

**BREAKING THROUGH THE REGULATORY BARRIER:
WHAT RED TAPE MEANS FOR THE INNOVATION
ECONOMY**

HEARING

BEFORE THE

**JOINT ECONOMIC COMMITTEE
CONGRESS OF THE UNITED STATES**

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TUESDAY, MAY 22, 2018

UNITED STATES CONGRESS,
JOINT ECONOMIC COMMITTEE,
Washington, DC.

The Committee met, pursuant to call, at 2:30 p.m., in Room 1100, Longworth House Office Building, the Honorable Erik Paulsen, Chairman, presiding.

Representatives present: Paulsen, Maloney, Schweikert, Handel, Adams, Delaney, and Beyer.

Senators present: Heinrich, Lee, Hassan, and Klobuchar.

Staff present: Theodore Boll, Colin Brainard, Kim Corbin, Connie Foster, Colleen Healy, Beila Leboeuf, Matt Kando, and Rohan Shetty.

OPENING STATEMENT OF HON. ERIK PAULSEN, CHAIRMAN, A U.S. REPRESENTATIVE FROM MINNESOTA

Chairman Paulsen. I call this hearing to order.

Good afternoon, and welcome to today's hearing on "Breaking Through the Regulatory Barrier: What Red Tape Means for the Innovation Economy."

Bloomberg recently reported that the U.S. dropped out of the top 10 in the 2018 Bloomberg Innovation Index for the first time in 6 years. We were at 9, and now we are at number 11.

Such news is a call to action. America's tradition of invention has been at the heart of our economic strength. As lawmakers, we must recognize that the only way forward is to place our trust in the American people and to get out of the way.

The private sector knows all too well how needless red tape imposes costs on businesses, increases prices for consumers, and reduces consumer choice. For innovation, however, the impact can be worse. In Washington, regulators can put an idea to death before it is ever even tried, foreclosing a future of opportunity and progress.

We should know better. Americans enjoy a better quality of life today than decades ago, thanks to technological innovation. U.S. leadership in the world has been based largely on technological prowess, and for it to continue, our regulations must foster innovation rather than inhibit it.

We will hear examples from our witnesses today of regulation hindering advances and, perhaps worse, even driving it away to other countries.

And not all regulation is bad. After all, some is important for giving job creators necessary guidance and stability in their work. And when done well, sound regulation can make up for where markets fail to appreciate important public benefits or costs.

And that is why we are holding this hearing. How should we approach regulations so that it is as dynamic as America's tinkerers and inventors? In other words, how can we stop hurting and start helping more?

Our regulation should always serve the public interest, with minimum collateral damage to the economy. Where innovations are concerned, regulators shouldn't slam the door in the face of new ideas. Our economy and, in particular, the American people themselves should be given the opportunity to integrate these innovations in their lives. An advance that can improve lives and raise productivity generally leads to higher wages, and many Americans are in dire need of that kind of prosperity.

After all, technological progress is what ultimately brings us better living standards. And it makes little sense to thwart promising innovations that can make our lives easier, improve our health, provide new products and services, and then help the United States' firms compete internationally.

Consider that the majority of startup firms are in the tech sector. We should encourage the dynamism that contributed to the economy. If we fail to make improvements, fast-moving technology will be moving offshore even faster.

And as we will hear today, sound regulation is aware of and anticipates technological change. I like the concept of permissionless innovation. Our inventors and entrepreneurs should not have to ask for permission to make things better.

The U.S. technological edge and competitive advantage in a variety of sectors is narrowing and, to some extent, through unforced, self-inflicted regulatory wounds. I am keenly interested to hear what our expert witnesses have to say today, especially on how we might improve our regulatory regime.

Before I introduce the witnesses, though, I would like to recognize Ranking Member Senator Heinrich for his opening statement.

[The prepared statement of Chairman Paulsen appears in the Submissions for the Record on page 28.]

OPENING STATEMENT OF HON. MARTIN HEINRICH, RANKING MEMBER, A U.S. SENATOR FROM NEW MEXICO

Senator Heinrich. Thank you, Mr. Chairman. I am pleased that we are again looking at the question of how to accelerate the pace of innovation.

We come at this issue from different perspectives. My Republican colleagues seem to believe that only regulations are holding back innovation. Yet dialing back the clock on rules designed to protect consumers doesn't help small businesses innovate and grow.

Small firms, like small cities and towns, need fair rules of play. They need rules that give consumers and entrepreneurs a fair shake and rules that help improve access to capital.

When I talk with small businesses across New Mexico, the thing they are most concerned about is limited access to capital. That is why I asked Ms. Milano to testify today about the difficulties that small firms encounter gaining access to capital to launch and to grow their businesses. I believe her testimony will shed additional light on this important issue.

What is slowing innovation are barriers to capital and misguided tax policies. Let's start with taxes.

Republicans just passed a tax law that lavishes huge tax benefits on large corporations. At the same time, the new law makes the Tax Code more complex for small firms.

Corporations are using their tax savings to buy back their stock, not to invest in plants or workers. So far, companies have announced more than \$400 billion in share buybacks, including \$100 billion from one company alone. Those buybacks will do little to boost worker wages or to spur innovation.

Instead, we should be focused on supporting the next generation of companies, ensuring that those who want to start or expand a business have the tools and the access to capital that they need.

New businesses are the lifeblood of the economy. They drive innovation, they drive productivity, and they drive jobs. Yet new business formation has been declining for decades.

And the startups we do see are increasingly concentrated geographically. Half of the increase in business establishments between 2010 and 2014 was in 20 counties. Fully 60 percent of counties saw a net decline in establishments during this period.

Increasingly, banks are unwilling to take the risk on small loans that have high fixed costs and lower profit margins. More than half of small businesses seek loans of less than \$100,000. Yet those loans have fallen from 33 percent of bank lending in 2008 to 22 percent in 2016.

While it is hard for many small firms to access the funds that they need to start or grow their businesses, it is especially challenging for women-owned and minority-owned firms. These firms have less wealth to draw from to launch their businesses and also face higher borrowing costs.

Community Development Financial Institutions, or CDFIs, help to fill the void, often making loans to those who can't get them from commercial banks. Yet the Trump administration has proposed effectively eliminating the Treasury Department's CDFI Fund.

We have to tackle the access-to-capital challenge from all sides. And it starts with encouraging venture funds to identify and support promising startups beyond the urban hub on the coasts. SBA's Small Business Investment Company Early Stage Initiative helps to broaden the base of venture funding nationally.

We need to support small-business lending through SBA's capital programs, the CDFI Fund, and other channels. And we need to work toward greater lending transparency in the private sector.

A growing number of online lenders are using technology and access to data to attempt to fill gaps in small-business lending, but we need to ensure that these loans are safe. We should look at the financial protections we extend to consumers as a blueprint for how

we can and should protect small-business borrowers using these new financial products.

While access to capital is critical, there are other factors that are important to enabling innovation. These include Federally funded research and development and access to quality K–12 education and affordable postsecondary options. Investing in human capital, while promoting greater access to financial capital, will enable the United States to continue to lead in the 21st-century economy.

And I am very much looking forward to the testimony from all of today's witnesses.

Thank you, Mr. Chairman.

[The prepared statement of Senator Heinrich appears in the Submissions for the Record on page 28.]

Chairman Paulsen. Thank you, Senator Heinrich.

Before we introduce the witnesses, let me just welcome a lot of students who are here today from the Close Up program.

Thanks for joining us here and watching our hearing.

We will start with Mr. Brinkman, who is the Secretary of the Executive Cabinet in Kentucky Governor Bevin's administration. In this capacity, he oversees the various cabinets and is responsible for implementing the Governor's policies and programs. He is also currently serving as Acting Secretary for the Cabinet for Health and Family Services.

Previously, Mr. Brinkman represented the 32nd legislative district in eastern Jefferson County in the Kentucky House of Representatives from 2001 to 2010. Mr. Brinkman practiced law in Louisville for 35 years, specializing in corporate, real estate, and public finance law. He was a member of the Health and Welfare Committee during his entire tenure in the House of Representatives, as well as a member of the Appropriations and Revenue Committee during his last 8 years as a State representative.

Dr. Kennedy is a Senior Fellow at the Information Technology and Innovation Foundation. For almost three decades, he has provided legal and economic advice to senior officials in the public and private sector on public policies involving technology, competitiveness, and the social contract.

Dr. Kennedy previously served as the Chief Economist for the U.S. Department of Commerce. He has held numerous other positions in government, serving on committees in both houses of Congress and in the executive branch. He also was a Senior Economist on the Joint Economic Committee.

So welcome back, Dr. Kennedy.

Dr. Kennedy has a Law Degree and a Master's Degree in Agriculture and Applied Economics from the University of Minnesota and a Ph.D. in Economics from George Washington University.

Mr. Koopman is a Senior Director of Strategy and Research at the Center for Growth and Opportunity at Utah State University. He is also a Senior Affiliated Scholar at the Mercatus Center at George Mason University, where he has also taught in both the Economics Department and at the George Mason University School of Law.

His research specializes in regulation, competition, and innovation, with a particular focus on public choice and the economics of government favoritism. Mr. Koopman earned his J.D. from Ave

Maria University and his LLM in Law and Economics at George Mason University.

Ms. Milano, who is with us today, is a V.P. and Director of ESG investment research at Calvert Research and Management.

Before joining Calvert, she served as the Deputy Assistant Secretary for Small Business, Community Development, and Housing Policy at the U.S. Department of the Treasury. And prior to joining the Department of the Treasury, Jessica served as Senior Advisor to the Administrator at the U.S. Small Business Administration.

Ms. Milano also holds an M.A. in Applied Economics from Johns Hopkins University and received her B.S. in Government from the London School of Economics.

Thank you all for joining us today.

And, with that, Mr. Brinkman, you are recognized for 5 minutes.

STATEMENT OF MR. SCOTT W. BRINKMAN, SECRETARY OF GOVERNOR BEVIN'S EXECUTIVE CABINET, FRANKFORT, KY

Mr. Brinkman. Thank you, Chairman Paulsen, Vice Chairman Lee, Ranking Member Heinrich, and members of the committee, for affording me this opportunity to discuss Governor Bevin's Red Tape Reduction Initiative.

Governor Bevin campaigned for Governor in 2015 on the theme that it is all about jobs, which, at its core, means creating a more inviting environment to attract both human and financial capital.

To assist Kentucky in satisfying its financial obligations, Governor Bevin made the conscious decision to use every tool available to the administration to grow Kentucky's economic base and, thus, increase the flow of tax receipts into the State coffers.

Although there are many aspects of job creation, a key component of that effort is regulatory relief. And one of the first undertakings of the administration was the formulation and implementation of its Red Tape Reduction Initiative.

As part of this initiative, every cabinet and agency within the executive branch has been directed to review every regulation promulgated by it over the years and make one of the following determinations:

First, completely repeal the regulation, as its original purpose is no longer relevant.

Second, amend the regulation to conform it to a Federal counterpart. This effort includes eliminating inconsistent definitions and standards, with the goal that the State regulation should never be more burdensome than the Federal counterpart unless circumstances unique to Kentucky require a stricter standard.

Third, amend and modernize the regulation to make it clearer and simpler to understand by those subject to the regulation, and also make it easier to update the regulation in the future.

Fourth, combine the regulation with other regulations to include a single subject matter, such as fees or applications, in one regulation for ease of review by those subject to it.

Finally, leave the regulation as it is currently written.

The goal of the administration is to reduce by one-third the number of restrictions on businesses and individuals in Kentucky. In 1975, there were four volumes of regulations in effect in Kentucky.

That number had grown to 14 volumes when Governor Bevin took office.

Through the end of 2017, of the approximately 4,700 separate regulations on the books at the outset of the administration, 2,220 regulations have been reviewed, 372 regulations have been repealed, 327 regulations have been amended, 157 regulations have been targeted for repeal, and 433 regulations have been targeted for amendment.

The initiative has the support of business groups, trade associations, chambers of commerce, and other organizations across Kentucky.

There are several lessons to be learned from Kentucky's Red Tape Reduction Initiative.

First, the Governor must own the initiative in every aspect, and it helps to have a tangible symbol associated with the endeavor. In the case of Kentucky, we created the lapel pin that I am wearing today, and Governor Bevin and his top officials wear this pin each and every day.

Further, Governor Bevin speaks out regularly regarding the importance of the Red Tape Reduction Initiative to individuals and groups throughout Kentucky. As a result of the Governor's leadership, there is growing awareness of the initiative every day throughout the Commonwealth.

Second, it is important to create a website that is interactive with the public and allows for individuals to post recommendations on the repeal or amendment of regulations. Kentucky's Red Tape Reduction Initiative website is RedTapeReduction.com.

Kentuckians have submitted scores of thoughtful ideas on how to reduce unnecessary regulations that drive up the cost of conducting business and create inefficiencies without contributing to public health or public safety.

Finally, the effort of the cabinets and other agencies must be sustained on a regular basis. Our cabinets and other agencies regularly review and re-review existing regulations to ensure that the goals of the Red Tape Reduction Initiative are being met. This is a thoughtful and deliberative process that never ends.

We are also in the process of digitizing and modernizing the manner in which we draft and promulgate regulations.

The purpose of the Red Tape Reduction Initiative also includes helping to foster technological and engineering innovation. Governor Bevin's vision is for Kentucky to be the center for engineering and manufacturing excellence in America.

This is already happening. Toyota Motor Manufacturing Kentucky, Inc., which has its largest assembly plant located in Georgetown, Kentucky, announced last year that it is investing approximately \$1.33 billion to retool its facility in Georgetown to incorporate the Toyota New Global Architecture, which represents an entirely new manner in which Toyota designs, engineers, and manufactures its vehicles.

Braidy Industries will soon break ground on a \$1.3 billion high-tech, fully integrated aluminum rolling mill at a location in northeast Kentucky, which will be the first new aluminum mill in the United States in over 30 years. It will incorporate technological ad-

vances in aluminum materials science that were developed by a team at the Massachusetts Institute of Technology.

Finally, Amazon announced last year that it will invest \$1.49 billion at the Cincinnati/Northern Kentucky Airport, located in Boone County, Kentucky, to create its innovative, state-of-the-art global cargo hub.

These are just a few examples of the innovation that is occurring regularly in the Commonwealth of Kentucky.

