiful car, with a driver who's in a suit. Really, a limo.

But they can't afford to pay three or four times the rate of fare. And so in certain communities where there are people who are indigent and can't afford that, they can't have their Uber, and also at the same time, people who are disabled because there is not necessarily—and this goes for taxis and limos, too, this is not just an Uber issue—there's not necessarily a dispatch system for wheelchair-accessible cabs outside of Chicago and New York. So I think there's a legitimate civil rights issue that disabled people have when it comes to not just the TNCs, but in general. But if you don't have a wheelchair-accessible vehicle, I guess you can't take an Uber, right?

So that's kind of my viewpoint on it. Those are issues that have to be addressed on a broader scale, outside of the issue with your company, I think. It's the next big civil rights movement, I think. And I think, at one point, you're going to see, probably, every form of transportation have some type of a wheelchair access, because we have an aging population. And I think the members of Congress, as they get a little older, are starting to realize that, too, that they need to take care of the transportation.

And the ADA does not go far enough in a lot of different ways, and I think public transit is woefully unable to handle these needs. So I'm hoping, at some point, as a result of the TNC debate, where the taxis and limos are facing-off, then we'll have some real service. But it doesn't mean every cab and every Uber. I think that's outrageous to say, and I fight with the advocates on this all the time.

It's outrageous to say that you should have a ramp in every single vehicle that's out there. I think the dispatch system that New York has, and Chicago has, if you have the right number, is very efficient. But to then go into a city like Seattle and say, we don't want to provide the service at all, or to lobby, saying, we don't do that, taxis do that, I think that's not right, either.

WILLIAM ADKINSON: Ashwini, could you respond and—

ASHWINI CHHABRA: Sure, sure, yeah. So I don't think anyone goes into a city and says, we won't provide the service, that's what taxis do. If you go to Brooklyn right now, you can get a wheelchair-accessible vehicle to pick you up on Uber. You couldn't do that a year ago. You couldn't do that with taxis. The vehicles weren't there.

I mean, Matt's right, that if the service isn't there on one platform, it's not there on the other. Like taxis, there weren't accessible taxis in New York more than a few years ago. This is all, sort of, happening now. And I think everyone's got more work to do on this.

The app permits—it does bring some advantages. So deaf and hard of hearing passengers are able to access transport in a way that they weren't able to before. We just put out some modifications to our app that allows deaf and hard of hearing drivers to actually work on the platform. The communication is textual with the passenger. The Voice Over iOS features of the iPhone allow visually-impaired riders to finally use transit in an unassisted fashion.

And in several markets, we're piloting and we're learning from wheelchair-accessible services as well. So in DC, Philadelphia, New York, Chicago, LA, and San Francisco, there are wheelchair-accessible vehicles on our platform. And as we learn from those experiences, we'll be able to improve that as well.

MATTHEW DAUS: I actually apologize, because I was wrong about New York.

WILLIAM ADKINSON: I'm sorry. I should let Julie move to the next issue.

MATTHEW DAUS: Oh. Can I just say one quick—I mean, you're right for bringing up the New York exception, but that's the exception also, because it's got a great regulatory system, and because Uber complies with all the laws there. And I think that's something we haven't talked about, is that Uber and Lyft are required to get licenses like everybody else, and they don't need the same TNC laws that are around the country.

And I do believe that, yes, there are the green cabs being used and I think that's a good thing. But New York is really the exception, not the rule. The rest of the country, there's a different path, as you can see from California, going west, and progressing east.

ASHWINI CHHABRA: I mean, you and I can sit here and talk about how great New York is—

MATTHEW DAUS: Of course.

ASHWINI CHHABRA:—until these people—

JULIE GOSHORN: But can you talk about it in one minute?

ASHWINI CHHABRA: Yeah, probably.

[LAUGHTER]

JULIE GOSHORN: So I'm going to just exercise a little bit of moderator privilege here and collapse our last two issues. First of those, I think we've talked about a lot on this panel and at other times during the day, and that's about data disclosure. So I invite you, in the small amount of remaining time we have, to mention anything that you haven't had a chance to mention.

The second issue is what I've been calling affectionately the crystal ball question. If we were all too convene in a year, in 18 months, in 5 years, what do you think the landscape would look like? What predictions can you give us? So I invite you all to make your closing remarks. I want to start with Brooks on this one, because you've been quiet down there for a while, Brooks.

BROOKS RAINWATER: Well, I think start by reiterating, as I've said, data sharing is so important. And it was great to hear from some of the folks on the panel that they want to do more of this. So kind of to close, I would like to first reiterate that city's make the sharing economy work. This is happening in the urban environment, and the future, in my view, is exciting, and the sharing economy will continue to grow, change, and broadly influence more and more sectors of the economy.

There are a number of key areas that I think will have a big impact 5, 10 years down the road. Labor classifications. We touched on this a little bit, but I think we need to think differently about the way we classify this new and growing part of the workforce. It's fundamentally a question about whether these workers should be considered contract workers, as they are now, full-time employees, or perhaps some kind of hybrid model. While this has important implications for cities, I do believe that the federal government will need to play a role in this regard in much the same way as current federal safety net programs help further this type of work.

More thought needs to be given toward approaching this ever-growing section of the workforce. On the homesharing side, I think we'll see new types of zoning classifications proliferate. Programs like Austin's zoning distinctions for short-term rentals will be recreated probably more broadly, as cities learn how to better incorporate these services in the current zoning guidelines. And then building on the data thing again, data-sharing between platforms and cities will broadly take place, as they work together hand-in-hand to improve everyone's end-to-end transportation experience.

And, kind of, getting back to, kind of, the key piece here, the city of the future must be a city for everyone. When I'm thinking, I want to wake up in 2025 and look around, we want our cities to be socially-cohesive, environmentally-positive places, where the benefits of sharing economy growth and new technologies enhance quality of life. And I think we can do that by all working together. Thank you.

JULIE GOSHORN: Thank you. Vanessa, let's hear from you.

VANESSA SINDERS: Thank you. Well, I would just start on the issue of data and privacy. In the hotel industry, we do everything we can to protect our guests' data and their privacy. With five million guests checking into hotels each day, it's extremely important that we are good stewards of information for our guests.

Additionally, we're a transparent industry. We have publicly-available information to see how many hotels there are, how many rooms are available, and how many guests stay in hotels each year. And in terms of closing, I would go back to, we welcome competition. We are, by nature, a competitive industry that continues to innovate and drive economic growth and jobs. But a successful, competitive market means that everyone plays by the same rules. And new entrants to the marketplace, like Airbnb and others that are transacting business and impacting people each day need to respect the rules of the road in order to protect consumer safety, and security, and the integrity of neighborhoods and communities.

These platforms might have started as mom-and-pops, individuals occasionally renting out their room to make some extra money, but that's not where the growth and the focus is today. The New York Attorney General's report again cites that 6% of those hosts make about 40% of the revenue, and that is a clear indication that commercial interests are dominating the market. We look forward to innovating and competing, again, on a level playing field, and we believe that the future is bright and exciting for the hotel industry. Thank you.

JULIE GOSHORN: David, to you.

DAVID HANTMAN: So first, thank you. And I also believe that the future for the hotel industry is bright and exciting.

[LAUGHTER]

I think, on data, anyone who reads about us knows how strongly we protect personal data of our users. We've gone through a lot to do that. I do agree that we should be sharing more anonymized data. We should be proud of the data we have, and we should share it, because numbers that are thrown around like this, the 6%, the 40%, the 72% illegal, they're all wrong. But we can't prove it unless we share our data.

So I think we're going to have to continuously do that, and I think that this conversation will change over time as we see it. For instance, a smaller percentage of people over time are doing this as a business, as opposed to regular people. But until we share our data, it's going to be hard for us to prove that. So we're going to, I think, work on that, and stay tuned.

In terms of where the world is going, I'm confident we're going to work all this out. I do think we, in general, agree. Most people agree that homesharing should be legal. Most people understand that there's a difference between people doing this once-in-a-while in their own home and doing it as a business. Government, after government, after government are making those distinctions, and will continue to do so.

So in some ways, I think that's the easy path now. It's pretty clear that so many people are doing this, people are moving away from ownership into experience. They want to go where they want to go. They want to experience the world in new ways. They don't care as much about whether they own a home, stay in the same place, own a car.

They want to do things a little bit differently, and the sharing economy is letting them. I think what's most amazing about the sharing economy is not the companies here at the table, or the people who are currently in it. It's what those people are going to create. Everyone who's in the sharing economy earning a little extra money or time by using resources they already have is doing something with that time. Some of them are starting businesses that may be the next Apple.