Thank you, Mr. Chairman and members of the committee.

[The prepared statement of Mr. Brinkman appears in the Submissions for the Record on page 29.]

Chairman Paulsen. Thank you.

And, Dr. Kennedy, you are recognized for 5 minutes.

STATEMENT OF DR. JOSEPH KENNEDY, SENIOR FELLOW, INFORMATION TECHNOLOGY AND INNOVATION FOUNDATION, WASHINGTON, DC

Dr. Kennedy. Thank you.

Chairman Paulsen, Ranking Member Heinrich, and members of the committee, thank you for inviting me to be here today.

The task of regulating the economy is a necessary but very difficult problem. Congress and regulators need to view it from a dynamic viewpoint: develop rules that encourage firms to discover new ways to achieve social goals as efficiently as possible.

Regulation is most justified when it addresses market imperfections. Rules that use market tools like price signals and information to fix problems are most likely to encourage innovation. So is regulation that gives companies clear, long-term, and achievable goals.

ITIF believes that better regulation can not only remove artificial barriers to innovation, it can actually increase innovation by changing market rules to reward those companies that develop more effective, cheaper ways of attaining important goals.

Intelligent rules can increase the amount of competition in a market. They can lower the barrier for new innovations. Smart rulemaking can increase the amount of information that customers have about different products, while unwise ones can reduce buyers' incentives to make wise choices.

Rules that favor incumbents can raise entry barriers, while reforms that improve market structure can significantly increase productivity by speeding the use of existing innovations.

Regulators can help this process by following a set of general principles.

First, embrace innovation. Regulators should assume technology will continue to advance. Rules should not only anticipate innovation, they should encourage it.

Second, embrace transparency. Congress, regulated entities, and the general public should have a clearer view into the decision-making process of regulators, including any evidence or studies that they use to back their conclusions.

Third, place more trust in the consumer. Given sufficient information, consumers can be their own most effective advocates. Firms that violate the public's trust often pay a heavy price in terms of profits and market share.

Fourth, place more emphasis on reducing the cost of overregulation. Regulators should actively seek input from industry and major stakeholders on ways to reduce the cost of compliance without affecting public goals.

Fifth, every major rule should undergo some level of public cost-benefit analysis in which the agency clearly explains why and how a rule will increase social welfare. To the extent possible, this analysis should be backed by quantitative studies.

Sixth, regulators should focus on competitiveness effects. We increasingly live in a global economy in which domestic firms have to compete not just for foreign markets but also for those here at home.

Congress can further this effort by enacting legislation that does four things.

The first is to encourage interagency cooperation to undertake a comprehensive study of the global competitive environment faced by specific U.S. industries, including a review of the regulatory environment that they face.

Second, direct the Office of Management and Budget to evaluate the effect of major rules on innovation within the regulated industry.

Third, update legislation in ways that give agencies more guidance and revoke obsolete rulemaking authority. Also hold more frequent oversight hearings to discuss regulatory approaches with the agencies.

And, finally, ensure that regulators have enough resources to attract the best people and to acquire a deep understanding of the industry they are regulating.

I believe that these suggestions can be implemented rather easily, provided the necessary leadership exists. If enacted, they will have a noticeable effect on the quality of regulation.

Thank you very much.

[The prepared statement of Dr. Kennedy appears in the Submissions for the Record on page 32.]

Chairman Paulsen. Thank you.

Mr. Koopman, welcome, and you are recognized for 5 minutes.

STATEMENT OF MR. CHRISTOPHER KOOPMAN, SENIOR DIRECTOR, CENTER FOR GROWTH AND OPPORTUNITY, UTAH STATE UNIVERSITY, LOGAN, UT, AND SENIOR AFFILIATED SCHOLAR, MERCATUS CENTER, GEORGE MASON UNIVERSITY, ARLINGTON, VA

Mr. Koopman. Thank you, Chairman Paulsen, Ranking Member Heinrich, and members of the committee, for holding this important hearing today.

I want to make three points in my testimony.

First, the growth of the commercial internet was the direct results of a culture of permissionless innovation, which allowed it to create the massive gains in consumer welfare we have witnessed over the past 30 years.

Second, the continued growth of this sector is being stifled by outdated regulatory approaches that are driving innovators to pursue better regulatory climates overseas.

And, third, we can reclaim this culture of permissionless innovation through a few simple reforms.

As an open platform, the internet has allowed entrepreneurs to try new business models and offer new services without first seeking the approval of regulators. This is no accident. Bipartisan efforts in the 1990s made it the official policy of the United States. This guaranteed a platform with little prior restraint on the commercial activities undertaken on the internet. When harms and failures did occur, we addressed them in an ex post manner.

However, as more industries have been disrupted by technology companies, this culture of permissionless innovation has been met with a permission-based, proscriptive regulatory approach.

The cost of these regulatory approaches at both the State and local level are being felt more acutely today and by more people by the simple fact that it is easier than ever to jump into regulated industries. Within a few clicks, one can offer tax and legal advice to anyone, connect with a doctor thousands of miles away, chat with a therapist, or find a mover.

Moreover, as entrepreneurs have brought these pre-internet practices into the internet age, they are encountering regulatory environments where smartphones, computers, and internets were never thought of when they were created.

One stark example of this that comes to mind is the recent response by the Federal Aviation Administration to flight-sharing platforms. For decades, general aviation pilots and passengers were able to connect with one another via physical corkboards in airports all across the country. In 2013, a company called Flytenow created a platform that turned these physical corkboards into a digital app.

This could have revolutionized the way we travel. And, within a few years, the app itself had 25,000 users—pilots and passengers—connecting with one another to share flights all across the country.

However, current FAA regulations and guidelines on flight-sharing arrangements never contemplated the use of the internet. And, as a result, the FAA relied on 30-year-old guidance documents to declare pilots using the platform to be common carriers. This meant pilots without commercial certification were operating illegally. They could continue to connect with passengers using the physical corkboards, but using the app to arrange the same flight was illegal.

Discouraging this type of innovation in the United States doesn't necessarily mean this innovation will not occur. Rather than fighting with regulators, innovators will simply go where they are welcome. This is what my colleague Adam Thierer refers to as "innovation arbitrage."

While flight-sharing platforms have been grounded in the United States, they have taken off in Europe. A European version of Flytenow hosts 150,000 users, 10,000 licensed pilots in France, Germany, the United Kingdom, and they are expanding across the entire continent.

Now, why is that? Instead of viewing them as a threat, European regulators recognized these platforms were simply extending existing practices. They reformed existing regulations, and they actively worked with the platforms to promote safety.

This is but one example. Innovators working on commercial drones, driverless cars, flying cars, and the sharing economy are all finding more hospitable homes outside the regulatory purview of the United States.

Now, ultimately, to ensure that we remain a leader in the innovation economy, we must embrace the culture of permissionless innovation that fueled the internet's unprecedented growth over the past 30 years and all of the economic benefits that it has generated.

To do so, we must balance important regulatory goals—safety and consumer protection—with a tolerance for mistakes, failures, and learning so that innovation can continue to move us forward. Doing so requires a technological freedom not found in many of our current regulatory approaches. It requires a humility to admit that we do not know what the future will look like, and it requires a willingness to admit when our approaches have outlived their usefulness.

By shoring up boundaries of regulatory agencies and requiring agencies to take clear, concise, and consistent approaches toward regulating new technology, Congress can ensure a foundation for simple rules in our fast-changing, complex world.

There will always be serious and legitimate concerns that make it tempting to require innovators to seek approval before they proceed. And while this may address many of these concerns, it is done at the expense of continued innovation and economic growth. And we should all be mindful of the effects that decisions made today will have on tomorrow's innovators and entrepreneurs.

Again, I thank the committee for the interest in and attention to these issues, as well as the opportunity to testify, and I will welcome any questions you may have. Thank you.

[The prepared statement of Mr. Koopman appears in the Submissions for the Record on page 35.]

Chairman Paulsen. Thank you.

And, Ms. Milano, you are recognized for 5 minutes.

STATEMENT OF MS. JESSICA MILANO, FORMER DEPUTY ASSISTANT SECRETARY FOR SMALL BUSINESS, COMMUNITY DEVELOPMENT, AND HOUSING POLICY, U.S. DEPARTMENT OF TREASURY, AND BOARD MEMBER, SMALL BUSINESS MAJORITY, WASHINGTON, DC

Ms. Milano. I would like to thank Chairman Paulsen, Ranking Member Heinrich, Vice Chairman Lee and all of the distinguished members of the committee for inviting me to testify today. I am honored to be here to talk about my experience supporting safe and affordable access to credit for America's small businesses and entrepreneurs.

Small businesses are one of our country's greatest sources of innovation. All of our most successful innovators, from Apple to Amazon, started small. Their meteoric growth was not inhibited by regulation but could have been without access to capital needed to grow and scale their business.

In my testimony today, I wish to discuss three important points.

First, most small-business owners believe some regulation is needed in a modern economy. While no one likes red tape and fill-

ing out paperwork, most Americans can appreciate that some regulation is needed to promote fairness and competition.

In fact, according to a new poll released today by Small Business Majority, three out of four small-business owners disagree that we should get rid of all regulations on business and think that some regulations are important to protect small businesses from unfair competition. What is more, an overwhelming majority of 82 percent agree their business can live with some regulation if it is fair, manageable, and reasonable.

Second, many small-business owners rank access to capital as a bigger concern than regulation. While our capital markets work well for most established, large, and midsize businesses, many small, early stage, rural, minority-owned, and women-owned businesses often struggle to find financing and consistently rank access to capital as a bigger concern than regulation.

Even more concerning, a growing number of financing products are being offered to these businesses by financial firms not subject to the same regulation and oversight as banks. According to another Small Business Majority poll, while small-business owners felt that online lending opened up new sources of credit, 8 in 10 reported they were in favor of regulating online lenders to ensure that interest rates and fees were clearly disclosed to borrowers.

And this brings me to my final point: Smart policy can promote safe and affordable credit and encourage innovation. Transparency is critical to promoting market competition, which should ultimately provide small-business borrowers better products at better prices. But to ensure a level playing field among financing providers, disclosure requirements should apply equally to all small-business financing products, regardless of whether the provider is a bank, credit card, merchant cash advance, online marketplace lender, payments processor, or any new companies yet to emerge.

While transparency would make credit safer and more affordable, there will still be some businesses that will need help qualifying for a loan or accessing critical early stage capital. I would like to highlight one of the very successful and innovative public-private programs I had the privilege of working on during my time at Treasury as a model for Federal support for innovation and entrepreneurship.

The State Small Business Credit Initiative was funded with a one-time authorization of \$1.5 billion through the Small Business Jobs Act of 2010. It was a new program and a true experiment, born of the need to jump-start small-business lending and investment during the financial crisis.

The program worked by allowing states to set up their own small-business support programs targeted to local economic needs. It was so flexible there were only two requirements: States had to establish at least one from a list of five possible credit or equity programs; and states had to provide a plan for leveraging \$10 of new private-sector small-business financing for every \$1 of SSBCI funds.

Unlike other Federal programs, it was not a one-size-fits-all approach. Some communities chose to target micro-businesses, while others targeted manufacturers or high-tech companies. In total, SSBCI funded 154 State programs, over 80 of them new, and dedi-

cated \$1 billion to lending programs and \$400 million to venture capital programs supporting early stage businesses.

From 2011 to 2016, the last year data was available, SSBCI supported over \$10.7 billion in new lending or investments, and it was estimated to have created or retained over 240,000 jobs.

In total, it supported \$2.5 billion in financing for small manufacturers; \$1.5 billion for women- and minority-owned firms; \$4 billion to early stage businesses with high growth potential; and, even more remarkable, with no Federal requirement to do so, over 42 percent of SSBCI loans or investments were made to businesses in low- to moderate-income communities.

SSBCI illustrates the power of leverage, a little bit of Federal support partnered with State and private-sector resources, and the power of flexibility to drive innovation and inclusive economic growth. We need more smart policy like SSBCI, and I recommended to the committee, if you are considering policy to support innovation and small businesses, you should consider reauthorizing SSBCI in some form.

Thank you.

[The prepared statement of Ms. Milano appears in the Submissions for the Record on page 61.]

Chairman Paulsen. Thanks, Ms. Milano.

And we will start our questions now.

Maybe just to begin, you referenced the article earlier, the Bloomberg article, where the United States has now fallen out of the top 10 in innovation. And, obviously there is a concern there, but I think what was even more concerning in the article was the prediction that some have also made about that trend is going to get worse rather than get better.

So my question is—and I will just start with you, Mr. Koopman—how do regulators allow for a culture where it is okay for innovators to be doing their thing? And you referenced the internet, for instance, the FAA and some of the flight-sharing components from an app.

And when is regulation necessary? How do we ensure that it is tailored and it is not going to be immediately outdated?

And what are some examples of what other major trading partners or other allies and economies around the world are doing to orient themselves on regulatory change as a competitiveness argument?

Mr. Koopman. Thank you very much for the question.

I think the most important thing regulatory agencies can do to embrace a culture of permissionless innovation, first and foremost, is to sort of separate the idea of harm from fear.

I think, especially in the emerging tech space, very often every new innovation is followed by, you know, techno panics, if you can call them that, where people think the latest technology will ruin the world or make people less safe or harm us in some way.

And those fears may be legitimate, and it requires the agency to do one of two things: to step in and say, we don't have enough information at this point to make that decision; or to say, yes, there is clearly tangible, irreversible, catastrophic harm, and it is time to narrowly tailor a regulation to ensure that that harm doesn't come to pass.

I think the most important thing an agency can do is to base regulatory decisions around actual harm as opposed to the fear of harm.

And I think the perfect example of this is flight-sharing, as I mentioned before. The FAA is a safety agency at the end of the day. And their concerns about flight-sharing, general aviation pilots using an app to connect with passengers, was one of safety.

At the same time, you have this European example where the European Aviation Safety Administration has embraced this and said, there is no clear harm, and we will play an active role in setting up norms and practices and procedures within the industry to ensure that the feared harm never comes to pass.

I think that is one perfect example of this. You see this also in drones, another emerging technology, where you have companies—Google X, for example, built most of their technology in the United States, and a lot of their testing initially was done in Australia, because the Australian regulators had embraced the idea that you can fly a drone over someone else's head without hurting them, while it was still, you know, very much a heavily regulated industry in the United States.