Some of them are spending time with family and getting experiences they couldn't otherwise get. And we don't know what that's going to be like, and we should be encouraging it, and watching it, and be excited about it. And I think that's where we're going to go. We're just at the tip of what the sharing economy's going to give the world, and so I think what's really exciting is what's going to happen over the next five years there.

JULIE GOSHORN: Thank you. Matt.

MATTHEW DAUS: Over the next five years, what I think is going to happen is, most of the lawsuits that have been against the TNCs, they're going to lose. And I think, on constitutional grounds, a lot of these new laws are going to be thrown out, and we're going to be back at the drawing board redoing them. And I think what's going to happen is, we're going to have a new legislation that emerges that applies the same standards to everybody, whether it's background checks, or insurance, it's going to be the same for taxis, limos, TNCs.

The second thing is, is that I think the taxis of the future and the TNCs of the future, there's not going to be a meter anymore. I think history has shown that deregulation always leads to re-regulation, and we're in a period of promoting self-regulation and some deregulation. I think it's going to pull back a little bit. And meters are going to be iPads in the back of all vehicles that go into the cloud. And you're going to be able to monitor the meter like you do now, on your smartphone app.

I don't believe autonomous vehicles are going to be out there on the road in our lifetime. I think we will have connected vehicles, where the OBD data from the car goes into the apps and it's shared. On the data and security, I'm not optimistic that there's going to be a lot of government sharing of data that we're looking for, with academic institutions and government. I think it's going to be better than what we have now, which are basically FTC and White House reports that are out there, but no action being taken by Congress.

So I think we'll have a little bit—we'll have some incidents of hacking. We, unfortunately, will have people being outraged about private data being used and we'll have something, but it's not going to be anywhere near the government taking full control.

And finally, I think all these apps are going to be in everybody's pockets everywhere around the world. And the transportation apps that are being used are the key to selling new products and services, seeing what your desires are and what they want to sell you. Number two, it's already happening now. They're logistics companies, these companies. There's a reason why some of your investors, and Lyft's investors, are involved in getting products to you. And last, but not least, the good news, for transportation people is, there's going to be more integration between mass transit and private transportation. Apps are already out there that are connecting Ubers, and taxis, and limos to mass transit. So I think the future's going all be here in this little device. It may be bigger or smaller. I'm not sure which direction we're going in. But that's my prediction for the future, and you can hold me to it.

JULIE GOSHORN: Thanks, Matt. Final word to Ashwini.

ASHWINI CHHABRA: Sure. So I can't let go of that initial question, sort of, what's the appropriate role of regulation? So that's kind of what I want to talk about. And for me, there's a little bit of, what's the appropriate government entity to have an interest in this, or what's the appropriate level of government that should be interested in this thing?

David said something earlier about government are paying attention to this at a time when they least need to pay attention. And I kind of get that, but at the same time, now is when this stuff is interesting, right? Mayors didn't care so much about the taxi industry.

They just wanted it to work, and they didn't want there to be discrimination, or accidents, and that sort of stuff. But beyond that, it was taxis, it wasn't mass transit. It wasn't something that was going to change the face of the city. We're now at a point where these innovations are going to change the face of our cities.

And that's why Brooks is very interested, because his constituents really care about the outcomes of what we're talking about here, not just for the data, but because it improves the life of those cities. I mean, we go to National League of Cities, we go to US Conference of Mayors, because those are the people who get what we're trying to do, and they want more of it. And so that's why there are regulations that have been passed in those 40 jurisdictions I mentioned.

So what this comes down to, for me, is what are these platforms delivering that taxis couldn't or didn't? It is access to small businesses on a scale that wasn't possible before. It is reduction in DUIs on a scale that wasn't possible before. It's serving underserved areas. It's reducing discrimination and mobility.

And now the part about, sort of, the future-looking, the crystal ball piece, and I'm not looking one year into it. I'm looking 35 years into it. So the data on the growth of cities is that, by 2050, we're going to go from what, in 1900, was one in seven people living in cities, to what is today, one in two, and by 2050, will be two out of three people on this planet will live in cities. So 2.5 billion more people are either going to move to or be born in cities. And you think it's a parking lot trying to get home now. It's going to be so much worse.

I mean, what we see in Mexico City, what we see in Beijing, that's going to be DC and that's going to be, I would say LA, but it probably is already there.

[LAUGHTER]

And that's what cities need to be grappling with now, and are thinking about now, and that's why I think they're excited about these platforms. You're going to need a lot more places for people to live. You're going to need more schools for them to go to, jobs to go to, and parks to go to. And you're going to have to figure out a way to get them there so that doesn't cripple the system.

We're not building much more mass transit there. We're not building new roads. We should, and we probably will between now and then, but there has to be this portfolio of options that gets people comfortable enough to say, I don't need a private car anymore. I have the option of mass transit, which has to be at the center of all this, and ridesharing, and taxis, and bike sharing, and walkable streets, so that I feel comfortable not taking the car out today, or not having a second car, or not having a first car. And that's where the crystal ball that interests me, and I think probably interests all of us to some extent.

JULIE GOSHORN: Thank you very much.

WILLIAM ADKINSON: Well, I thank the whole panel. It’s been a great education for us all here. And we’ve gone a long, unfortunately, this afternoon so far. So if people can keep this break down to 10 minutes, we’ll try to catch up some of that time.

JULIE GOSHORN: Thank you to our panel.

[APPLAUSE]

[SHORT BREAK]

PANEL 4: THE INTERPLAY BETWEEN COMPETITION, CONSUMER PROTECTION, AND REGULATION: POLICY PERSPECTIVES

Panelists:

- **Lee Peeler, President and CEO, Advertising Self-Regulatory Council; Executive Vice President, National Advertising Self-Regulation, Council of Better Business Bureaus**
- **Sofia Ranchordás, Resident Fellow, Information Society Project, Yale Law School; Assistant Professor, Administrative Law, Tilburg University**
- **Maurice Stucke, Associate Professor, University of Tennessee College of Law**
- **Arun Sundararajan, Professor, Information, Operations and Management Sciences, Stern School of Business, New York University**
- **Adam Thierer, Senior Research Fellow, Mercatus Center, George Mason University**

Moderators:

- **Marina Lao, Director, Office of Policy Planning, Federal Trade Commission**
- **Megan Cox, Attorney, Division of Privacy and Identity Protection, Bureau of Consumer Protection, Federal Trade Commission**

MARINA LAO: Thank you all so much for staying to the end. This is the fourth panel. I've introduced myself before, but I guess for those of you who are just coming in, my name is Marina Lao, and I'm the director of the Commission's Office of Policy Planning. To my right is my colleague Megan Cox, who will be co-moderating this panel with me. Megan is an attorney with the agency's Bureau of Consumer Protection.

We have on this panel four speakers with expertise on issues relating to the sharing economy and on competition and consumer protection policies. I'll introduce each panelist very briefly. I won't go into the details of all of their incredible accomplishments, as I will cut too much into our discussion time. But their full bios are, of course, in the registration packet. We do have a fifth speaker who was unable to come because of a family emergency, but I will just mention that it's a joyous emergency, so we're very happy for him. We have four speakers. I will just start, I guess, alphabetically.

Sofia Ranchordás. Sofia is currently a resident fellow at Yale Law School. She's also an assistant professor of law at Tilburg Law School in the Netherlands. Her research focuses on the interaction between innovation and law.

And at the far end is my colleague Maurice Stucke, who is a law professor at the University of Tennessee. He's a co-founder of the Data Competition Institution and of counsel at the Concurrence Group. This year, he is an academic visitor at Oxford. He publishes and speaks regularly on antitrust law and policy. The reason I refer to him as my colleague is that, like me, he used to be with the Department of Justice Antitrust Division as a trial attorney there.

Sitting next to Maurice is Arun Sundararajan, whom we have heard from just earlier. Arun is a professor at New York University School of Business. He has written and spoken extensively on the sharing economy. He's currently wrapping up writing his book about the sharing economy and the crowd-based future of capitalism.

And sitting right next to me is Adam Thierer, who is a senior research fellow with the Technology Policy Program at the Mercatus Center at George Mason University. He specializes in technology, media, internet, and free speech policies. His latest book is "Permissionless Innovation: The Continuing Case for Comprehensive Technological Freedom."

With that, let's turn now to what this panel is about. The previous panel, which was extremely lively, provided the industry and regulatory views on the interplay between competition, consumer protection, and regulation. On this panel, what we hope to do is to delve into the policy issues. The panelists will offer different approaches to balance society's need to promote innovation and competition and the need to provide consumer protections as well.

Among the questions that we will ask are, what consumer protection issues do sharing economy practices raise, and how should they be addressed without overburdening the new business models and hindering entry into the market and hindering their continued growth and evolution? Should state and local regulators take into account reputational feedback mechanisms that we discussed this morning in addressing these consumer concerns? We will also look briefly into the future at network effects, a topic that was discussed in the morning, and ask if they're truly a concern with sharing economy businesses. And if they are, what are the policy implications?