I think those are two examples of where trading partners are taking a posture toward permissionless innovation and you are seeing U.S.-born ideas and U.S. innovations going overseas.

Chairman Paulsen. Dr. Kennedy, maybe you can add, too. Drones, driverless cars—I mean, maybe you can expand on that.

Dr. Kennedy. Sure. Yeah, I recently came out with a report last year, I think, on the automation that is occurring in the freight transportation industry. You know, whether it is trains or freight trucks or drones or even airlines, every industry is automating. The technology is advancing quite rapidly.

And I think the best thing that the regulators can do is, one, take some responsibility for the competitiveness of the industry internationally and say, in addition to guaranteeing public safety, we also have to make sure that this industry can continue to compete strongly in global markets, and then work with the agency to try and identify, you know, the true public safety issues that are involved in moving to greater automation and find ways to get around those.

I think, you know, usually once we identify the legitimate concerns or dangers of the technology, we can find ways to get around it. I think, in the past, if you look at the history of technology, there has always been a tendency to fear the technology and to want to put a brake on it until you understand everything that could possibly go wrong. And if something goes wrong, nobody wants to take the responsibility to say, yeah, I authorized that because I thought it was worth the risk, I thought the benefit of the technology in the long term was worth, you know, a couple accidents.

You know, all technologies have to work through problems, but eventually we get there. Eventually we come out with solutions that, you know, make substantial contributions to the way we live.

Chairman Paulsen. Thank you.

Dr. Kennedy. And the regulator has to accept that as a challenge.

Chairman Paulsen. Senator Heinrich, you are recognized for 5 minutes.

Senator Heinrich. Ms. Milano, banks are more reluctant these days to make loans to small businesses, both citing high costs and low profits. And, as a result, borrowers are oftentimes looking to new sources of capital, including FinTech, that operate, in some cases, without real oversight.

What are some of your concerns about turning to FinTech lenders in this environment, particularly online lenders?

Ms. Milano. Thank you for the question, Senator Heinrich.

I think that small-business lending, particularly small-dollar loans under \$100,000, which are what the vast majority of small businesses seek, have high fixed transaction costs and underwriting costs relative to revenue generation potential for community banks. And we have seen a decline in community banks'—less than \$10 billion in assets—share of that lending and more of a movement toward credit card products and emerging online FinTech providers that are sort of credit-scoring businesses online and underwriting loans that way.

And I think one of the concerns online is that it is buyer beware for small businesses. You know, I am on the board of directors of Small Business Majority. They do polling of small businesses. They are a national advocacy organization that has 55,000 small-business members nationwide. And what we have seen is that there is not a lot of transparency about the prices, the interest rates, the fees associated with these products. And there is a real desire for an extension of common disclosures that would basically level the playing field and provide transparency to the market.

Senator Heinrich. That gets to the heart of an issue with regard to access to capital. How do we do a better job? We have these different platforms. We have credit cards, we have FinTech, we have community banks, we have big banks, we have credit unions. How do we do a better job of treating everyone equally and transparently in that regulatory environment?

Ms. Milano. Right. I don't think you regulate the entity; I think you regulate the activity. And you basically say, whether it is a loan or a credit product, there are certain key pieces of information that consumers or borrowers need to have, and that is the interest rate, any fees—and there is more about this in my paper—and the payment terms and things like that.

And this is information that, if it is available, borrowers will actually be able to shop and compare prices across credit providers and know what is a better deal and what is not for them. And nobody really in the market should be threatened by that, because that is just promoting better products at better prices and fairer competition.

Senator Heinrich. I think one of the challenges is we all live in a world where there is a historical inertia. And so we sometimes set things up to, by default, regulate the entities based on, you know, what box you check, as opposed to regulating the activity.

Dr. Kennedy, there has been a big focus today on the importance of deregulation and less focus on how, as you do that, you make sure that you are doing it in a responsible way. And I thought you were very measured and balanced in your testimony today.

No one likes red tape; that is obvious. But it has been my experience that my constituents like to breathe clean air and they prefer that when they drink water it is clean water. When my mother worked in a factory, she was more than happy to sign up for long hours and hard work, but she didn't sign up for carpal tunnel syndrome.

In designing regulations, how do we make sure that we consider both the costs and the benefits? And how do we ensure, once again, those issues of transparency and level playing field across platforms?

Dr. Kennedy. Two or three things that I think especially on the big level are important.

One is, I think the regulator has to—it has to measure potential benefits and harms over technology in a clear way. Some of the environmental issues are sometimes the hardest because they are difficult to quantify—the benefits of clean air or clean water or better worker safety.

But I think it is Congress' job to set a level for what is safe, and then it is the regulator's job to try and achieve that level but try and achieve it in the most efficient ways.

And, a lot of times, regulators have used command and control methods or dictated the use of a certain technology, and that can sometimes work when the technology is there and you just want to—it will let you achieve the level you want and you never want to do better.

But we should accept as a goal, or adopt as a goal, that we want to do better and better and better and better over time. We want cleaner and cleaner air. We want better and better worker safety. And for there, I think you measure the results. You measure air quality; you measure the number of sick days. And you try and find a way to reward companies that do better over time. And you invite in and even help develop technology that would get you improved performance.

Senator Heinrich. Thank you.

Chairman Paulsen. Thank you.

Senator Lee, you are recognized for 5 minutes.

Senator Lee. Thank you, Mr. Chairman.

And thanks to all of you for being here. I appreciate the insight and expertise each of you brings to this committee.

Mr. Koopman, you have previously written about how local land use restrictions end up having an impact on hardworking Americans by restricting the supply of housing and, in the end, raising prices.

The local zoning laws, in many instances, have an impact on development, and they end up discouraging economic innovation. This problem is compounded in a State like mine, where there is a whole lot of land that is owned by the Federal Government. At present, the Federal Government owns about two-thirds of the land in the State of Utah.

And so, without considering the impact of State and local laws restricting land use—we have those too, but on top of that, in Utah, we also have this restriction that says that there is only about one-third of the land that can ever be developed for anything—for housing, for recreational purposes, for grazing, and so

forth. And so, unlike people in many states, people in Utah are limited by both State and local land use restrictions and also the Federal overlay that comes with Federal public land.

Can you just tell me about how this strikes you, about the relationship you see between land use restrictions at the State and local level on the one hand and the Federal Government on the other hand and how they have an impact on the availability of housing and the pricing of housing?

Mr. Koopman. Thank you very much for the question. And I think this goes to a point that Ranking Member Heinrich mentioned before, that 20 counties, I think he said, had an overwhelming majority of these startup and innovation activities.

And I think that goes to the heart of the point. You think of San Francisco, the Bay Area, for example. There is all of this economic activity occurring, and yet it is far too expensive for people who could pursue the jobs being created by many of those companies to move there because land use regulations quite simply make it too expensive to move there. And geographic mobility is very much a chief component to income mobility. Being able to move to where work is is an important part of getting the work, is being there and showing up and having the job.

So the restrictions, the inability to develop land locally, be it from a Federal restriction, a State restriction, or a local restriction, is a chief barrier, in many instances, to people finding meaningful work and opportunity. Because you do, again, end up with this mismatch where you have a supply restriction, regulation either at the Federal, State, or local level that says you cannot build a house here, but you have a high demand for jobs. Holding the supply constant, the demand increases; you will see the prices go up and up and up.

This is something we have experienced here in D.C., as more and more people come to D.C. You see this in the Bay Area. You see this in Salt Lake City and elsewhere. As jobs continue to be needed in a particular area, a big part of that is having housing available.

Senator Lee. Are there policies we could pursue, through legislation or otherwise, that would help alleviate this burden?

Mr. Koopman. Oh, certainly. At a State and local level, there are many things that policymakers could do to take positive steps toward unleashing the supply of housing.

Senator Lee. What about Congress? Do you think there are things Congress could do to impact at least the Federal role, the role the Federal Government might have in public land states, for example?

Mr. Koopman. Oh, certainly. And I have to say, I just moved to Utah a week and a half ago, and I am very much—

Senator Lee. We are so pleased to have you there. You have moved to Utah at a very good time of year.

Mr. Koopman. Yeah, it is been beautiful. Don't tell my wife about the snow.

But we have just moved to Utah, and I can't speak specifically to the issues of public lands, but definitely seeing there are vast amounts of the West owned by the Federal Government that could be put to beneficial use in various ways. This isn't returning it to the states or privatizing it, but the Federal Government taking a

more active role in allowing for multiple uses on public lands could certainly go a long way toward some of these housing affordability issues in the long term.

Senator Lee. And, to be clear, you are not talking here about national parks, about wilderness areas. Most of the land that is public in Utah doesn't fit into any of those categories; it is just garden-variety land, right?

Mr. Koopman. Correct. I am not saying shut down parks. I am not saying anything like that. What I am saying is, in land that is held by the Federal Government and isn't being put to use currently, that is an opportunity for Congress to look and say, can it be put to better or different use.

Senator Lee. Thank you very much, Mr. Koopman.

Chairman Paulsen. Thank you.

Ms. Maloney, you are recognized for 5 minutes.

Representative Maloney. Thank you, Mr. Chairman and Mr. Ranking Member, for holding this hearing. I view innovation as one of the key elements of the success of our country. This is an important hearing.

But, of course, regulations—we don't want so few of them that we have things like the 2008 economic downturn that, before this committee, one economist after another said it could have been prevented with good regulations and good oversight, could have prevented the catastrophe that resulted in over \$15 trillion lost in household wealth, 9 million jobs, 8 million homes—just a devastating downturn that could have been prevented.

Part of the reforms was the Credit Card Bill of Rights. It was a bill that I authored, and, 9 years ago today, President Obama signed it into law. And some of the protections of this law, to name a few, were that it prevented companies from applying payments to balances with the lowest rate before balances with the highest rate; banned fees from being upped without the customer's knowledge or consent; said they had to really do what they said. If they said that an interest rate was a certain interest rate for a year or 2 years or 3 or whatever, they had to keep their word.

So it made many things—they banned the practice of raising rates after purchases had already been made. I heard stories where they were told the rate was one thing; the next day they bought a car, then the next day they raised the rate to 21 percent and kept them in poverty and never-ending debt.

So I would like to ask all of you, would you call these regulations, some of which I just mentioned for the credit card industry, unnecessary red tape?

Ms. Milano, yes or no?

Ms. Milano. No.

Representative Maloney. Would you?

Just go down the line. These credit card abuses that I outlined, would you consider it red tape or relevant and necessary?

By the way, three different reports said this bill saved consumers over \$12 billion—billion—a year, keeping their money in their own pockets, not going for unfair, unnecessary fees.

Well, I will just take one answer since—you think it is—do you have a response?

Mr. Koopman. Yeah. I am not a—

Representative Maloney. Okay.

Mr. Koopman [continuing]. Financial markets——

Representative Maloney. Okay.

Mr. Koopman [continuing]. Expert, but, no, it doesn't——

Representative Maloney. Well, then let me just go on.

Well, personally, I am just making a point that there are some regulations that literally save pain and suffering and literally save consumers and help the vitality and investment in our economy.

Mr. Koopman, last month, the Office of Management and Budget released a report which estimates the cost versus the benefits of Federal legislation and agency compliance. You are an expert on regulation. I assume that you are familiar with the report. Yes or no? Are you familiar with the report?

Mr. Koopman. I have not read that report, no.

Representative Maloney. You haven't read it?

Has anyone read it?

Ms. Milano. Yes, I read it.

Representative Maloney. You read it. Okay. Can you tell me, in the most basic way, the findings of that report?

Ms. Milano. Yes. It is a report OMB produces annually and has done so for the last 10 years. And at a very basic level, the most recent report, which was released under the Trump administration, showed that the estimated benefits of government regulations amounted to \$287 billion to \$911 billion, versus cost estimates of \$78 billion to \$115 billion. So, at a minimum, benefits outweighed costs two to one.

Representative Maloney. Well, I would like to follow up with another question for you. In your testimony, you argue that over-regulation likely is not the primary restraint on small-business formation and innovation. You argue that access to capital is a primary barrier.

And I would like to go a step further and ask you if you could provide some insight on small-business formation at the ground level. Let's say that I want to open up a small hardware store or a restaurant. Could you just make a comment on that?

Ms. Milano. Sure. The vast majority of businesses in this country—76 percent have receipts less than \$100,000. They are very small businesses.

And the first place you start, if you want to open up a hardware store or move from a food truck into a restaurant, is with the need for credit. And, a lot of times, it is with personal credit or, home equity. And then the next step up is to try to go to a bank and get a small-business loan or to turn to an online lender or to use a business credit card, since you mentioned the CARD Act, which excluded business credit cards.

And oftentimes there isn't an easy way to compare and price-shop those products, because there are no disclosure requirements around the fees and the interest rates that are being charged for those products.

Representative Maloney. My time has expired. I yield back.

Chairman Paulsen. Thank you.

Representative Schweikert, you are recognized for 5 minutes.

Representative Schweikert. Thank you, Mr. Chairman.

Can I ask for a bit of a thought experiment for all of us, our friends on the left and those of us here on the right and our panel.

Okay. Regulation. What is its basic purpose in our society? Is it to keep us safe, keep us healthy?

Are we comfortable with that as part of the thought experiment?

So, in many ways, if you actually look at much of our regulatory model, it is as if we are still in 1938. Let's fill up file cabinets full of paperwork that will document that we intend to do certain things, and if we do something wrong, we have documentation to say you screwed up and to penalize you.

A good example, as was just brought up by the woman from New York, is 2008. If you actually read the literature—and I have stacks of it on my nightstand—it turns out we had a crisis of information. No one knew what was in these securitizations because we didn't have information. You could not see what was the impairments within the securitization of the MBS. It turns out information was the solution in that regulatory environment.

I am sometimes enraged, the fact that this isn't the ultimate regulator. In air quality, we now have technology—I can attach something to my phone that will do hydrocarbons, PM10s. If I could have a few thousand of those moving through my community, I would catch bad actors instantly, instead of having someone fill up a file cabinet and a couple of years later I will find out they screwed up because they didn't meet their certification, and we will have documentation we are suing them, but instead of moving to a—you know, crowd-sourced.