With that, let's start the first round of questions. And what we will do with the first round is simply an opportunity for our panelists to give us the general views about the sharing economy without a debate. And then we will go on to five substantive questions, which we will delve more deeply into what has been raised in the introduction. And we will then have the debate.

Adam, if I could start with you. You and some of your colleagues at the Mercatus Center at George Mason have written in depth, and you have filed comments with the agency on many of the issues pertinent to the sharing economy. You have written that markets, competition, reputation systems, and ongoing innovation often solve consumer protection issues much better than regulation. Would you like to elaborate on that and other significant issues that you have included in the comments that you submitted to the FTC?

ADAM THIERER: Certainly, Marina. And thank you and Megan for inviting me here to be here today on behalf of the Mercatus Center at George Mason University, where we've recently published quite a bit of scholarship on sharing economy policy issues, the law and economics associated with this exciting new sector. Do you want us to go on for about five minutes, you said?

MARINA LAO: About five minutes. Maybe four.

ADAM THIERER: OK, I'll try four. I'm a quick talker. And we just recently released two law review articles and a new major filing to the Commission on this issue for this workshop.

The general conclusions of our research, I'll try to divide into or four or five buckets and quickly summarize them in four-ish minutes. The first overarching principle that I think we try to get forth in our work is that good intentions only get you so far in this world. And just because we label something to be a consumer protection policy or regulation doesn't mean that it actually protects consumers in practice.

In fact, much consumer protection regulation historically has had a fairly miserable record of serving consumers, and unfortunately, a fairly marvelous record of serving incumbent industries. Sometimes, the public interest looks more like the private interest. And generations of economic historians, economists, political scientists, and legal scholars have documented this fact on both the left and the right.

Moreover, even when regulations weren't captured by affected industries, many regulations in this sector have come to burden innovation and become a formidable barrier to new forms of entry and entrepreneurialism. This, in turn, has hurt consumer welfare by denying the public more and better types of services, lower prices, better quality, and better information.

The second general conclusion of our work is that the sharing economy and modern information technology platforms are solving a lot of the very real world problems that regulators were meaning to address with consumer protection regulations. The ease of innovation and entry in the online world means that new entrants can come in and provide better options to solve complex problems that previously thought were only able to be solved through regulation.

Informational empowerment is a big part of that. The internet and information technology solves a lot of these problems by offering consumers more and better information about products and services and giving them ways to lower their transaction and search costs when they go out into the market. Importantly, and probably a central feature of the sharing economy, are these reputational feedback mechanisms, which is the subject of one of the two new law review articles we've released at Mercatus. These reputational feedback mechanisms and product and service ratings and review systems, which we've heard about earlier, create powerful reputational incentives for all parties involved in transactions to perform better and develop trust between these diverse parties.

The combination of all these factors helps create what is known as self-regulating markets, where bad actors are generally weeded out and very quickly out of the way. And this alleviates the need for a lot of the top down regulation we've seen in the past.

We've already heard a lot—and this is a third conclusion from our research—we've already heard a lot today about how the sharing economy has demonstrably improved consumer welfare. But I think it's worth repeating that it's the combination of more choices, more competition, more service innovation, and differentiation, price differences, higher quality services, so on and so forth, that were not necessarily available in the past even though that was the desire of the very well-intentioned regulations that were put in place. But ultimately, it failed to deliver.

These platforms today wouldn't be thriving unless there was a clear consumer demand for them and a fairly high level of satisfaction and comfort with them overall. That bears repeating because of the fact that it means that we don't always necessarily need to have a preemptive regulatory policy in place to solve that problem.

A fourth general conclusion of our work, which I'll briefly addresses, is the topic of the previous panel, which is that there's always this need about leveling the playing field in sectors that are undergoing comprehensive technological transformation. And that's a challenging question, and a very legitimate problem, because of the creation of regulatory asymmetries in these industries and sectors in transition.

But the best way to level the proverbial playing field is not by regulating up to put everybody on the same level playing field or achieve parity, but rather, by deregulating down to give everybody an equal level playing field that's usually achieved by whatever the new entrant faces. If you think about it, what we face in the field of technology policy today is a lot like what we faced in the world of trade in the postwar period, where we had a serious problem with reciprocity and fairness in terms of how we applied law and, in this case, things like tariffs.

How did we solve that problem? We solved it by applying most favored nation clauses to trade agreements that achieved reciprocity in trade. And we did that by basically saying, you're going to accord equal treatment to other nations that you would accord to some other players that you do trade with. And whatever is the lowest level of burden that you accord to some other player is what you'll accord to everybody. This was the genius of the postwar trade experiment that led to the greatest opening of global markets in history.

That's the same sort of model we need for the sharing economy—achieving parity through liberalization of these markets and these regulations. Generally speaking, as we do so, our goal should be to have an innovation policy of a permissionless innovation, generally speaking, which means that new innovators are free to experiment with new business models, new methods of doing business. And then to the extent harms develop or accidents happen, we deal with them after the fact through other mechanisms.

On that point—this is another big theme of our research at Mercatus—we should always remember—and I can't believe nobody has talked about it today—that many alternative remedies exist to solve real world problems that do develop. Whether it's questions about liability or accidents or bad actors, we have insurance contracts, product liability, and other legal remedies. And this is really the genius of the common law. Because the common law has always worked to solve these sorts of problems that have developed in every other segment of our capitalist economy. There's no reason they can't work here as well.

Fifth and finally, I would say that the best role that public policy can play this time is to clear the way for even more sharing economy innovation and entry by removing barriers to entry in trade. Again, we should work to level the playing field, but do so with an eye towards liberalizing markets through permissionless innovation. State and local officials in some cases are trying to clear the way for that. But if they fail to do so and these barriers to entry and innovation remain, the Federal Trade Commission can play a very important role here, as it has historically, using its advocacy or even its antitrust enforcement powers to look into the question of when state and local government policies are serving as an impediment to greater interstate trade and competition. This is something that's very pertinent now since it was a recent Supreme Court case on this matter in North Carolina Dental that I'd be happy to discuss here today.

But in closing, I'll just mention that at a minimum we should bear in mind that it's important to be humble in this area and understand that the sharing economy is still very much in its cradle. This is not a phrase that any of us even had in our vocabulary five years ago. Now we're having a whole FTC workshop about it. That's a sign of how fast things move in the modern technological economy.

But in light of that, we should be very careful about the kind of public policies we try to craft today. Because none of us have a crystal ball that can perfectly predict the exciting future that lies ahead. Thank you.

MARINA LAO: Thank you, Adam. Sofia, in your scholarship, you have asserted that the issues we're discussing should be analyzed from the perspective of innovation law. You've also said that regulatory flexibility is important in addressing the complexity and the uncertainty that attends sharing economy platforms. Can you explain further what these concepts mean, and perhaps keep it to four minutes?

SOFIA RANCHORDÁS: I'll try. Well, thank you. So in my business scholarship, I have tried to offer an alternative for this highly polarized debate between those that defend the sharing economy because it's innovative and offers numerous benefits to consumers and those that actually just disregard the innovative elements and just focus rather on the privacy deficit, on the reduced consumer protection, and the public safety arguments.

My alternative framework that I suggest basically focuses or tries to focus on a more flexible approach to the regulation of sharing economy. It doesn't mean that I necessarily disagree with Adam's suggestion to self-regulate, but I don't think that self-regulation is able to solve all the problems. By regulatory flexibility, I mean not only the sense of adapting regulations more frequently, but also allowing for more experimentation—so not only experimentation in the field so that new entrepreneurs can experiment with new forms of sharing economy practices, but also experimenting with the rules themselves.

I'm totally aware that my framework, or at least my suggestion, would never fit a civil law country. And actually, if we look at what's happening right now in Europe, sharing economy practices have not been well received. So I assume that the 40 jurisdictions that were referred to on a previous panel did not include some European jurisdictions.

My innovation law perspective, at least as I name it in my scholarship, basically means that yes, we should regulate the sharing economy, but we should also not forget that the sharing economy does bring about a great deal of innovation, which should be prioritized. So in this sense, I started from the idea that sharing economy practices have—or at least they are built on a triangular relationship between two peers and a platform. And this platform should be the center of the regulation, not the sector. So a sharing economy practice, like Airbnb, does not necessarily have the same problems as a taxi or a hotel. We're talking about problems which are inherent to platforms, and they are common problems. And privacy is definitely probably the best example.

In my framework, what I suggest is basically that first we should prioritize innovation, or at least the innovation goal, and indeed, protect sharing economy practices that fulfill this goal that are innovative. So I don't just mean that any smartphone application is innovative, but those that actually increase our welfare, then they should benefit from a more flexible regulatory approach. And I do think there's no doubt that Airbnb and Uber do enhance welfare in general.

A second point is that basically if we actually decide to grant more flexibility to sharing economy practices—because at the end of the day, we're not renting our extra room every day—then we have to look at how we should do it. It has already been mentioned today that the sharing economy is evolving very fast. And one of the dangers here is that we actually are regulating sharing economy practices with very outdated rules, rules which were designed for different practices, for the commercial equivalents' practices, and not practices which are based on online platforms, on smartphone apps.

So my suggestion has been basically to adopt more flexibility in the sense that when we are not aware of all the risks and opportunities of the sharing economy, perhaps we should not regulate it right away. Perhaps you could actually have a regulatory delay here or define simple standards or guidelines with which Uber, Airbnb, or any new smartphone applications—I refer just to the platform—should comply with. So regulatory delay is one of the options I would suggest.

And the second one would be basically to return to a very old mechanism called sunset clauses that we all have heard of, which basically means that in order to ensure that we don't end up with outdated regulations, that we can just terminate regulations. If we don't know what's going to happen in one year from now, if we're afraid that there will be insurance issues, why don't we just experiment with certain rules? At least say, well, let's do this at a state level. Public utilities commissions can do this in theory. And assess whether this has beneficial effects or not on the sector, and also, whether there are risks attached to this.

And finally, I think that by having a more flexible regulatory approach to the sharing economy, we could also stimulate or at least give incentives to sharing economy platforms to at least provide more information on what kind of data they are sharing or not and what kind of data they have. So I think my solution is, yes, there should be regulation. This regulation should either be principle-based, or it should be regulation characterized by temporality.

MARINA LAO: Thank you, Sofia.

Arun, you've done a lot of research and have written extensively on many aspects of the sharing economy. You've also argued that consumer issues that arise due to information asymmetries can be addressed through different forms of self-regulation. And also, in a recent paper—which you mentioned in your presentation earlier—you used a new economic model to show that the sharing economy tends to benefit people with below median incomes more than they benefit people with above median incomes, which is somewhat contrary to popular assumptions.

So I was wondering if you could briefly address these points and other issues that you think are important and that you would like to raise at this time.

ARUN SUNDARARAJAN: All right. Thank you, Marina. I wanted to thank the FTC for putting together such a fabulous and thought provoking day of discussion. I've really learned a lot, and I think that this has been very educational for me.

I'd like to situate my comments in the context of the prior panel, which was fabulous, although it seemed to look at the necessity of intervention by non-market entities as given—inertial, in a sense. And it helps to frame our discussion by thinking about the purpose of regulation as surgical intervention to prevent different forms of market failure, whether these be from information failures, whether they be from externalities, a variety of other causes.

Over the last few years, I've observed the platforms, the business models, and the technologies that are creating this new sharing economy. I call it the sharing economy because it's a convenient term, much like we call social media, social media even though it's not all social. It solves a whole bunch of problems of market failure that used to exist in the past. But as we shift business away from provided by firms and institutions towards being provided by peer-to-peer markets, I think it's important for us to be vigilant about new forms of market failure that may emerge.

The second point I wanted to make was that when protecting customers, or you're thinking about consumer safety or consumer protection, society often makes tradeoffs between safety and the cost of enforcement of a regulatory regime. For example—I'll use the example of restaurants, because that industry is not represented here or has not been represented in the panels, and so it forms a useful case in point without getting into the specifics of a particular industry. The ideal solution to food safety would be to station a health inspector in every restaurant, have them inspect every piece of food, and make sure that it was safe before a consumer consumed it. Now, of course, this is not the solution to safety that we have chosen. We instead have spot inspections and a set of rules. And there's a tradeoff that society makes between safety and enforcement costs. To me, it seems like when people start running supper clubs out of their homes for money and occasionally feeding people, that we have to make that same tradeoff and perhaps come up with a different regulatory regime for these occasional providers than we have come up with for the frequent or professional providers.

Both of these are to set the stage for the prescription that I've been giving fairly consistently over the last three years, which favors self-regulation. This is not the same as no regulation. It is not the same as deregulation. It's simply the performing of regulatory activities by entities other than the government. If you look at the U.S. economy, different kinds of self-regulatory organizations are widespread.

Self-regulatory organizations have emerged naturally through history. They go back hundreds of years. This is not an idea created by the sharing economy or created by platforms. It's just that I recognize that when you create a new entity that is mediating transactions between two trading parties, then you are creating the possibility that this entity can take on some of the regulatory responsibility that we have had to give to different entities in the past.

In a Chicago Law Review article that was published a couple of months ago, my co-author Molly Cohen and I outline how self-regulation can form part of a broader innovation-enhancing solution. We provide guidelines for sharing economy regulations that draw from the experiences in industries ranging from nuclear power and financial intermediation to chemical production and cotton supply. It seems to us that demonstrated enforcement capabilities and the perception of legitimacy are essential for the success of self-regulatory organizations. Leveraging reputational concerns can complement traditional regulation. And there's a distinction between those entities that are best suited for addressing problems of information asymmetry and those entities that are best suited for addressing problems of externalities.

I want to make two other comments really quickly if I may. One is—and this came up in the previous panel—I've proposed an idea that I label delegated regulation through data. And this roughly encompasses an idea where platforms are charged with the enforcement, perhaps with audited evidence, rather than as an alternative to them handing over data to a government for the enforcement of their regulations. I see this as an attractive alternative to policies that advocate open data. Because there are often business challenges associated with handing over widespread data from a private entity to a government entity. I think that this kind of solution where a platform or a third party is charged with things ranging from collecting hotel taxes to making sure that there is no discrimination on the transactions conducted on their platforms can be achieved effectively by delegating these responsibilities to platforms, allowing them to use machine learning techniques to identify patterns that may not have otherwise emerged, and providing evidence of compliance through audited statements, much like publicly traded companies provide audited financial statements rather than opening up their books to all of their investors.

Finally, on the issue of the sharing economy and its equalizing effects, I think that with the right policy, there is a great deal of opportunity for this emerging sector of the economy to have an equalizing effect on our society. In fact, that's part of the reason why I got interested in the sharing economy in the first place—the idea that people who couldn't afford to own might get access to a higher quality of life when they could choose access over ownership. Already the returns to trade from platforms like Airbnb and Etsy and, to some extent, Lyft and Uber, have created a vast amount of work that goes well beyond the usual skill-biased technical change returns that we see come out of technological progress where you've got hundreds of thousands, maybe millions, of people who do not have skills that are biased towards the use of the new technology—like a Etsy sellers, Airbnb hosts, Uber drivers—but nevertheless are enjoying the returns created by the creation of these platforms.

The paper that Marina mentioned develops a new economic model about how an economy is impacted when, in addition to buying and selling goods through new and used goods markets, consumers can also rent them to each other through a peer-to-peer market. We calibrated this model using data from one peer-to-peer car rental marketplace, Getaround, as well as data from the National Household Transportation Survey, Bureau of Labor Statistics, NADA, a variety of data sets. And the intuition behind our finding that the peer-to-peer rental market is welfare- improving for people below median income comes from three points.

One is that there is always a fraction of the economy that is excluded when ownership is the only way to gain access. This sector of the economy tends to be low income. And that sector of the economy gets included when you have access to a peer-to-peer rental market. The data that I looked at on activity showed a negative correlation between rental activity on peer-to-peer car rental marketplace and income, so there's more activity of rental in lower income neighborhoods in San Francisco. So that's one.

The second is that in our projections to the future where we calibrated our model and looked into the future when this behavior became more widespread, people who tend to be lower income will give up ownership in favor of rental because the costs of ownership are high, the costs of carrying the asset are high. And so it is more likely that a lower income person is going to choose to rent and give up those costs of ownership and some of the convenience, and therefore enjoy the benefits.

And finally, it is also more likely that someone who is below median income is going to buy a better product now because they can earn some money by renting out their product through the peer-to-peer rental market. So you may end up buying a better car, a more energy efficient car, a better home.

Those are my comments, and thank you.

MARINA LAO: OK. Thank you so much, Arun.

Maurice, as an antitrust and privacy scholar who has focused on technology, the internet, and two-sided platform issues, what is your general perspective on the competition and consumer issues that are raised by the sharing economy?

MAURICE STUCKE: Well, thank you very much for inviting me today. I think what we've heard today is that, from an antitrust perspective, there are tremendous upsides from the sharing economy. We've heard that from the other panelists and from the earlier panels as well. But there are also potential risks. And what I want to raise here are not risks that are going to happen today or tomorrow. These are potential risks that could happen down the road.