As you talk about access to capital, we passed the JOBS Act a few years ago. It took how many years to basically have the SEC screw up crowd-funding? How about crowd-lending? How about Reg A, Reg A+, the roadshow, all the things we were doing to try to create egalitarian access to capital? And, in many ways, it was the very regulators who screwed up the access to those things instead of moving to an information base that if you wanted to crowd-lend something, give me enough information, and the lending of the information becomes the regulator.

In many ways—I am sorry, I know I am going on a bit, but I am frustrated because it is as if we are still here trying to find a better way to allow Blockbuster Video to have a drivethrough instead of the revolution of the fact I go home, I hit a button, and now my movies and entertainment are streamed to me. We are defending a model that is decades out of date technology-wise.

And, Mr. Koopman, you are the only one who has actually said anything that provides me hope. How do I help my brothers and sisters and all the rest of us in this thought experiment understand the power of information is the ultimate regulatory box because it identifies the sinners?

Mr. Koopman. I think the best way to—just to add a concrete example to your thought experiment. I use this with my students in our Economics of Regulation class that I have taught for the past couple years at George Mason. And that is, when you are taking your family out to dinner and you want to know a good restaurant, where do you turn? In most cities, there are city health inspectors that are making sure that the restaurants are clean, they are not serving bad food, they are not making people sick. But

at the end of the day, most of the information we get and most of the information we use about who we deal with is coming from places like Yelp.

I mean, this is the way that technology acts as a regulator, by breaking down information asymmetry and giving more information to consumers, that they can police bad actors within an industry by saying, "We will not work with you anymore." You could think of the delete Uber campaign. The #deleteUber campaign is a perfect example of this, of making it clear to a company that consumers, as regulators, will not deal with things that they don't like.

Representative Schweikert. Okay.

Dr. Kennedy, you had something, and I will beg you to go really fast.

Dr. Kennedy. Yeah. Nobody is questioning that regulations, on whole, benefit the economy. But there are many regulations that don't benefit the economy, and I think most of the regulations that Congress struck down using the CRA were good examples of that—

Representative Schweikert. Well—and I am so sorry. I am going to interrupt you.

Dr. Kennedy. Okay.

Representative Schweikert. I will make you an argument that, if I want to have telemedicine, I need to break down layers and layers and layers of regulation, whether it be my State licensing boards, the way we compensate, the way we say the algorithm that may be talking to my wearable has to be a medical device under certain regulation.

I can make you an argument that the most elegant thing we could do with the Securities and Exchange Commission is have trades and those things run on rails, where the algorithm and the regulator can see it live and see if someone is cheating, breaking the rules, and you catch it instantly, instead of a quarter later someone files a piece of paper and we find something on the piece of paper and we go back in time.

How do you embrace technology so regulation of protecting the public and our health and safety is live instead of a paperwork process of filling up file cabinets?

And, with that, I yield back.

Chairman Paulsen. Thank you.

Senator Hassan, you are recognized for 5 minutes.

Senator Hassan. Oh, thank you very much, Mr. Chair.

And thank you to our panelists for being here, for your expertise and your hard work.

And I was just listening to Representative Schweikert and thinking that I am not sure we are debating, really, regulation good or regulation bad as absolutes. What we are really trying to do is, how do you do it well?

In my State, to have access to telemedicine, before you have the iPhone, you need broadband and you need connectivity and you need help investing in that. And that is something that it has been very hard to get the government to do, to turn around and say, we are in a new digital age and we have to actually invest in the kind of technology that would give our regulators the access to the tools they need to modernize.

And so, you know, I think that is an important touchstone. You can't just, in government, wave a magic wand and suddenly have the tools that you need to catch up to the digital age. And I think we are way behind in investing in that.

I am also right with Senator Heinrich in saying nobody loves red tape but all of us, I think—and you have all agreed in some way—appreciate that regulation helps the quality of life we all enjoy.

In my family's case, my son has an implanted pump that helps his spasticity from cerebral palsy be relaxed. I want to know that the baclofen pump that was implanted in my son is a safe medical device. And we need regulation to establish the parameters.

We also know, to Ms. Milano's point, that, in order to ensure fairness and competition, we have to sometimes evolve as an industry evolves. And that is why I think it was important and right that the Senate just voted to reinstate net neutrality. Because, without that level playing field, small and emerging internet companies can't compete with the big guys and people can't have access to the internet on a fair and even playing field that would help them start that new business.

So I think it is a subtle conversation we need to be having, and I am very appreciative of the work you are all doing to help us do that.

Ms. Milano, I did want to turn to the issue that you have raised about what you are hearing from small businesses, because it is what I hear too, that it is really hard for them to establish or expand because of limitations on access to capital.

So, in particular, what are some of the ways that we can encourage capital to be invested in diverse geographic areas and rural communities and not just places like Silicon Valley and New York?

Ms. Milano. That is a great question, Ms. Hassan, and thank you for asking it.

I think, first off, you have introduced a bill, the ROI Act, to relieve student debt so that more young entrepreneurs and innovators can get started on starting their businesses and helping to grow small businesses in their communities. And I think that is really important.

I think, secondly, for so many small businesses, particularly in rural areas, they will need the support of programs like CDFIs. And I oversaw the CDFI program. CDFIs are very special institutions which serve low-income communities and help with business counseling and technical support and all the wraparound activities that help rural businesses get ready to really grow with the capital they are provided. And we need more support for CDFIs and for Small Business Administration programs.

Senator Hassan. Well, thank you.

And thanks for mentioning my bill, because I was going to ask you about that too. We are seeing a big drop-off in young people starting businesses, in part because of the kind of student debt they have. And so the idea behind the bill is simply to allow people who start businesses, especially in distressed areas, to have a break on their student debt.

I thank you very much for your testimony.

Thank you all for being here.

I will yield the rest of my time.

Chairman Paulsen. Thank you.

Representative Handel, you are recognized for 5 minutes.

Representative Handel. Thank you, Mr. Chairman.

And thank you to all of you for being here today. I appreciate your comments.

Chairman Paulsen had referenced earlier the Bloomberg Innovation Index, saying that the U.S. had sort of ceded its top-10 role. Yet, in the 1970s and 1980s, we were arguably the most prolific global innovators. And I would just be curious what you think is different from then versus now in terms of that regulatory climate.

I will start with Mr. Koopman and then Dr. Kennedy.

Mr. Koopman. So I think that when you look at, let's say, the last 30 years and the growth of commercial activity on the internet of the last 30 years, this goes to Congress and a nonpartisan agreement that the internet would be a place of permissionless innovation. I think that is where you see the growth in the last 30 years, why you see a slowdown—total factor productivity in the United States has been declining for 10 years in other sectors, and you see this difference.

And I think what we are recognizing now in the decline in innovation in the United States is one where, as tech has grown off the internet and into the world where all of us are interacting with it every day, technology is now interacting with 30-, 40-, 50-, sometimes 80-year-old regulations that have more or less, you know, put its gangbusters growth to a halt.

Representative Handel. Dr. Kennedy.

Dr. Kennedy. I think that one of the things that happened over the last couple of decades is we had a couple of financial crises, caused in part by some bad actors, and in each time we passed massive financial rules to make sure nobody ever made that mistake again. And what it did is it created a whole layer of cost on top of the system that slowed down IPOs, that caused companies to withhold credit or not be so interested in giving credit to small businesses because of the high fixed costs.

I think we have sort of—we have also lost some of our confidence about the future. I mean, I think the U.S. is going to be the most productive country in the world over the next 20 years. I really believe that. We have a lot of problems, but we have far more strengths than problems, and we are better placed than Europe or China or Russia. And yet you look around the country, and you don't see that optimism, you don't see that dynamism, except in certain places—

Representative Handel. I don't know, I am feeling pretty optimistic, with 4.1-percent growth compared to what we had before, thanks to the Tax Cuts and Jobs Act.

Dr. Kennedy. Well, I hope it continues, but—

Representative Handel. And I just have a little bit of time, so let me—

Dr. Kennedy. Certainly.

Representative Handel [continuing]. Just jump in here.

I think there is no question that we have an extraordinarily static regulatory climate and, to your point, Mr. Koopman, just the layering, layering, layering of decades and decades of regulatory rules. But it is a herculean effort to start to unwind that.

What can we do to really practically go in—certainly, to your point, Dr. Kennedy, cost-benefit analysis going forward. Do we need to go in and have a sunset rule on major regulations that inject some process so that we don't let it build up for 80 years?

Dr. Kennedy and then Mr. Koopman.

Dr. Kennedy. Two things.

One is I think Congress needs to revisit rules on a regular basis and see if the rules it has written that govern the agency make sense. And when you revoke a rule, my understanding is you revoke the regulations that were authorized by the rule.

Another thing is I think we ought to look at some industries like construction and healthcare and education and say, why haven't we gotten productivity there? And why don't we focus on driving down the cost, improving the quality of higher education or healthcare?

And how can we restructure the rules of the markets? You know, by giving consumers more choice, by making them more responsible for their actions, by reducing regulations, say, on a medical app. I mean, I think there are lots of ways that, when you get in the weeds, you can find specific rules that you can get bipartisan support on and that will make a noticeable difference.

Representative Handel. So, in other words, for Congress to be more proactive in being dynamic about looking at the climate—

Dr. Kennedy. I think that would help.

Representative Handel [continuing]. Versus static on our side. My time is up. Thank you so much.

I yield back, Mr. Chairman.

Chairman Paulsen. Thank you.

And, Dr. Adams, you are recognized for 5 minutes.

Representative Adams. Thank you, Mr. Chairman.

And I thank you all for your testimony today.

My question is for Ms. Milano.

First of all, let me just say I believe that we must ensure greater access and more options for entrepreneurs to obtain responsible capital by providing small businesses, particularly minority businesses, with increased opportunities to participate in Small Business Administration programs.

HBCUs—that is Historically Black Colleges and Universities—provide education and training to a large share of our Nation's African-American population. In particular, HBCUs prepare many individuals to embark on small-business ventures. Yet, too often, HBCU students and alumni are left out of the small-business training equation.

My question: Do you think it would be helpful for the SBA to conduct a specific outreach campaign to HBCUs? And would targeted SBA outreach increase the likelihood that minority-owned small businesses succeed?

Ms. Milano. Great question. And thank you. It is a really, really important issue.

There is a paper that I cite in my report that Center for American Progress did that shows that small-business ownership and entrepreneurship is a really, really important wealth-building tool for minority communities, African Americans in particular. African-American families that own their own small business have \$52,000

in total household wealth, compared to \$7,000 for non-business-owning families.

And so it is a really, really important tool to help minority communities move up the economic ladder and have access to the middle class.

And I think that one of the ways that you get there is with the support of programs like SBA and more entrepreneurship mentoring programs and outreach programs that help show folks what is possible and how to get from step A to step B.

So, yes, I think it would be very helpful if SBA, through their entrepreneurship programs, through SCORE and the Small Business Development Centers, coordinated and did more direct outreach to Historically Black Colleges and Universities. They are operating on a shoestring budget these days, so I don't know how likely that is to happen anytime soon, but it would be wonderful if it could.

Representative Adams. Okay.

So the specific steps that you might recommend—you mentioned SCORE or the others—that SBA might take in order to fully engage these communities?

Ms. Milano. Well, I think that there are a couple of steps they could take.

One would be to do more direct outreach, as you mentioned, actually go out to schools and try to do more events on campus and attract more people to come and learn about the resources of the SBA.

In addition, business owners need capital to get their business started. So the SBA Microloan Program is very important to these communities. And funding that program, continuing that program would be very helpful in terms of helping these communities access capital.

Representative Adams. Thank you.

Since the hearing today is about the innovation economy, what would you think would have a greater impact on innovation growth, spending \$1.6 trillion on tax cuts or \$1.6 trillion in research and development?

Ms. Milano. Well, I would say \$1.6 trillion on research and development. But, you know, the vast majority of businesses—I have said this three or four times now—76 percent have receipts, annual receipts, of \$100,000 or less. They are not benefiting from the tax cuts. So anything that would help them access capital or would increase our country's overall contribution to R&D would be a better use of resources.

Representative Adams. Thank you very much.

Mr. Chair, I yield back.

Chairman Paulsen. Thank you.

Mr. Beyer, you are recognized for 5 minutes.

Representative Beyer. Mr. Chairman, thank you very much.

Dr. Kennedy, I have served in the Virginia senate for 8 years and noticed that virtually every business legislation we passed there was to restrict entry to the businesses we were already in. It was in restraint of trade.

And yet we find that, while there is so much consolidation in so many different industries right now, that many are encouraging

regulatory policies that are designed to foster competition, to restrict consolidation, to restrain the crowding out of possible new entrants.

How do you see the role of regulatory policy in actually maintaining market competition?

Dr. Kennedy. Well, I think that too often we get into the habit of thinking that big is bad and small is good. And I think the president of ITIF just came out with a recent book that basically challenges that premise and points out that in many industries there are scales of economy, there are network effects where prices go down the bigger industries get and the more sales they make. He also points out that large companies spend more on R&D. They pay their workers more.

And so I don't think we should look at the size of a company when we develop a policy. Instead, we should be sort of size-neutral. And we should say, what rules do we really want to govern in this industry?

And I think when we do that and we look at some of the promises of technology, we can find a lot of ways that we can promote high productivity. Like, one is encouraging telemedicine. I mean, that right there would make a big difference in driving down prices and increasing quality and access.

Representative Beyer. Let me move on, because I know you have written on this in the past, but wouldn't you think that implementing a carbon tax to fund the latest tax reform would have made a lot more sense than creating the largest legislated deficit in history?

Dr. Kennedy. I wrote a paper advocating that the carbon tax be used to pay for part of the tax bill.

Representative Beyer. Sort of the classic case of letting the market achieve the goal of lower carbon emissions rather than doing it through regulation.

Dr. Kennedy. I think a carbon tax is a much better way—and I think most economists would agree—of approaching the goal of getting carbon emissions down.

I wrote also that corporate tax reform was very important to our economy, especially in globally competitive industries, where our companies are competing against companies that have tax rates 10 percentage points or more lower.

Representative Beyer. Yeah. Let me move on. Thank you, Doctor.

Ms. Milano, in all your—you have a small-business background, but you didn't mention anything about deregulation of the banking sector in your testimony. And yet you talked about the scarcity of capital for small businesses.