I don't think anyone today will say that the FTC should regulate tomorrow. First, you're bringing it from the state level to the national level, which is not necessarily good. And second, you're then saying they're already presupposing there's a problem, and you may not have the proper tools.

But what I'm identifying is, what are some of the potential long-term issues that may arise in the competition authority to ask, do I have the tools currently to quickly address that issue should it arise? Do I have the tools to analyze the issue? Do I also have the tools to remedy the issue?

The sharing economy raises certain risks. One of the risks that you have is the online sharing economy is often characterized by a multi-sided platform in which you have buyers, sellers as well as advertisers. And the platform itself is controlling a lot of data. It's getting data from the users as well as from the sellers. There's a significant volume of data. There's a significant variety of data. And this data can have significant value. And having that control over that data can provide a company a significant competitive advantage. And what we've seen over the past year is the competition authorities starting to recognize the competitive significance of big data.

Having the concentration of data in one platform raises several issues. It raises, as we've already heard from Sofia, potential privacy issues. The potential concern down the road is, what if a dominant platform uses its market power to extract more data than what consumers might otherwise want? It also raises consumer protection issues, particularly if the platform provider can use that data to engage in behavioral advertising and price discrimination.

It also raises five potential antitrust concerns. The first concern—and we heard this this morning—is the rise of data-driven mergers. Data can help companies attain or maintain a competitive position, a dominant position. The problem is that often these data-driven mergers defy the conventional antitrust analysis.

One example I just threw out there—suppose Google were to acquire Uber. It wouldn't be necessarily a horizontal merger, a vertical, or a conglomerate merger. And the concern here is not whether or not the price for Uber's services go up, but one company having a significant amount of data. And is that reasonably capable of helping the company attain or maintain its dominant position in other markets?

The second concern—and Marina mentioned it earlier—is network effects. And what we've already heard from this morning is that these online platforms can be characterized by several network effects. One thing that we also heard from this morning is that network effects aren't necessarily bad. But they can be. They can increase entry barriers, and they can provide breathing room for dominant firms to engage in behavior that may ultimately reduce consumer welfare.

The third concern involves anti-competitive restraints by the platform operators. And we heard that this morning as well. This might come about with exclusivity provisions. Let's say the dominant platform prohibits sellers from using other platforms—so for example, if Uber prevented its drivers from using Lyft and vice versa.

The fourth potential antitrust concern involves vertical integration by a dominant platform operator. This is the case where the platform operator now becomes a seller on the platform. And the incentives of the operator can change, and it starts favoring its own products and services to the detriment of other sellers and also to the detriment of consumers.

The final concern involves price fixing. Here, what if we have a dominant platform and the dominant platform uses, let's say, one pricing algorithm? So you have a series of vertical agreements in the industry. One issue is, does that have the effect, then, of tampering with market prices?

So what are some of the canaries in the coal mine? That came up as well this morning. What are some of the things that the competition agency should start considering? The first is, to what extent do users multi-home? How frequently do they use multiple platforms? Second, who owns the sharing economy platform? There are potential antitrust concerns if the dominating operating system—let's say the dominating mobile operating system, for example, also controls the platform. This came up in the European Commission decision involving Facebook/WhatsApp, is that there is a potential risk. If the operating system also controls the app, to what extent can it take advantage of status quo bias? Also, to what extent by controlling the operating system does the operator of the platform start making it harder for consumers to perhaps switch to rival platforms?

And then third, is there any evidence of the platform operator seeking to increase switching costs of either buyers or sellers to rival platforms? And now you have data portability issues that we're going to address later. Consumers may feel locked in if they have a significant amount of valuable data and interaction history that they can't easily transport onto another platform, and technology exists that can enable the consumer to transport that information, but the platform operator doesn't.

What I want to emphasize, again, is not that these issues are imminent. But what the competition authority should ask is, do I have—first of all, am I asking the right questions? And second, do I have the tools that should this issue arise, I can then address it? So for example, if a dominant firm acquires one of these sharing platforms, do I have the analytical tools to assess what the impact would be? And then secondly, can I act quickly in the regards to prevent, then, the industry from tipping, let's say, into a dominant firm's favor. Thank you.

MARINA LAO: Thanks, Maurice.

MEGAN COX: Thank you all for that great overview. It certainly identified a number of issues we hope to further discuss on the panel.

The issue I'd like to begin with is the idea of self-regulation in the sharing economy. So Sofia, Arun has made the point in his remarks that a self-regulatory approach can address many consumer protection concerns. Some may react with that to some skepticism in light of some of the consumer protection issues that are arising in the sharing economy, such as safety issues, equal access issues, or issues regarding terms of service and meaningful disclosures to consumers. So what is your reaction to the self-regulatory approach? How might this idea interplay with the innovation approach you were discussing? And if you could touch upon how the expectations consumers bring to some of these transactions, and how that should inform how the platforms are regulated.

SOFIA RANCHORDÁS: Well, I do think expectations matter when it comes to regulation of sharing economy. Because at the end of the day, we do not have the same expectations towards our peers. Consumer protection originally derived from the mis-balance between professionals and consumers.

To a certain extent, especially when we look back at the history of sharing economy—because if we do historical research on this, we see that the original collaborative practices, they were just peer-to-peer. There was no online platform, and there was no professional involved. When it comes to the peer-to-peer transaction, I do believe that we are talking about application of the so-called Samaritan laws, where consumer protection is very reduced, because you don't have consumers. You just have two peers.

And this comes very close to what Arun was mentioning this morning about the difference between the regulated sphere and the non-regulated sphere where you're basically just preparing an extra bedroom for your mom. That's a personal sphere. I don't think in a personal sphere, we're talking about the same type of expectations or consumer regulation.

A different situation happens when we are talking about this triangular regulation where we basically have two peers, or more peers, and a platform, which is a professional. And by having this professional element in the relationship, we definitely have to think about new ways of approaching consumer regulation. So naming and shaming is a very effective tool to regulate and to protect consumers, but it's only a tool, which might not be sufficient to actually address all externalities.

Another tool which might be more effective, and which we already see with eBay, is to have more effective consumer dispute claims, alternative dispute claims. I think if we do have those in action, we actually are complementing the existing consumer protection regulation.

To a certain extent, I don't think we should neglect the fact that what we do have different expectations when it comes to sharing economy. But at the same time, there is no difference in expectations when it comes to relationship between platforms and consumers. And I think at that level, the expectations are exactly the same. And this is relevant for privacy protection.

Although it is true that privacy protection is often neglected because Americans don't really care about their data—because that's what people often say—but actually, we do care about our data, especially if we have a merger involving different apps, where basically just by monetizing our data, you can just buy a profile. If it happens, I think we as consumers do really care about how privacy is being managed.

MEGAN COX: Thank you. And Maurice, do you have a reaction to give on the self-regulatory approach?

MAURICE STUCKE: Yeah. I think the touchstone for me is that there are no absolutes. If there's a self-regulatory approach that works to address certain types of the market failures, and that works more effectively than other types of regulation, then I say go for it. That's a good thing. It's part of the tool kit.

There are things, though—we can't say necessarily that—and I don't think anyone really is saying that self-regulation is a panacea for all the harms. It's not going to necessarily deal with data-driven mergers where the company acquires the platform for the data and that can then lead to market power. So it really is, what's the sort of behavior that you're looking at on the particular local level, and to what extent would a self-regulatory organization be superior to the alternatives. And if it is, then I say no one would disagree that that would be the best outcome.

MEGAN COX: Great. Great; thank you. And Arun, did you want to respond?

ARUN SUNDARARAJAN: Sure. Neither Sofia nor Maurice said anything that I disagree with. I just wanted to reinforce a point which Sofia made, which is that we are in a number of sectors transitioning from peer-to-peer commerce that was non-intermediated, and therefore did require government regulation, to a world where a lot of this peer-to-peer commerce is mediated and thus may be well-suited for a self-regulatory solution in which the platform plays some of the rule of the regulator.

But I also did want to reinforce that point—that we may, in fact, also see sectors that used to be firm-to-consumer, like the accommodation, that are now becoming peer-to-peer that may create new forms of market failure that may need to be addressed by a variety of solutions, including a self-regulatory third-party government platform. And to Maurice's point, I do want to agree and reinforce the point that you made that nobody is suggesting that the absence of regulation or some sort of nongovernmental self-regulation is a panacea for everything. You're absolutely right. My argument is merely that it be considered as a viable alternative and as a viable solution recognizing that perhaps the existing regulatory infrastructure was built for an economy in which you did not have these professional third-party intermediaries.

MARINA LAO: Thank you.