Do you see the regulatory environment at all as a primary impediment to small businesses in seeking to raise capital? Is there a connection between the two?

Ms. Milano. I personally don't think so. I mean, I think that what is happening, particularly in the small-dollar loan market for small-business loans under \$100,000, it is a profitability issue. For community banks, these are high-cost loans to acquire, service, and underwrite, relative to revenue generation potential, and so you are just seeing banks do less of them.

And the decline predates Dodd-Frank and predates the recession. Chicago Fed did a paper using flow-of-funds data that showed, from 1997 to 2015, there was a drop from 82 percent to 29 percent of small-business loans under \$100,000 being done by community banks.

So I don't see it as a regulatory issue. Also if you look at the numbers that the FDIC just put out today, there was a record \$65 billion net income, reported by banks. And so I don't see how regulation is hurting bank lending.

Representative Beyer. Thank you.

Mr. Koopman, you talked about Yelp and taking your kids to dinner. We use Yelp all the time and things like it. But we also assume that the health department has made sure that the food is okay, you know, that we are not going to get poisoned afterward. You need both, both the regulations that the restaurants are healthy, clean, and safe, and then what is the good restaurant using Yelp.

Mr. Koopman. Oh, certainly. And, actually, I think there was a recent story, maybe a year ago, that health inspectors in New York were actually choosing which—in New York City, that is—were choosing which restaurants to inspect based on Yelp reviews.

So I think there is a role for regulators to be better informed with this information, as well as members of the industry, be it consumers or producers, to make sure everyone is playing their proper role in allowing for the next Yelp, or whatever that is, to continue to provide more tools to both consumers, producers, and regulators to make better, more efficient decisions in the marketplace.

Representative Beyer. Thank you very much.

Mr. Chairman, I yield back.

Chairman Paulsen. Thank you, Representative Beyer.

And just to wrap up, I want to thank everyone for taking the time to testify and be here today. We appreciate your time before the committee.

And just to remind everyone, also, if members wish to submit questions for the record—I know we will have some—the hearing record will remain open for 5 business days.

Chairman Paulsen. And, with that, the committee is adjourned.

[Whereupon, at 3:47 p.m., the committee was adjourned.]

SUBMISSIONS FOR THE RECORD



I call this hearing to order.

Good afternoon and welcome to today's hearing on "Breaking Through The Regulatory Barrier: What Red Tape Means For The Innovation Economy"

Bloomberg recently reported that the U.S. dropped out of the top 10 in the 2018 Bloomberg Innovation Index for the first time in six years.

We were at 9, and now we are at 11.

Such news is a call to action. America's tradition of invention has been at the heart of our economic strength.

As lawmakers, we must recognize that the only way forward is to place our trust in the American people, and to get out of the way.

The private sector knows all too well how needless red tape imposes costs on businesses, increases prices for consumers, and reduces consumer choice.

For innovation, however, the impact can be worse.

In Washington, regulators can put an idea to death before it is ever tried, foreclosing a future of opportunity and progress.

We should know better. Americans enjoy a better quality of life today than decades ago, thanks to technological innovation.

U.S. leadership in the world has been based largely on technological prowess, and for it to continue, our regulations must foster innovation rather than inhibit it.

We will hear examples from our witnesses today of regulation hindering advances and, perhaps worse, even driving it away to other countries.

Not all regulation is bad. After all, some is important for giving job creators necessary guidance and stability in their work. When done well, sound regulation can make up for where markets fail to appreciate important public benefits or costs.

That's why we're holding this hearing: How should we approach regulation so that it's as dynamic as America's tinkerers and inventors? In other words, how can we stop hurting, and start helping?

Our regulations should always serve the public interest with minimum collateral damage to the economy. Where innovations are concerned, regulators shouldn't slam the door in the face of new ideas.

Our economy—in particular, the American people themselves—should be given the opportunity to integrate these innovations in their lives.

An advance that can improve lives and raise productivity generally leads to higher wages—and many Americans are in dire need of that kind of prosperity.

After all, technological progress is what ultimately brings us better living standards.

It makes little sense to thwart promising innovations that can make our lives easier, improve our health, provide new products and services, and help U.S. firms compete internationally.

Consider that the majority of start-up firms are in the tech sector. We should encourage the dynamism they contribute to the economy.

If we fail to make improvements, fast-moving technology will be moving offshore even faster.

As we will hear today, sound regulation is aware of and anticipates technological change.

I like the concept of "permissionless" innovation. Our inventors and entrepreneurs should not have to ask for permission to make things better.

The U.S. technological edge and competitive advantage in a variety of sectors is narrowing, and to some extent through unforced, self-inflicted regulatory wounds.

I am keenly interested to hear what our expert witnesses have to say today, especially how we might improve our regulatory regimes.

Before I introduce the witnesses, I now recognize our Ranking Member, Senator Heinrich, for his opening statement.

PREPARED STATEMENT OF HON. MARTIN HEINRICH, RANKING MEMBER, JOINT ECONOMIC COMMITTEE

Mr. Chairman, I'm pleased that we are again looking at the question of how to accelerate the pace of innovation.

We come at this issue from different perspectives. My Republican colleagues seem to believe that regulations are holding back innovation.

Yet, dialing back the clock on rules designed to protect consumers doesn't help small businesses innovate and grow.

Small firms, like small cities and towns, need fair rules of play. They need rules that give consumers and entrepreneurs a fair shake.

And rules that help improve access to capital.

When I talk with small businesses across New Mexico, the thing they are most concerned about is limited access to capital.

That's why I asked Ms. Milano to testify today about the difficulties small firms encounter gaining access to capital to launch and grow their businesses.

I believe her testimony will shed additional light on this important issue.

What's slowing innovation are barriers to capital and misguided tax policies.

Let's start with taxes. Republicans just passed a tax law that lavishes huge tax benefits on large corporations. At the same time, the new law makes the tax code more complex for small firms.

Corporations are using their tax savings to buy back their stock, not to invest in plants or workers. So far, companies have announced more than \$400 billion in share buybacks, including \$100 billion from one company alone.

Those buybacks will do little to boost worker wages or spur innovation.

Instead, we should be focused on supporting the next generation of companies, ensuring that those who want to start or expand a business have the tools and access to capital they need.

New businesses are the lifeblood of the economy. They drive innovation, productivity, and jobs. Yet, new business formation has been declining for decades.

And the startups we do see are increasingly concentrated geographically. Half of the increase in business establishments between 2010 and 2014 was in 20 counties.

Fully sixty percent of counties saw a net decline in establishments during this period.

Increasingly, banks are unwilling to take the risk on small loans that have high fixed costs and lower profit margins.

More than half of small businesses seek loans of less than \$100,000. Yet, these loans have fallen from 33 percent of bank lending in 2008 to 22 percent in 2016.

While it's hard for many small firms to access the funds they need to start or grow their businesses, it's especially challenging for women-owned and minority-owned firms.

These firms have less wealth to draw from to launch their businesses and also face higher borrowing costs.

Community Development Financial Institutions (or CDFIs) help to fill the void, often making loans to those who can't get them from commercial banks.

Yet, the Trump administration has proposed effectively eliminating the Treasury Department's CDFI Fund.

We've got to tackle the access to capital challenge from all sides.

It starts with encouraging venture funds to identify and support promising startups beyond the urban hubs on the coasts. SBA's Small Business Investment Company Early Stage Initiative helps to broaden the base of venture funding nationally.

We need to support small business lending through SBA's capital programs, the CDFI Fund, and other channels.

And we need to work toward greater lending transparency in the private sector.

A growing number of online lenders are using technology and access to data to attempt to fill gaps in small business lending.

But, we need to ensure these loans are safe.

We should look to the financial protections we extend to consumers as a good blueprint for how we can and should protect small business borrowers using these new financial products.

While access to capital is critical, there are other factors that are important to enabling innovation. These include federally funded R&D and access to quality K-12 education and affordable post-secondary options.

Investing in human capital while promoting greater access to financial capital will enable the United States to continue to lead in the 21st Century economy.

I look forward to our witnesses' testimony.

PREPARED STATEMENT OF MR. SCOTT W. BRINKMAN, SECRETARY OF GOVERNOR
BEVIN'S EXECUTIVE CABINET

Thank you Chairman Paulsen, Ranking Member Heinrich, and Members of the Committee for affording me this opportunity to discuss Governor Bevin's Red Tape Reduction Initiative. Let me first offer some perspective for this effort. Upon Governor Bevin assuming office on December 8, 2015, Kentucky's unemployment rate was 5.3% and its workforce participation rate was 47th in the Nation. Kentucky also

has approximately \$60 billion dollars of unfunded pension liabilities with respect to its public sector pension systems. The prior administration also expanded Medicaid by executive action without a plan to pay for the State's share of the cost of providing Medicaid benefits to the expansion population. Further, the prior administration estimated that the expansion population would approximate less than 200,000 Kentuckians. Today, the expansion population includes almost 500,000 Kentuckians. Finally, Kentucky has one of the highest incarceration rates in the Nation, driven in large part by the opioid epidemic which has affected my State particularly hard. Consequently, our corrections budget has exploded exponentially, as has the number of children in our foster care system. These challenges, coupled with the constitutional and statutory obligations imposed upon the executive and legislative branches, such as the obligation to fund public education and to protect the public and the environment, have created tremendous challenges in managing our biennial budget. In short, Kentucky faces a long and difficult road in getting its financial house in order.

Governor Bevin campaigned on the theme that it is all about jobs, which at its core means creating a more inviting environment to attract both human and financial capital. To assist Kentucky in satisfying its financial obligations, Governor Bevin made the conscious decision to use every tool available to the administration to grow Kentucky's economic base and thus increase the flow of tax receipts into the State coffers. Although there are many aspects to job creation, a key component of that effort is regulatory relief, and one of the first undertakings of the administration was the formulation and implementation of its Red Tape Reduction Initiative. As part of this Initiative, every Cabinet and agency within the executive branch has been directed to review every regulation promulgated by it over the years and make one of the following determinations:

- Completely repeal the regulation as its original purpose is no longer relevant.
- Amend the regulation to conform it to a Federal counterpart. This effort includes eliminating inconsistent definitions and standards with the goal that the State regulation should never be more burdensome than the Federal counterpart unless circumstances unique to Kentucky require a stricter standard.
- Amend and modernize the regulation to make it clearer and simpler to understand by those subject to the regulation and also make it easier to update in the future.
- Combine the regulation with other regulations to include a single subject matter, such as fees or applications, in one regulation for ease of review by those subject to it.
- Leave the regulation as it is currently written.

The goal of the administration is to reduce by one-third the number of restrictions on businesses and individuals in Kentucky. In 1975, there were four volumes of regulations in effect in Kentucky. That number had grown to 14 volumes when Governor Bevin took office. Through the end of 2017, of the approximately 4,700 separate regulations on the books at the outset of the administration, 2,220 regulations have been reviewed, 372 regulations have been repealed, 327 regulations have been amended, 157 regulations have been targeted for repeal, and 433 regulations have been targeted for amendment. The Initiative has the support of business groups, trade associations, chambers of commerce, and other organizations across Kentucky.

Several examples of the regulations that have been repealed or amended and how such effort affects Kentuckians include the following:

- We have eliminated a regulation that required a boxing or wrestling match to cease at the slightest hint of bleeding by a participant, which precluded Kentucky from hosting boxing, wrestling or martial arts events. Kentucky is now hosting such events which helps drive tourism and adds to local economies.
- We have eliminated a rule that required a certain amount of cast iron piping in buildings above a certain height, which added dramatically to the cost of construction or renovation of buildings in our largest cities as cast iron pipe is much more expensive than PVC piping. PVC piping is a recognized safe component in both international and domestic building codes.
- We have modernized and made it easier for military personnel to obtain commercial driver's license.

There are several lessons to be learned from Kentucky's Red Tape Reduction Initiative. First, the governor or, in the case of the Federal Government, the President, must own the initiative in every aspect, and it helps to have a tangible symbol associated with the endeavor. In the case of Kentucky, we created the lapel pin that I am wearing today, and Governor Bevin and his top officials wear this pin every day. Further, Governor Bevin speaks out regularly regarding the importance of the Red

Tape Reduction Initiative to individuals and groups throughout Kentucky. As a result of the Governor's leadership, there is growing awareness of the Initiative every day throughout the Commonwealth.

Second, it is important to create a website that is interactive with the public and allows for individuals to post recommendations on the repeal or amendment of regulations. Kentucky's Red Tape Reduction Initiative website is <http://redtapereduction.com>. Kentuckians have submitted scores of thoughtful ideas on how to reduce unnecessary regulations that drive up the cost of conducting business and create inefficiencies without contributing to public health or public safety.

Finally, the effort of the Cabinets and other agencies must be sustained on a regular basis. Our Cabinets and other agencies regularly review and re-review existing regulations to ensure that the goals of the Red Tape Reduction Initiative are being met. This is a thoughtful and deliberative process that never ends. We are also in the process of digitizing and modernizing the manner in which we draft and promulgate regulations.

The administration has also undertaken efforts to modernize and simplify the issuance and renewal of licenses and permits, with the goal to enable Kentuckians to either commence the conduct of business or to continue the conduct of business with the least amount of bureaucratic friction. Our Department of Housing, Buildings and Construction used to take 55 days to review building plans. That process now takes 5 days unless there are exceptional circumstances that require a slightly longer review period. Kentucky is also working to enable most applications, licenses, and permits to be processed online through the internet.

The purpose of the Red Tape Reduction Initiative also includes helping to foster technological and engineering innovation. Governor Bevin's vision is for Kentucky to be the center for engineering and manufacturing excellence in America. This is already happening. Toyota Motor Manufacturing, Kentucky, Inc., which has its largest assembly plant located in Georgetown, Kentucky, announced last year that it is investing approximately \$1.33 billion to re-tool its facility in Georgetown to incorporate the Toyota New Global Architecture, which represents an entirely new manner in which Toyota designs, engineers, and manufactures its vehicles. Braidy Industries will soon break ground on a \$1.3 billion high-tech, fully integrated aluminum rolling mill at a location in northeast Kentucky, which will be the first new aluminum mill in the United States in over 30 years. It will incorporate technological advances in aluminum materials science that were developed by a team at the Massachusetts Institute of Technology. Finally, Amazon announced last year that it will invest \$1.49 billion at the Cincinnati and Northern Kentucky airport located in Boone County, Kentucky, to create its state-of-the-art global cargo hub.