Arun, Adam had spoken about the power of reputational feedback mechanisms and how we can often rely on these mechanisms to protect consumers. I know you generally agree with that proposition as well. But do they alleviate all consumer health and safety concerns? Are there concerns where reputation mechanisms would not work? What about externalities? I'm thinking about insurance that so many people talked about—Commissioner Sandoval and Matt Daus talked about it earlier. Would reputation mechanisms take care of problems that are market failures caused by externalities?

ARUN SUNDARARAJAN: I think when we say reputation system, I think different people mean different things. And the scope of what is included in a reputation system may be broader or narrower depending on—the panel this morning, a lot of their focus on what they meant by reputation system was a system that collects feedback from other peers, digitizes it, and makes it available for potential customers to look at. To me, that's one thin slice of the trust infrastructure.

You have these peer feedback systems. You've got identity verification systems. You've got systems that digitize social capital, like Facebook and LinkedIn. You've got identity systems that rely on the existence of a government. When you digitize your state-issued ID and that causes people to trust, say, Airbnb more, the removal of the entity that is issuing that state-issued ID is going to weaken the digital trust infrastructure. And so this trust infrastructure is not purely digital. It's not created from within purely. And there's brand, and there are third party certification, the Better Business Bureau emerging one.

I think that, while recognizing that today's "reputation systems" go well beyond these digitized peer feedback systems, I think that they are well equipped to take care of a number of the problems that are created by asymmetric information. They seem well suited to deal with some of the issues of adverse selection that would otherwise have not been dealt with. I think that the higher the stakes of the transaction—that is, if you contrast sending a package on eBay, which is relatively low stakes for the receiver with getting into a stranger's car and say drive me to another city, which is relatively high stakes, I think there's a hierarchy of needs that a consumer has from a trust system.

They want to know, is this person real? Does this person have good intentions? And then, is this person going to be good at what they do? That's generally the third concern. And the feedback systems can tell you a lot about the third, a little bit about the first and second. But you often see a greater layering of the non-peer feedback systems as the stakes of the transaction go up.

With respect to externalities, there are definitely certain externalities that cannot be easily addressed by either peer-to-peer feedback systems or more broadly by reputation systems. Because in all of the examples that I've given, the incentives of the platform are perfectly aligned in some ways with the broader societal incentives. A profit-maximizing marketplace wants safety. They want high quality sellers. They want to be able to distinguish between the high quality and the low quality. The interests of society are aligned with the interests of the provider of the reputation system.

With some of the externalities, it's not immediately clear that the platform is the right self-regulatory organization or that the peer feedback system is the right regulatory mechanism. For example, the congestion externalities that were brought up this morning, if they do become an issue, that does seem to be something where it's either going to be a government entity or a government law that is enforced by the platforms. Similarly, concerns about the externalities that are placed on people living in buildings that have a lot of Airbnb hosts , there are some externalities that are born.

It sometimes has seemed to me that so long as a uniform code is put in place, that the right entity to enforce that would be the homeowners' associations, the co-op boards. Because in some ways, you are localizing the set of people who are bearing the cost of those externalities is exactly the set of people who are under the jurisdiction of that association. So rather than going to either the platform or to the city or to the state, it makes a lot of sense to go to the entity whose scope of power is exactly the set of people who might be harmed by those externalities, leading, perhaps, to Airbnb-free and Airbnb-friendly buildings.

And so the short answer is, yes, there are a number of situations in which these reputation systems may not be sufficient. But if we define them broadly enough, they will address most issues of asymmetric information. But we may see different self-regulatory organizations to step in to deal with externalities.

ADAM THIERER: Can I make three brief points building on that? That was excellent, and I agree with everything Arun said. I think the study that we released at Mercatus Center on reputational feedback mechanisms takes a historical overview of these things have evolved going back to ancient times, all the way to present and tries to put the modern sharing reputation feedback mechanisms in some historical context. We draw a few general conclusions that I'll just point out here really quick. First of all, reputational feedback mechanisms are in a constant state of flux. And that's because, secondly, there's no one-size-fits-all formula for what works. There are going to be different needs in different contexts, and I'll give a concrete example in a second.

But also, third, none of these things happen in a vacuum. Reputational feedback mechanisms play alongside of many other types of social mechanisms and legal mechanisms to try to enforce good behavior. So it could be that you're not only using a reputation feedback mechanism on a site, you're also relying on some sort of back-end, hooking it to a LinkedIn account or a Facebook account. You're relying on actual human contact where you actually meet somebody. There could be a lot of different mechanisms to verify identity or reputation.

Now, a really quick concrete point here of the most important of these conclusions about the fact that the market's in a constant state of flux and there's no one-size-fits-all—just two concrete examples. You look at a service like Shuttle, which is trying to be Uber for kids, basically trying to chauffeur our kids around—that's a pretty sensitive thing. I'm a parent of a 13-year-old and a 10-year-old. If I'm going to have somebody pick up my kids, I want them highly, highly vetted. The reputational feedback systems they're putting in place with Shuttle are very, very rigorous. They're well beyond anything required by law. And that's because most parents would never sign up for it unless they were in place in that way.

But then you look at the opposite end of the spectrum, and you look at something like—my daughter and I recently sign up for an account on 1000tools.com, which is a tool sharing site. And I told my daughter for a summer project if she came in to business with me, so to speak, we would take all my old tools that I've amassed over the years, and she can take pictures of them and come up with prices, and we'll rent them out and I'll give her half of everything. And don't worry. She's 13, so it's all COPPA compliant. The FTC doesn't need to come after me. And hopefully, this works. I don't know. But we're going to go on and try this.

Well, it basically says on the site, leave some feedback if you had a good transaction. If something goes, wrong contact us. That's it. And it's because we're renting out for $5 a day a circular saw or a blender for your kitchen. It can be any tool or appliance in your house. So there’s a wide spectrum of reputational feedback mechanisms for the wide variety of diverse needs that our citizenry has.

MARINA LAO: Sofia, did you have anything to add to that?

SOFIA RANCHORDÁS: Yeah. I think that I agree with both Adam and Arun. And I think I would just add that in order to improve the effectiveness of peer review mechanisms, I think apps should probably work on five aspects. The first one is detail. Of course, as Adam explained, the level of detail really varies according to the service provided. But sometimes, providing just a five-star review might not be enough in most cases.

The second one is numbers. In the case of Airbnb, I wouldn’t trust anyone who has less than two or three reviews. And I think having a certain of reviews really matters. Of course, it might be an entry barrier, but it’s something that should be worked on. The third one is expertise—once we have a peer review mechanism, we’re actually leaving out of the expert role. So when we have a regulation, we see the regulators that name and shame as those that we will trust. Here it’s a little bit difficult. And we actually always incur the risk that we’ll have certain users that are biased and therefore will provide the bad review.

I think maybe having a form of expertise, which should be probably not provided by peer but provided by, for example, by an employee of Airbnb being or something like that, could actually help consumers decide, especially in the case of new providers. And the fourth one is making sure that there’s also a mechanism for third parties that actually are also absorbing a part of these externalities to also react.

For example, imagine you went to your house and the strangers throw a party. You as the homeowner, you don’t know about it. But probably, your neighbors will. And if they could at least provide some feedback or at least provide a review of the users, maybe in the future, other hosts will not be willing to actually host these people.

MARINA LAO: Let’s move on to the next question in the interest of time.

MEGAN COX: So to move on now to the issue of privacy more specifically. This has been mentioned a bit today, and it’s certainly an issue that’s very important to consumers. So the sharing economy platforms can collect a great deal of data from consumers, some of which is sensitive information. And this collection raises an interesting question at the intersection of competition policy, and privacy. And that is whether a platform should be allowed to use the data that's collected from participants for another commercial purpose.

So for instance, if Uber or Lyft decided to offer grocery delivery service of the future, should it be able to use the data collected from users at its transportation service in providing the grocery delivery service? Some may argue on privacy grounds that the platform should not be able to use the data collected from the transportation service without first getting the user's permission. Others will say, though, that the platform being able to use that data for a new purpose is more efficient.

So Sofia, I know that you are an advocate for an information fiduciary approach to this question. Could you please explain the idea of an information fiduciary a bit and how this might work?

SOFIA RANCHORDÁS: Well, as we have mentioned today, online platforms perform the role of middlemen that connect and exploit both service providers and consumers. And in different sectors, we see middlemen being treated as experts which actually have to operate under a number of constraints. So in the case of financial law, we see that fiduciaries always have to act with the bona fides or duty of care in the case of civil law. In the case of common law, we see that a number of middlemen have to comply with the so-called fiduciary duty.

If we look at the relationship between peers and online platforms, we see that we also have here a very similar relationship that would justify having a fiduciary duty. This idea has been developed at Yale by Professor Jack Balkin, who has a fantastic article on information fiduciaries. It's not on the sharing economies broader, but it is an article which actually analyzes this relationship.