The Kentucky General Assembly has joined the Bevin administration in reducing the regulatory burden on Kentucky businesses and individuals through the passage of important legislation during the last two sessions of the legislature. For example, the Kentucky General Assembly has institutionalized the continuous review of the efficacy of regulations through the passage of House Bill 50 during its 2017 session. This legislation mandates that every regulation shall expire seven years from the effective date of its promulgation unless extended by the applicable State agency. Although the process to continue the effectiveness of a regulation is simple, the legislation does require that every regulation be re-examined every seven years to determine whether it should remain in effect, should be amended, or should be repealed. House Bill 50 should have the laudatory effect of avoiding the accumulation of outdated regulations that no longer serve a useful purpose and simply clutter up the Kentucky Administrative Regulations.

During the legislative session just concluded, the General Assembly passed HB 314, which allows the Secretary of the Labor Cabinet to suspend, delay, or alter enforcement of a promulgated occupational safety and health administrative regulation if the Federal Government has suspended, delayed, or enjoined the corresponding Federal regulation or has suspended, delayed, enjoined, or altered the enforcement thereof. The General Assembly also just enacted legislation that simplifies the ability of veterans to obtain licenses to operate a business or profession. Kentucky is the home to both Fort Knox and Fort Campbell, which contribute enormously to Kentucky's economy. The ability to enable veterans concluding their service at either military installation to continue to live in Kentucky makes strong economic sense, and Governor Bevin continuously challenges his leadership to make Kentucky the most veteran friendly State in the Nation.

The General Assembly also eliminated and modernized the licenses required to operate various health care facilities through the passage of House Bill 444. This legislation aligns our health care regulatory regime with modern medicine.

In conclusion, the administration's efforts to simplify the ability of Kentuckians to conduct business are paying valuable dividends. As of last month, Kentucky's un-

employment rate is 4%, which is the lowest it has been since 1976 when this statistic began to be determined, and its workforce participation rate is trending towards 40th in the Nation. Kentucky also realized during the month of April of this year the highest amount of monthly tax receipts in its history, driven largely by corporate and individual income tax receipts. Also as of last month, there were 1,970,801 Kentuckians in the workforce, which is the highest number of employed Kentuckians in the history of the Commonwealth. Kentucky attracted \$9.2 billion of announced direct investment in the State in 2017, which is a record amount for any year, and approximately \$14 billion since Governor Bevin took office, representing the creation of almost 40,000 jobs. There are many factors contributing to this success, including the enactment of smart and innovative legislation. Certainly, Kentucky has also benefited from improving national and global economies. However, it is the firm belief of the governor that the implementation of the Red Tape Reduction Initiative, and the exposure that it has received, has contributed in large part to the growing perception that Kentucky is an attractive State in which to conduct business.

PREPARED STATEMENT OF DR. JOSEPH KENNEDY, SENIOR FELLOW, INFORMATION TECHNOLOGY AND INNOVATION FOUNDATION

Chairman Paulsen, Ranking Member Heinrich, and Members of the Committee, thank you for inviting me to be here today. I am Joe Kennedy, Senior Fellow with the Information Technology and Innovation Foundation. A recent study by the University of Pennsylvania ranked ITIF as the world's leading think tank on science and technology policy. The Foundation focuses on developing better policy to promote innovation, increase competitiveness, and improve productivity.

The task of regulating the economy is a necessary, but very difficult, problem. Congress and regulators need to view the problem from a dynamic viewpoint: develop rules that encourage firms to discover new ways to achieve social goals as efficiently as possible. Regulation is most justified when it addresses market imperfections. Rules that use market tools like price signals and information to fix the problem are most likely to do a better job of encouraging innovation than command and control, technology-specific rules. So is regulation that gives companies clear long-term and achievable goals.

The Information Technology and Innovation Foundation has written widely on the need for regulatory reform, both in general and as applied to specific sectors. Some of the sectors we have examined include automation of the transportation industry, telecommunications, agricultural biotechnology, and pharmaceuticals. In addition, we have focused extensively on regulations affecting the internet, including privacy and cybersecurity.

Our study of the freight transportation industry showed that railroads, freight trucks, drones, and even airplanes are making rapid advancements in automation.¹ Although many problems still need to be worked out, this technology promises to reduce transportation costs and save lives. Regulators should find ways to speed its development while still protecting public safety. At the same time, because each of these industries competes with the others, regulators also need to make sure that regulations do not cause one industry to fall behind others in introducing valuable technology.

Another ITIF report examined the likely impact of the European Union's new General Data Protection Regulation and concluded that it would harm the EU's ability to compete in the development of artificial intelligence.² By unnecessarily creating barriers to the use of even de-identified data and threatening disproportionate fines, the new rules will likely deter companies from developing or using algorithms in member countries.

An ITIF literature review of the impact of regulation on innovation in several industries concluded that regulations can either inhibit innovation or encourage it, depending upon how they are written. Good rules tend to increase the amount of public information, reduce uncertainty about future regulation, and set goals but allow

¹Joseph V. Kennedy, "How Regulatory Reform Can Advance Automation in the Freight Transportation Sector" (Information Technology and Innovation Foundation, June 2017), <https://itif.org/publications/2017/06/12/how-regulatory-reform-can-advance-automation-freight-transportation-sector>.

²Nick Wallace and Daniel Castro, "The Impact of the EU's New Data Protection Regulation on AI (Center for Data Innovation)" March 2018), <http://www2.datainnovation.org/2018-impact-gdpr-ai.pdf>.

flexibility in achieving them.³ A forthcoming ITIF review of the literature on environmental regulation and innovation arrives at similar conclusions about when and how regulation can actually spur companies to innovate faster. Among these are that regulators need a sophisticated understanding of the industry, they should set ambitious long-term goals but use performance standards to achieve them, and they should worry about effects on competitiveness.

ITIF believes that better regulation is needed and, compared to existing regulation, can improve innovation. Intelligent rules can increase the amount of competition in a market. Reforms that improve market competition, possibly by reducing barriers to entry, increasing the flow of information, or allowing new approaches to comply with existing regulations, can significantly increase productivity by speeding the adoption of existing innovations.

Regulators can support innovation by following a set of general principles:⁴

1. Anticipate innovation. Regulators should assume technology will continue to advance. Rules should not only anticipate innovation: they should encourage it.
2. Embrace transparency. Congress, regulated entities, and the general public should have a clear view into the decision making process of regulators, including any evidence or studies they use to back their conclusions.
3. Place more trust in the consumer. Given sufficient information, consumers can often be their own most effective advocates. Firms that violate the public's trust often pay a heavy price in terms of profits and market share.
4. Place more emphasis on reducing the cost of over-regulation. Regulators should actively seek input from industry and major stakeholders on ways to reduce the cost of compliance without affecting public goals.
5. Every major rule should undergo some level of public cost/benefit analysis in which the agency clearly explains why and how a rule will increase social welfare. To the extent possible, this analysis should be backed by quantitative studies.
6. Regulators should focus on competitiveness effects. We increasingly live in a global economy in which firms in traded industries have to compete not just for foreign markets but also those here at home. Overly rigid regulations in these industries can reduce U.S. competitive advantage.

Congress can further this effort by enacting legislation that does four things:

1. Encourage interagency cooperation to undertake a comprehensive study of the competitive environment facing specific industries, including a review of their regulatory structure. The United States has already lost competitiveness in a number of traded industries, and its strength in others is being challenged by other countries. The Federal Government needs to undertake a careful examination of every major traded industry to assess its strengths and weaknesses and then develop a strategy for improving its competitiveness. A key part of this effort should be a review of Federal regulations governing its performance.
2. Direct the Office of Management and Budget to evaluate the effect of major rules on innovation within the regulated industry. Regulatory agencies often fail to consider how a major rule will affect innovation. The Office of Management and Budget already reviews major rules for substance and consistency. OMB should develop an expertise in innovation and then apply this knowledge to agency rules to ensure that they encourage rather than impede innovation.
3. Update legislation in ways that give agencies more guidance and revoke obsolete rulemaking authority. Also hold more frequent oversight hearings to discuss regulatory approaches with the agency. Congress can help in this effort by viewing major statutes with a fresh eye. In the process of updating old statutes to reflect modern times, Congress can revoke the authorization for many rules and require the agency to issue new ones. Congress should also try to give agencies more guidance about its intentions when delegating rulemaking authority. More frequent oversight hearings on specific

³Luke Stewart, "The Impact of Regulation on Innovation in the United States: A Cross-Industry Literature Review" (Information Technology and Innovation Foundation, June 2010, <http://www.itif.org/files/2011-impact-regulation-innovation.pdf>).

⁴Joseph V. Kennedy, "Reforming Regulation to Drive International Competitiveness" (Information Technology and Innovation Foundation, March 2015), <https://itif.org/publications/2015/03/16/reforming-regulation-drive-international-competitiveness>.

rules and policy issues are the best way to ensure that agencies can justify the impact of prospective rules.

4. Ensure that regulators have enough resources to attract the best people and acquire a deep understanding of the industry. Agencies need to attract and keep experts in an industry. They also need to be able to keep up with how new innovations will affect a certain sector. Agencies also need the ability to restructure their personnel to reflect changes to the industry.

These suggestions can be implemented rather easily, provided the necessary leadership exists. If enacted they will have a noticeable positive effect on the quality of regulation.



TESTIMONY

CREATING AN ENVIRONMENT FOR PERMISSIONLESS INNOVATION

Christopher Koopman

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Senior Affiliated Scholar, Mercatus Center at George Mason University*

US Congress Joint Economic Committee

Hearing: Breaking through the Regulatory Barrier: What Red Tape Means for the Innovation Economy

May 22, 2018

Thank you, Chairman Paulsen, Ranking Member Heinrich, and members of the committee, for holding this hearing on this important topic.

My name is Christopher Koopman. I am senior director at the Center for Growth and Opportunity at Utah State University and a senior affiliated scholar at the Mercatus Center at George Mason University. I am grateful for the invitation to discuss opportunities and challenges facing innovators and entrepreneurs in the United States, especially the role regulation is increasingly playing in the innovation economy. This issue parallels much of my work over the past five years, as well as other research projects being pursued at both the Center for Growth and Opportunity and the Mercatus Center. Any opinions I express today are my own and do not necessarily reflect the views of my employer.

The current regulatory environment is inimical to innovation.

1. The culture of “permissionless innovation,” which was responsible for much of the economic growth associated with the growth of the internet, is now being stifled by old regulatory regimes.
2. Continuing to apply these regimes is not only discouraging innovation, but pushing innovators to pursue better regulatory climates overseas.
3. Reforming the regulatory regime is necessary to continue to reap the benefits of innovation we experienced over the past 30 years.

PUTTING AN END TO PERMISSIONLESS INNOVATION

Over the past 30 years, the growth of the internet as a commercial platform has been marked by a culture of “permissionless innovation.” Vint Cerf, one of the “fathers of the internet,” credits this culture for the economic benefits that the internet has generated.¹ As an open platform, the internet has allowed entrepreneurs to try new business models and offer new services without first seeking the approval of regulators. This is no accident. Bipartisan efforts in the 1990s made it the official policy of the United States “to preserve the vibrant and competitive free market that presently exists for the Internet, unfettered by Federal or State regulation.”² This guaranteed a platform with little prior

¹ Vinton G. Cerf, *Keep the Internet Open*, N.Y. TIMES, May 24, 2012, <https://www.nytimes.com/2012/05/25/opinion/keep-the-internet-open.html>.

² 47 U.S.C. § 230(b)(2) (2016).

restraint on the commercial activities undertaken through the internet. When harms or failures occurred, the country addressed them in an ex post manner.

However, as more industries have been disrupted by technology companies, the culture of permissionless innovation has met a permissioned-based, proscriptive regulatory approach. The costs of these regulatory approaches at both state and federal levels are felt more acutely today by more people because of the simple fact that the internet has made jumping into regulated professions easier than ever before. In a few clicks, one can obtain tax and legal advice,³ connect with a doctor thousands of miles away,⁴ chat with a therapist⁵ or find a mover.⁶ The natural, geographical barriers to entry that might have kept someone out of these professions in the past have been virtually eliminated, meaning the artificial barriers—particularly licensing and regulatory restrictions—are sometimes all that stand in the way of this activity.

Moreover, as entrepreneurs continue to bring pre-internet practices into the internet age, they are encountering regulatory environments that were never built with smartphones, computers, and the internet in mind. Regulators have viewed these disruptions as per se illegal by the mere fact that decades-old regulations failed to foresee the future we are living in today.

One stark example of this comes in the recent response to flight-sharing platforms. For decades, general aviation pilots and passengers would look at flight plans posted on cork boards at airports to connect with one another in order to share flights. In 2013, a company called Flytenow created an app that consolidated these corkboards into a digital app. This could have revolutionized how we travel. Within two years, the platform hosted 25,000 pilots and passengers to arrange flights nationwide.

However, current FAA guidelines on flight-sharing arrangements never contemplated the information-sharing power of the internet. As a result, the FAA relied on 30-year-old guidance documents to declare pilots using the platform to be “common carriers.” This meant pilots without commercial certification were operating illegally. Private pilots could continue to connect with passengers through physical cork boards, but the Flytenow version—nothing more than a digital cork board on a smartphone—was deemed illegal. This lost opportunity is not a failure of technology but a failure of public policies to accept that the world will continue to change as we find new and better ways of creating value for others through innovation.⁷

PERMISSIONLESS INNOVATION AND GLOBAL INNOVATION ARBITRAGE

Discouraging technological innovation in the United States will not prevent that innovation from happening. This theory is what my colleague Adam Thierer calls “innovation arbitrage.” Simply put, rather than fighting with regulators, innovators will simply go where they are welcome. As Thierer explains,

[I]nnovators can, and will with increasing regularity, move to those jurisdictions that provide a legal and regulatory environment more hospitable to entrepreneurial activity. Just as capital now fluidly moves around the globe seeking out more friendly regulatory treatment, the same is

³ Search Results for Legal Advice, QUORA, <https://www.quora.com/search?q=legal%20advice&type=answer> (search “Legal Advice” using the search bar at the top of the page).