So basically, the idea is, if you have a relationship based on trust and based on economic dependency—in this case, I would just emphasize in the case of the sharing economy, you basically are trusting the brands. You're trusting Uber. You're trusting Airbnb. You not trusting the driver.

And because you have this relation of trust, you also have some duties on the side of the platform, which basically means that the platform should have not only a duty to keep your information secret, your data, which is being collected, secret, but in some cases, it should also have a duty to disclose. So I'm actually analogizing the idea of fiduciary duties in the case of the sharing economy to the case of brokers. Brokers have similar problems. They have conflicts of interest, and they are solved by imposing this duty, or by building Chinese walls in the broader case of the financial sector.

And my question is, well, if we have a very similar situation here, a very similar scenario, why don't we just basically impose the same fiduciary duty on sharing economy platforms in the sense that if the system platform has some doubts regarding the service provider, maybe these doubts or these concerns should be actually disclosed to the consumer. And the same goes to the case of privacy, where actually, the fiduciary duty should be translated in a negative duty in the sense that data should not be collected, or if it is being collected, then this data should actually not be collected without the consent of the consumer.

So the idea of having a fiduciary relationship basically means that the platform has a duty to act in the best interests of the consumer. And very often, this is not very clear, because platforms are in the middle of two peers, and it's not clear whether they're acting in benefit of the consumer or of the provider.

MEGAN COX: Thank you. Adam, did you want to share your thoughts on this?

ADAM THIERER: Sure. So I think it's important that we be careful about the difference between industry best practices or codes of conduct versus formal fiduciary responsibilities. Under American jurisprudence, we've been very careful about who we've accorded fiduciary responsibility labels to. It typically comes down to sectors or professions where there's a potential serious grave harm. It's something like doctor patient relationship, or it's financial. Basically, it's potential real harm to your health or real harm to your pocketbook. And then, and only then, do we accord this fiduciary responsibility.

And there's a reason for that. Because there are additional burdens that come along with the fiduciary assignment. It's also kind of unclear about how it would even be applied in this context. Fiduciary responsibilities have evolved over time through codes and in common law, and then later have been affixed through law. It's unclear how they'd be done here. I think we're going to be hard pressed to find a way to make that work for the sharing economy considering how fast it's evolving and the fact that it does not reach that same level as, say, doctors or financial advisers.

Second of all, we can utilize the playbook that the Federal Trade Commission has already laid out for best practices for data handling and data privacy and security in other contexts for the sharing economy. There's no reason that the advice that the Commission has provided more generally to the tech world can't be applied to the sharing economy. And that can all be done within the context of, again, best practices, privacy by design, security by design, and so on and so forth.

Just a general point on this. I'll point that my friends at the Future of Privacy Forum—I see Joe Jerome over there—they just released a report on these issues just yesterday, I believe. So I'll put in a plug for that, because it provides a nice overview of some of the steps that players can take and are already taking to deal with these issues.

But I will just say this. On this point, it is very important we remember that the sharing economy, like most of the modern digital economy, is built on data and the free flow thereof. And its success is inextricably tied up with the fact that if you want people to have more trust in these platforms, it obviously is going to necessitate the sharing of a lot of information. And so this is the fundamental tension or paradox of what we face here—that you can't really have both a world where you want perfect reputational checks and information asymmetry solved, but then have perfect privacy or data security. You're going to have a fundamental tension there always. It's going to be tough to balance it. But we should be careful not to have a one-size-fits-all approach to it.

MARINA LAO: I think we have time for one last question, and that is the question on network effects. We talked about network effects earlier. And of course, networks effects are not necessarily bad. They can be quite efficient. And they don't violate the antitrust laws.

However, the existence of substantial and durable network effects could mean that current platform startups could well become dominant in the future. Now, we don't know that this prediction is necessarily true. But assuming that this prediction is true, what are the implications for competition policy? For example, should platforms be required to port suppliers' data to new platforms that may emerge in their respective sectors, for instance, in order to ease entry? And Maurice, since you're an antitrust scholar who focuses on technology and the internet issues, I think you'll be a good person to address this question to.

MAURICE STUCKE: Sure. With these data-driven economies, there at least four different types of network effects. One of them is the traditional form of network effects whereby the utility increases as more users use it. The telephone is a classic example. And that can be like social networks. You want to join the social network in which your friends are on, and the more people that join it, the more likely that someone who has to decide will join the larger platform.

The second network effect involves networks involving the scale of data. And this is like learning by doing. And so search engines are that. If you look at the published parts of the FTC staff report in *Google*, one of the issues that they grappled with was the scale. Everyone recognized that scale was a factor. The dispute was how important a factor, and how many search inquiries do you need to have perfected this learning by doing? And the Waze business model also operated on these scale effects.

The third involves scale effects with the scope of data. And here, it's by having a variety of information that you can compile across various different platforms to develop a better profile of the individual and better target them with an advertisement. And then the final form of network effects is where growth on one side of the platform helps growth on the other. And we heard about that this morning.

So for example, the more Uber users that you might have, the more drivers might want to then use Uber same thing with search engines. The more people that makes search inquiries on one hand, the more attractive that becomes for online advertisers. The reason that I mention these four different types of network effects is that the implications in terms of remedy may differ depending on which is the network effect that's at play here. And to what extent is the company then using its dominant position to entrench itself using these network effects?

So you really have to look at exactly what are the network effects at play? Are they helping the dominant firm entrench its dominant position? And even that by itself is not illegal. Then you have to say, is there any sort of anti-competitive behavior by the dominant firm to use this network effects to its advantage? Or are they engaging in, say, a merger in order to tip the market to its favor?

MARINA LAO: Adam, I know that you believe quite strongly—

ARUN SUNDARARAJAN: Could I jump in and add to that? That's a great breakdown of the different kinds of network effects.

The two that I've see most frequently in sharing economy platforms are clearly the two-sided markets network effects and, to some extent, the learning by doing. And I think that the issue of the previous question of data portability and the desirability of an information fiduciary, I think, relates to, in some ways, superior knowledge that comes from scale that could then be ported into an adjacent industry.

But I just wanted to reiterate a point that I may have alluded to briefly earlier today, which is that there's something very different about the kinds of two-sided network effects that these platforms are displaying, in that they are very localized. Uber's acquisition of drivers in New York does not help its business in Chicago except minimally for people who travel from New York to Chicago and who live in New York.

Similarly, the acquisition of space by Airbnb in San Francisco does not help customers who want to be going to a different city. And so these are sort of—I mentioned the fractal structure. But these are—there's a tremendous amount of difficulty, I think, that these platforms face in building sufficient liquidity at the local levels in these local markets. And given that difficulty, one might think that this would also pose a significant barrier to entry by a competitor.

Over there, I think it's important we distinguish between the kinds of network benefits that come from the supply and demand both flowing largely from the same geographic area. So in the case of ride sharing, most of the demand for the supply of New York taxi drivers comes from people who live in New York. So this is the kind of market which could tip very easily to a different provider if a lot of suppliers switched market by market, or where Lyft could dominate in one market, Uber could dominate in another market.

And that's different from an Airbnb marketplace where even though the supply is local, the demand is global, and so the barriers to entry may be more pronounced in that case. Now, again, that's not necessarily a bad thing. But I think that building on the frameworks for distinguishing between different kinds of network effects that we need to identify—I think that there's a need for additional academic research that goes beyond the observation that these are multi-homing platforms and tries to understand how the local nature of these two-sided markets affects the durability and resilience of the entry barriers posed by their network effects.

MARINA LAO: I think, Adam, I will give you the benefit of the last question, which is really a response to that. Because I know you feel quite strongly that it's premature to talk about network effects. So if you'd like to—

ADAM THIERER: Well, I think it's fine to talk about network effects. I don't want to say it's premature to say that they're of a sufficient level or concern that we need any sort of antitrust intervention at this time. I think to answer Maurice's question and his remarks about do we have the analytical tools to evaluate the competition policy issues relevant to the sector, I would say the answer is yes, we do have those tools, that the Commission is very well versed in these issues—not just network effects, but questions of bandwagon, lock in, whatever else.

They've dealt with them in other tech sectors, and of course, they've looked into things like Google's dominance and other things like that. So the Commission has been there, done that. And if there is a concern that arises, I'm confident they're well equipped to handle it. We don't need any additional law or body of regulation here.