⁴ See, e.g., TELADOC, <https://www.teladoc.com> (last visited May 17, 2018).

⁵ See, e.g., TALKSPACE, <https://www.talkspace.com> (last visited May 17, 2018).

⁶ *Help Moving*, TASKRABBIT, <https://www.taskrabbit.com/m/help-moving-on-demand> (last visited May 17, 2018).

⁷ Christopher Koopman, *Defining Common Carriers: Flight Sharing, the FAA, and the Future of Aviation* (Mercatus Center at George Mason University, Working Paper, 2017).

increasingly true for innovations. And this will also play out domestically as innovators seek to play state and local governments off each other in search of some sort of competitive advantage.⁸

While flight-sharing platforms have been grounded in the United States, they have taken off in Europe. Wingly, a European flight-sharing company, recently secured 2 million euros to expand its network across the continent.⁹ Its online platform enables 150,000 users to hop aboard small private aircraft operated by 10,000 licensed pilots in France, Germany, and the United Kingdom.¹⁰

Instead of viewing these platforms as a threat, European Aviation Safety Agency (EASA) administrators have recognized that these platforms were simply extending existing practices by leveraging web-based tools that are already in place. EASA thus expanded its existing regulations to include these internet-based platforms,¹¹ and it has actively worked with flight-sharing platforms such as Wingly to promote safety.¹² Until the FAA adopts a more accommodating and innovation-friendly disposition, Europe is likely to continue outpacing the United States in this space.

Flight-sharing platforms are but one example. Innovators working on genome editing,¹³ commercial drones,¹⁴ driverless cars,¹⁵ and the sharing economy are all finding more hospitable homes outside the regulatory purview of the United States.

RECLAIMING A CULTURE OF PERMISSIONLESS INNOVATION

To ensure that the United States remains a leader in the innovation economy, our public policy must have some tolerance for mistakes, failures, and learning so that innovation can continue to move forward. We must reclaim the culture of permissionless innovation that has fueled the growth of the commercial internet and the economic benefits that it has generated. Doing so requires a technological freedom not found in many of the current regulatory approaches.¹⁶

In any number of regulatory domains, there are serious and legitimate concerns that make it tempting to require innovators to seek approval before they proceed. While regulatory approval can address many of those concerns, it is done at the expense of continued innovation and economic growth. As my colleague James Broughel explained in his recent book on regulation and economic growth, “Regulations should nurture and not stifle the factors known to be important for growth. These factors

⁸ Adam Thierer, *Innovation Arbitrage, Technological Civil Disobedience & Spontaneous Deregulation*, MEDIUM (Dec. 7, 2016), <https://medium.com/tech-liberation/innovation-arbitrage-technological-civil-disobedience-spontaneous-deregulation-eb90da50fle2>.

⁹ Jonathan Keane, *Wingly Raises €2 Million for Its Carpooling for Flights Service*, TECH.EU, Mar. 5, 2018, <https://tech.eu/brief/wingly-funding/>.

¹⁰ *Id.*

¹¹ Letter from Patrick Ky, Exec. Dir. of EASA, to Emeric Waziers (Mar. 14, 2016), https://fr.wingly.io/media/doc/en/EASA_140316.pdf.

¹² WINGLY, SAFETY OF NON-COMMERCIAL GENERAL AVIATION FLIGHTS WITH LIGHT AIRCRAFT (2017).

¹³ Christopher Koopman and Jordan Reimchisel, *Ignoring the Future Won't Forestall It*, U.S. NEWS AND WORLD REPORT, Aug. 21, 2017, <https://www.usnews.com/opinion/economic-intelligence/articles/2017-08-21/the-us-ignores-crispr-and-genetic-engineering-issues-to-its-own-detriment>.

¹⁴ Jack Nicas and Greg Bensinger, *Amazon: U.S. Is Blocking Its Testing of Drones*, WALL ST. J., Dec. 8, 2014, <https://www.wsj.com/articles/amazon-warns-it-will-move-drone-research-abroad-1418076981>.

¹⁵ Chunka Mui, *Singapore: The First-Mover Nation for Driverless Cars*, STRATEGY+BUSINESS, July 26, 2016, <https://www.strategy-business.com/blog/Singapore-The-First-Mover-Nation-for-Driverless-Cars>.

¹⁶ See, e.g., ADAM THIERER, PERMISSIONLESS INNOVATION: THE CONTINUING CASE FOR COMPREHENSIVE TECHNOLOGICAL FREEDOM (rev. ed., 2016).

include productivity, investment, competition, human capital, institutions, and all the various forms of technological innovation.”¹⁷

CONCLUSION

I thank the committee for its interest in and attention to these issues, as well as for the opportunity to testify.

Sincerely,

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Senior Affiliated Scholar, Mercatus Center at George Mason University

ATTACHMENTS (2)

“Defining Common Carriers: Flight Sharing, the FAA, and the Future of Aviation” (Mercatus Research Summary)

“Defining Common Carriers: Flight Sharing, the FAA, and the Future of Aviation” (Mercatus Working Paper)

¹⁷ JAMES BROUGHEL, REGULATION AND ECONOMIC GROWTH: APPLYING ECONOMIC THEORY TO PUBLIC POLICY 108–9 (2017).



RESEARCH SUMMARY

Defining Common Carriers

Flight Sharing, the FAA, and the Future of Aviation

In January 2017, the Supreme Court of the United States declined to hear a case brought by Flytenow, an aviation startup, against the Federal Aviation Administration (FAA). While Flytenow's legal challenge ended when the Supreme Court refused to hear the case, the company continues to have the better policy argument.

In "Defining Common Carriers: Flight Sharing, the FAA, and the Future of Aviation," Mercatus Senior Research Fellow Christopher Koopman argues that the flight-sharing industry was shut down because the FAA designated flight-sharing services as common carriers, which are subject to a higher regulatory burden than private pilots. The FAA's definition of *common carriage* is too expansive and was implemented without oversight from Congress, which has been silent on the issue. Congress should intervene by explicitly defining *common carriage* narrowly via statute to allow flight sharing.

OVERVIEW AND KEY FINDINGS

Aviation innovation has a promising future, but the FAA has effectively shut down continued innovation in flight-sharing arrangements. This policy is foreclosing opportunities for both pilots and passengers to connect with one another and create value by providing more options and opportunities within American aviation.

Cost-sharing is a decades-old practice among private pilots. Private pilots traditionally have had a right to share costs, but several times the FAA has sought to stop this practice.

- The cost-sharing system is important to private pilots because aviation is an expensive hobby. A pilot may pay as much as \$33,750 to achieve 250 hours of flight time needed to carry passengers.
- The cost-sharing system allows pilots to recoup thousands of dollars as they pursue their hobby or work toward professional licensure.

Flytenow's innovative cost-sharing platform attempted to comply with the FAA's rules. Like ridesharing companies Uber and Lyft, Flytenow provided a platform for potential passengers to find someone willing to transport them, with pilots receiving only a prorated share of the expenses of a flight from each passenger.

- Flytenow structured its operations to comply with the FAA's regulations on private pilot privileges and limitations, as well as agency guidance and interpretations. A critical objective of this business model was to avoid being designated as a common carrier.
- If flights on Flytenow's platform were ruled to be common carriage, pilots would need to obtain several certificates and operate according to commercial rules. Essentially, the pilots using Flytenow would need to become full-fledged air taxis, defeating the purpose of the platform.

For more information, contact Kate De Lanoy, 703-993-9677, kdelanoy@mercatus.gmu.edu

The ideas presented in this document do not represent official positions of the Mercatus Center or George Mason University.

The FAA has broadly redefined common carriage and found that Flytenow's pilots are common carriers. The term *common carrier* in aviation is defined neither in federal statute nor in the Code of Federal Regulations. Instead, the current definition is promulgated in an FAA advisory circular from 1986. The advisory circular notes four elements of common carriage: “(1) a holding out of a willingness to (2) transport persons or property (3) from place to place (4) for compensation.”

- Despite Flytenow’s significant attempts to comply with the law, the FAA found that Flytenow’s cost-sharing system constituted “compensation” that rendered the platform a common carrier.
- The FAA also found that the firm’s efforts to avoid “holding itself out” as a common carrier were insufficient. Federal courts subsequently upheld the FAA’s interpretation and ruled that Flytenow pilots were common carriers.

Common law conflicts with the FAA’s interpretation. Historically, the purpose of common carriage is to establish a reasonable set of defaults that prevail in the absence of a contract. However, airlines have been allowed to contract out of common carriage rules before, and the same principle should apply to flight sharing.

PROPOSED SOLUTION AND CONCLUSION

As Congress is currently evaluating reauthorization of the FAA, it can implement reforms to prevent future problems with aviation innovations like Flytenow. Congress could fix confusion in common carriage and remove the FAA’s authority to continually reinterpret its definition by writing a definition into the Federal Aviation Act.

- Allowing flight-sharing arrangements would give consumers more options and cheaper alternatives beyond commercial flight.
- Defining *common carrier* more narrowly in statute would more clearly align with the purpose of common carriage as conceived under the common law.

Defining Common Carriers

Flight Sharing, the FAA, and the Future of Aviation

Christopher Koopman

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Christopher Koopman. "Defining Common Carriers: Flight Sharing, the FAA, and the Future of Aviation." *Mercatus Working Paper*, Mercatus Center at George Mason University, Arlington, VA, 2017.

Abstract

In January 2017, the Supreme Court of the United States declined to hear a case brought by Flytenow, a flight-sharing startup, against the Federal Aviation Administration (FAA). While Flytenow's legal challenge ended when the Supreme Court refused to hear the case, on policy grounds the company continues to have the better argument. Ultimately, the flight-sharing industry was shut down because the FAA can define *common carriage* expansively in its guidance and interpret that definition without oversight. Congress should intervene by explicitly defining *common carriage* narrowly in statute. This paper discusses private pilots' traditional right to share costs and why such cost-sharing matters for general aviation. Next, the paper shows that Flytenow tried to comply with this traditional framework and previous interpretations of aviation law, and it discusses the company's legal travails. There is a possible remedy: Congress could unwind the FAA's confused flight-sharing rulings by simply defining *common carrier* more narrowly in statute. The FAA's current definition undermines the purpose of common carriage as conceived under the common law. This paper proposes some elements that Congress should consider as it formulates an appropriate definition. Finally, the paper addresses some objections.

JEL codes: K0, K2, O38, R40

Keywords: Federal Aviation Administration, FAA, Flytenow, flight sharing, sharing economy, aviation, regulation, federal aviation regulations, common carriage

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Defining Common Carriers: Flight Sharing, the FAA, and the Future of Aviation

Christopher Koopman¹

Introduction

In January 2017, the Supreme Court of the United States declined to hear a case against the Federal Aviation Administration (FAA) brought by aviation startup Flytenow.² Like ridesharing companies Uber and Lyft, Flytenow provided a platform for potential passengers to find someone willing to transport them. But while Uber and Lyft connect passengers with drivers, Flytenow connected passengers with FAA-licensed pilots operating on a strictly not-for-profit basis in small, two- or four-seat airplanes.

Like many startups, Flytenow built its entire platform around the existing legal framework.³ To comply with existing FAA regulations and legal interpretations, pilots using Flytenow did not profit from flights. Instead, they received only a prorated share of flight costs from each passenger. This mirrored an FAA-approved practice that has existed for decades—using bulletin boards at local airports to post information about potential shared flights.⁴ The FAA also allows posting on Facebook.⁵ Nevertheless, in 2014 the FAA issued an interpretation of its regulations that rendered Flytenow’s business model illegal.⁶ The company put all operations on hold as it fought its way through the courts.

¹ This paper was originally coauthored with former senior research fellow and director of the Technology Policy Program Eli Dourado.

² *Flytenow, Inc. v. Fed. Aviation Admin.*, 808 F.3d 882 (D.C. Cir. 2015), *cert. denied*, 580 U.S. __ (U.S. Jan. 9, 2017) (No. 16-14).

³ *See, e.g.*, 14 C.F.R. § 61.113 (2017).

⁴ *See* FAA Legal Interpretation from Kenneth Geier, Regional Counsel, to Paul Ware (Feb. 13, 1976).

⁵ FAA Legal Interpretation from Rebecca B. MacPherson, Assistant Chief Counsel for Regulations, to Mark Haberkorn (Oct. 3, 2011).

⁶ FAA Legal Interpretation from Mark Bury, Acting Assistant Chief Counsel for International Law, Legislation, and Regulations Division, to Rebecca B. MacPherson (Aug. 13, 2014); FAA Legal Interpretation from Mark Bury, Acting Assistant Chief Counsel for International Law, Legislation, and Regulations Division, to Gregory Winston (Aug. 14, 2014).

Although Flytenow's legal challenge ended when the Supreme Court refused to hear the case, the company continues to have the better argument on policy grounds. Ultimately, the flight-sharing industry was shut down because the FAA can define *common carriage* expansively in its guidance and interpret that definition without congressional oversight. However, Congress can and should intervene by explicitly defining *common carriage* narrowly in statute.

This paper discusses private pilots' traditional right to share costs and why this traditional legal framework matters for general aviation. Flytenow tried to comply with this traditional framework and previous interpretations from the FAA. This paper discusses the company's legal travails, as well as a possible remedy: Congress could untangle the FAA's confused flight-sharing rulings by simply defining the term *common carrier* more narrowly in statute. The FAA's definition undermines the purpose of common carriage as conceived under the common law. This paper proposes some elements that Congress should consider as it formulates an appropriate definition. Finally, the paper addresses some safety-related objections.

Cost-Sharing in General Aviation

Anyone who wishes to fly a manned aircraft in the United States must have a pilot certificate issued by the FAA. Student pilot certificates require only a written examination and a driver's license. The requirements for a sport pilot certificate add 20 hours of flight experience as a student. Neither of these certificates authorizes the pilot to carry passengers.

The next step up, the private pilot certificate, does allow the pilot to transport passengers. However, private pilots have only a restricted ability to receive payment for transportation of passengers or cargo. Title 14 of the Code of Federal Regulations (CFR) enumerates the limited set of conditions under which a payment may be made. Paragraph (c) of subsection 61.113

specifically allows pilots to be compensated for a prorated portion of the costs they incur from transporting passengers.