But I think it's important to be humble and again understand that there's still plenty of churn and change and new entry in this sector. It's moving very, very rapidly. And let's not forget the very low switching costs associated with these sectors. It's very easy to move around and look at competition, look at different options. But then there's just the more general problem we have to keep in mind of how we even go about defining the relevant market for purposes of analysis of these sectors? That's very complicated. And it's not just in terms of its technological capability, but also its geographic one. I was born in rural Illinois where the family farm still had an outhouse. I don't think Uber is going to be there anytime soon. So are we talking about nationwide, locally, questions like that? But the point is—it goes back to the point I made in my opening remarks—it's important to have some humility here and understand things are changing pretty quick. We're in a pretty good place. I don't think we need to worry too much about our network effects creating any sort of dominant situation in this sector right now.

MARINA LAO: OK. Concluding thoughts. How about one minute per person. Starting at the end of the table, Maurice.

MAURICE STUCKE: All right. I would just begin by saying I don't think we have the right tools. I would say that we have tools—antitrust has really good tools where data is being sold in the marketplace. So if there are data sets that are being sold, they can apply their SSNIP test. They're really good at it.

But when it comes to these other types of data-driven mergers—for example, Google acquiring Nest Labs, or if Google were, for example, to acquire Uber—I don't think we have the tools. Because there, you're not looking at substitutability. You're not necessarily looking at price. Neither the Commission nor the DOJ have ever challenged a merger solely on non-price considerations alone. They've always considered price and quality and some other components.

So what I would encourage the Commission to do is not only to hold more workshops such as these, which I found very informative, but I would start asking the tough questions. What would happen if we start seeing—now, first of all, what are the canaries in the coal mine? How do we assess whether or not it is a canary? How do we assess an emerging competitive threat? Let's say someone who controls the operating system wants to acquire it. Do we have the tools to then assess how that would affect, then, consumers overall?

And there, I'm a lot more dubious. And so I would encourage the FTC and the DOJ to start really studying, what are the implications of big data on competition policy? Do we have the right tools? And if we don't do it—I know that the European Commission is now grappling with these issues. We need to do it one way or the other. Thank you.

ARUN SUNDARARAJAN: Thanks. I just wanted to conclude by highlighting and reiterating the tremendous potential societal benefits I see from regulatory models that delegate responsibility, and especially the delegated regulation through data from issues ranging from things as benign as collecting taxes to coming up with more effective enforcement and execution mechanisms for problems ranging from discrimination and exclusion. There really is tremendous potential from a delegated approach rather than an open data approach. I think it's clear from the discussion that not all forms of market failure are created equal, and that we have to think carefully about what kind of information asymmetry do we have, the difference between information asymmetry and externalities, and design the regulatory solution to address the specific market failure that is perceived.

I think it's also clear that the kind of network effects that are being created by these new platforms are quite different. We have some of the analytical tools. I think we have the foundations for the creation of these analytical tools. But there's a danger in borrowing the analytical tools created for the addressing of two-sided markets—say in the credit card industry or in other industries—and applying them whole scale to these localized network effects without rethinking exactly what the nature of these network effects are.

And I also think that, as our society moves closer to an economy in which a greater fraction of exchange and commerce is conducted through these peer-to-peer platforms, that we should be vigilant in new forms of market failure. And one that I highlighted this morning that I'll reiterate—the challenge of data Darwinism where a lack of a sufficient history of transacting might lead to exclusion of certain market participants. And we have to be vigilant for this kind of market failure. Thank you.

MARINA LAO: Sofia, your thoughts?

SOFIA RANCHORDÁS: Well, I think everyone agrees the sharing economy has numerous benefits. It has, above all, democratized access and access to accommodation, to transportation. And the challenge here is basically to find a moderate approach to the regulation of sharing economy. And very often, this moderate approach is actually lacking.

So I think in this case, we have to be careful with potential risks and externalities. But at the same time, we should also not forget that there are benefits here which should not be lost. So I think the major challenges here are first, making sure that antitrust challenges connected with ownership are taken into account. Also, because ownership and vertical integration have been addressed in Europe. For example, they have been one of the reasons why German courts have been actually biased against Uber, for example. They did not explain it that way, but they actually mentioned that Uber should not be treated more favorably, because it's not about small entrepreneurs. It's about a large American company which is being financed by another company. And because of that, it should not be protected. And local businesses should actually deserve this protection. So there is a certain bias here concerning ownership and financing which should also be addressed to avoid these kind of approaches.

I think the other challenge here is privacy. I think privacy is still unexplored. It is true that the sharing economy depends heavily on the flow of information. Whether this flow of information should be totally free, I'm not sure. I think there should be some walls. Whether we can call them Chinese walls or not, that's another matter. But there should be some walls preventing the information to flow too freely and certainly to flow outside the scope of the smartphone app.

And the last point that I would like to make is that one of the panelists this morning referred to the need to engage Congress in the conversation. I don't think Congress should be involved when it comes to updating legislation for platforms. This is a matter of regulation. And I think the FTC and other regulatory bodies are the ones who have to make sure that regulation actually keeps up with the evolution of sharing economy practices.

MARINA LAO: Adam, you have the last word.

ADAM THIERER: Thank you.

So are information technology markets perfect? Of course not. Are reputational feedback mechanisms perfect? Of course not. But think about how far we've come and the strides we've made in such a short period of time by combining the power of these two things. It is truly remarkable today that so many perfect strangers are coming together and interacting so effortlessly across so many segments of our economy thanks to the combination of information technology and these reputation feedback mechanisms. It's worth celebrating that fact.

It's also worth celebrating the fact that the general innovation policy our country has adopted toward these sectors and these new information technologies is what got us here. And that's the idea of permissionless innovation. We generally put the idea out there that entrepreneurs could go out there and do it without first coming and seeking a blessing from somebody before they did something interesting and innovative. And they're serving the public in exciting new ways that none of us could have ever envisioned just a generation ago. I think that's worth celebrating. And thank you for inviting here today to talk about it.

MARINA LAO: Thank you. And let's give a hand to all of our presenters.

[APPLAUSE]

CLOSING REMARKS

- **Julie Goshorn, Attorney, Office of Policy and Coordination, Bureau of Competition, Federal Trade Commission**

MEGAN COX: And now, Julie Goshorn will give a few closing remarks.

JULIE GOSHORN: I'm conscious of the fact that I'm the last thing standing between everyone and a plane or a train or an automobile. But I need to say thank you to a lot of people for helping us pull this off today. The fact that it seems like it is pulled off very well is an indication of a lot of people working behind the scenes. And so I need to say thank you briefly to all of them.

First, I want to thank all of our workshop participants for giving so much time in advance of the workshop and today on panels and on speeches. I know time is very valuable, and so I really appreciate the amount of sharing that has gone on today. I would like to thank Commissioner Ohlhausen and her staff for getting the workshop started this morning on such a strong foot. I also want to thank Commissioner Sandoval for contributing her thoughts on such short notice. That added a tremendous value to our event today.

I also want to thank Marina Lao for providing—besides moderating a panel, a lot of input and guidance as the workshop took shape. We also should thank especially Professor Sundararajan and Professor Einav both for preparing remarks today as well as sitting on panels. They've both given us a lot of input during the development of this workshop, which has been about eight months in the making. So we appreciate that.

We also need to thank the many Commission staff who've helped make this day a success. A lot of folks have participated in this. Not something that Bill or I would have pulled off by ourselves. The workshop team especially has worked tirelessly to put this together. We've got Fawn Bouchard and her event staff who have been behind the scenes today making this all run very smoothly. I want to thank Carrie Gelula and her design team for making all the graphics very successfully and very shiny and in a way that I could never have done.

And then today, you've probably all noticed the very sizable team of paralegals and interns that have made a significant contribution to making this day run smoothly. We owe a particular thanks to Tara Koslov, Chris Bryan, and Gina Pickerell for helping put everything together today and over the last few weeks. This event would not have gone smoothly without the significant involvement of all of them.

We also owe a debt of gratitude to Chairwoman Ramirez, who, as Marina mentioned earlier today, couldn't be here because of other commitments. But we owe her a debt of gratitude for being very supportive of this workshop from the very beginning.

And we need to say thanks to Andy Gavil, who is no longer at the FTC, but who lent a lot of support to this idea from its genesis when he was at the Commission. Finally, we want to thank all of you in the audience and watching remotely and the rest of the public for your interest in this workshop and involvement through being in the room today, watching the webcast, submitting comments, and sharing your views in other ways.

To that end, I'd like to remind you that the public comment period stays open from now until August 4. So please give us comments about what you think we did well, what you think we missed, what we can do the next time we start thinking about these issues. The details of the submission process can be found on the press release announcing the workshop, which is available on the FTC website. We encourage and look forward to your comments, and we'll read them with interest.

Last thing I need to mention, which is not a thank you at all, is please remember to turn in your badges as you leave the building. Thank you all for coming. It's been a great day.

[APPLAUSE]

[END OF WORKSHOP]