History suggests that the FAA would prefer not to allow even this limited form of compensation.⁷ Cost-sharing is a decades-old practice among private pilots who have commonly used bulletin boards at local airports to advertise upcoming flights. In 1950, the Civil Aeronautics Board instituted a rule attempting to end this practice, and in 1963, the Federal Aviation Agency, a predecessor of today's FAA, promulgated a draft rule to disallow cost-sharing for private pilots. On both occasions, the outcry from private pilots around the country was so great that the agencies reversed their decisions.⁸

The cost-sharing rule is important to private pilots because aviation is an expensive hobby. For example, the Aircraft Owners and Pilots Association (AOPA) estimates that after tallying loan payments, insurance, fuel, oil, landing fees, hangar fees, maintenance, and other expenses, the total annual cost for a pilot to own and operate a 1975 Cessna 172M Skyhawk, a small four-seat airplane, for 100 hours is \$22,530.⁹ To put it another way, for a pilot who flies 100 hours a year, this cost amounts to \$225.30 per hour. Renting a plane, while slightly less costly, is still expensive: AOPA estimates this cost to be around \$135 per hour. Larger aircraft cost significantly more to operate.

Pilots who want to carry passengers must keep their certifications current. That is, by law, they must log at least three takeoffs and landings every 90 days. For safety reasons, it is advisable for pilots to fly even more often so they can remain proficient. In addition, logging

⁷ See Brief for Petitioner at 33, *Flytenow, Inc. v. Fed. Aviation Admin.*, No. 14-1168 (D.C. Cir. Aug. 14, 2014).

⁸ *Id.*

⁹ *Hypothetical Operating Cost Calculation*, AIRCRAFT OWNERS AND PILOTS ASSOCIATION, <https://www.aopa.org/go-fly/aircraft-and-ownership/buying-an-aircraft/tips-on-buying-used-aircraft/hypothetical-operating-cost-calculation> (last visited June 7, 2017).

flight time is a critical component of earning an instrument rating. Once an instrument rating is earned, additional requirements to remain current come into effect. Finally, gaining flight time as a private pilot is important for pilots working toward a commercial pilot's license, which allows pilots to carry passengers for profit. Commercially rated pilots flying single-engine planes must log 250 hours of flight time, including 100 hours of pilot-in-command flight time, 10 hours of additional instrument training, 10 hours in an aircraft with retractable landing gear and flaps, 5 hours of night flying, 10 hours solo, and several multi-hour cross-country flights with specific distance ranges.¹⁰ Multiengine ratings require additional flight hours with extra takeoffs and landings. Using AOPA's rental estimate, a pilot using his own plane will have to pay approximately \$33,750 to achieve the 250 hours of flight time needed to carry passengers. The cost-sharing rule is popular with pilots for the obvious reason that it allows them to recoup thousands of dollars as they pursue their hobby or work toward professional licensure.

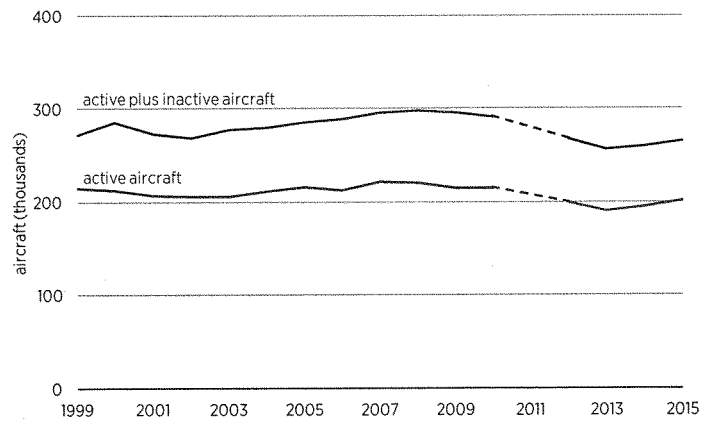
Even before the present debate over Internet-enabled cost-sharing, high costs were taking a toll on the general aviation industry. The FAA estimates that there are 201,100 active general aviation aircraft in the United States as of 2015, and 63,633 inactive aircraft (see figure 1).¹¹ In other words, 24 percent of general aviation aircraft sat idle all year long. General aviation aircraft flew an estimated 20,576,000 hours in 2015, for an average of 77.7 hours per aircraft, or 102.3 hours per active aircraft (figure 2 and figure 3).¹² By comparison, the air taxi, air tours, and air medical industries, which operate under 14 CFR § 135, logged about 400 hours per aircraft in 2015.¹³ There is a great deal of idle capital in general aviation.

¹⁰ 14 C.F.R. § 61.129(a) (2017).

¹¹ *General Aviation and Part 135 Activity Surveys - CY 2015*, FEDERAL AVIATION ADMINISTRATION, https://www.faa.gov/data_research/aviation_data_statistics/general_aviation/CY2015/ (last visited Feb. 24, 2017).

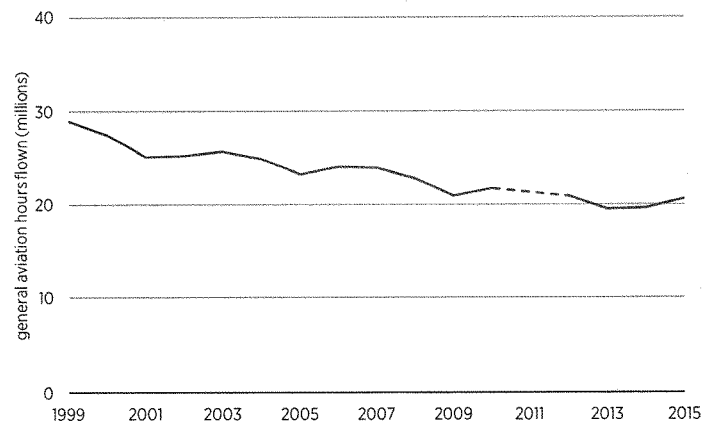
¹² *Id.*

¹³ *Id.*

Figure 1. General Aviation Fleet, Excluding Air Taxis

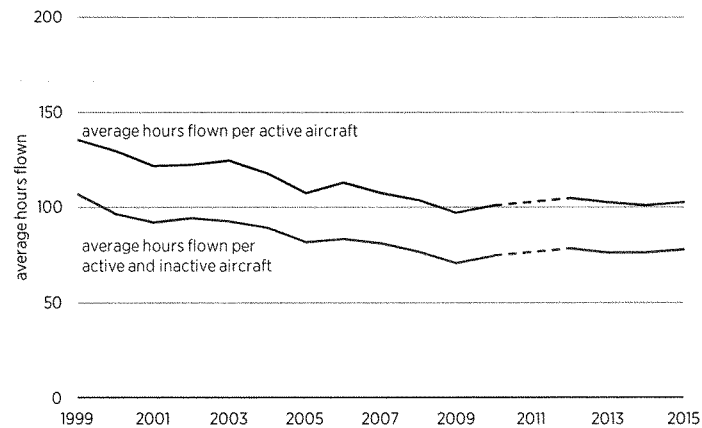
Note: The FAA did not publish its General Aviation Survey in 2011.

Source: Christopher Koopman and Eli Dourado; data are from the FAA General Aviation Survey.

Figure 2. General Aviation Hours Flown

Note: The FAA did not publish its General Aviation Survey in 2011.

Source: Christopher Koopman and Eli Dourado; data are from the FAA General Aviation Survey.

Figure 3. Average Hours Flown per General Aviation Aircraft

Note: The FAA did not publish its General Aviation Survey in 2011.

Source: Christopher Koopman and Eli Dourado; data are from the FAA General Aviation Survey.

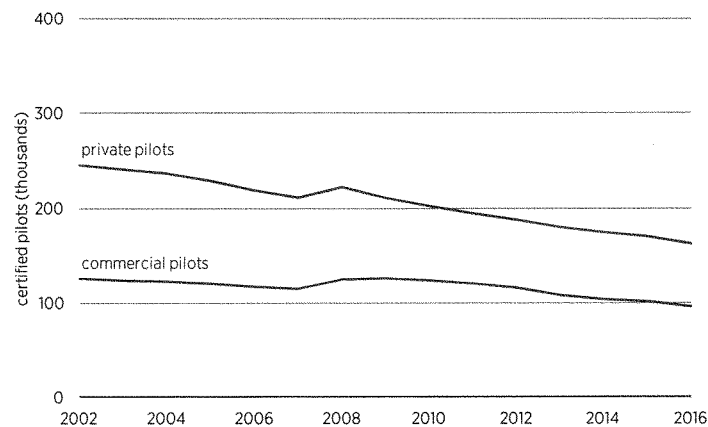
The high cost of flying and low rate of use among general aviation aircraft also harm the market for new aircraft. The average general aviation aircraft was manufactured 40 years ago in 1977.¹⁴ The small market for new aircraft means that the industry can only advance slowly and incrementally. There simply isn't enough of a market to produce rapid innovation if costs remain high. While the new Part 23 rules set to take effect in 2017 will likely mitigate some of this stagnation, it is difficult to expect general aviation to truly flourish without reducing the cost of flying.

The high cost of general aviation as a hobby has also led to a decline in the number of certified pilots. In 2016, there were 162,313 private airplane pilots in the United States, down

¹⁴ *Id.*

from 245,230 in 2002—a decline of 34 percent in 14 years (see figure 4).¹⁵ The number of pilots with a commercial certificate has also decreased, from 125,920 in 2002 to 96,081 in 2016, a decline of 24 percent.¹⁶ This is unsurprising since commercial pilots typically come from the pool of private pilots.

Figure 4. Number of Certified Pilots



Note: The FAA did not publish its General Aviation Survey in 2011.

Source: Christopher Koopman and Eli Dourado; data are from the FAA General Aviation Survey.

Taking the traditional practice of cost-sharing and bringing it to the Internet, as Flytenow and other flight-sharing firms proposed, not only is a potential boon for pilots but could also reinvigorate the entire general aviation industry. If the costs of flying are defrayed by sharing

¹⁵ *U.S. Civil Airmen Statistics*, FEDERAL AVIATION ADMINISTRATION, https://www.faa.gov/data_research/aviation_data_statistics/civil_airmen_statistics/ (last visited Feb. 24, 2017).

¹⁶ *Id.*

expenses with passengers, more people will become pilots, more new aircraft will be manufactured, and pilots will be able to fly their aircraft more often. In short, putting pilot convenience aside, the efficient use of billions of dollars' worth of physical and human capital is at stake.

Bringing Cost-Sharing into the Internet Age

Flytenow structured its operations to comply with the regulations on private pilot privileges and limitations as well as with agency guidance and interpretations. A critical objective was to avoid the FAA designating operators of shared flights as common carriers. If flights on Flytenow's platform were ruled to be common carriage, those using it would be subject to a much higher regulatory burden. Pilots would need commercial certificates, operators would need a Part 119 certificate, and flights would need to be operated according to Part 135 rules. Essentially, the pilots using Flytenow would need to become full-fledged air taxis, defeating the purpose of the platform.

Common carrier in aviation is defined neither in federal statute nor in the Code of Federal Regulations. Instead, the current definition is promulgated in an FAA advisory circular from 1986.¹⁷ Because the term comes from agency guidance rather than a formal regulation, it has never gone through administrative procedures that serve to protect affected parties from agency overreach—in particular, the public notice-and-comment process.

According to the advisory circular, the four elements of common carriage include “(1) a holding out of a willingness to (2) transport persons or property (3) from place to place (4) for compensation.”¹⁸ Flytenow's attempt to avoid getting captured under this definition was twofold.

¹⁷ FED. AVIATION ADMIN., ADVISORY CIRCULAR NO. 120-12A: PRIVATE CARRIAGE VERSUS COMMON CARRIAGE OF PERSONS OR PROPERTY (Apr. 24, 1986).

¹⁸ *Id.* ¶ 4.

First, addressing point number four, it facilitated payments only for prorated shares of flight costs—compensation that was, as already noted, explicitly authorized for private pilots under the Code of Federal Regulations.

Second, addressing point number one, Flytenow took numerous steps to avoid pilots’ “holding out” to the general public in a way that implied common carriage. The Flytenow platform itself was an exclusive, nonpublic network only available to those who had been accepted as members. Flights were not available to be indexed by search engines such as Google. To post a flight, the pilot was required to include the specific date and time, the points of operation, and a stated purpose of the flight. Members could not request itineraries directly; they could only join posted flights. Neither passengers nor Flytenow had control over flights, and pilots could accept or reject any member’s request to join any planned flight, at any time, and for any (or no) reason.

Despite these steps to comply with the law, shortly after the site launched in January 2014, FAA Flight Standards District Offices began notifying pilots who used the platform that they were operating illegally.¹⁹ In an attempt to clear up the matter, Flytenow and AirPooler, a similar platform facing the same issue, separately asked the FAA’s Office of the Chief Counsel for a formal legal interpretation.

The FAA responded with a letter indicating that, for purposes of determining whether common carriage is present, the cost-sharing system of Flytenow’s pilots counted as compensation. The FAA further stated that the firms’ efforts to avoid “holding out” were insufficient. Therefore, pilots using Flytenow and AirPooler were operating illegally if they did not hold a Part 119 certificate and, at minimum, a commercial pilot’s license. When Flytenow

¹⁹ Petition for Writ of Certiorari at 5, *Flytenow, Inc. v. Fed. Aviation Admin.*, No. 16-14 (U.S. Jan. 9, 2017).

appealed to the DC Circuit Court of Appeals, the court sided with the FAA, and in January 2017, the US Supreme Court denied certiorari.

As a result, the FAA has imposed a significant limitation on the right of private pilots to engage in cost-sharing to which they would otherwise be entitled under 14 CFR § 61.113. It has done so without any public notice and comment from private pilots or others in the general aviation industry. As discussed above, this limitation has significant consequences for the general aviation industry as well as for pilots who seek higher certification or who simply wish to remain current and proficient. On legal grounds, Flytenow's case against the FAA may be closed, but on policy grounds, flight-sharing firms still have the better argument.

Defining Common Carriage in Statute

The FAA has been able to create and interpret its own definition of *common carrier*—and thus to shut down web-based flight-sharing services—because Congress never defined the term. The Federal Aviation Act of 1958 and subsequent amendments define numerous terms in aviation. Throughout the Federal Aviation Act,²⁰ Congress defines 47 separate aviation-related terms, including terms as basic as *aircraft* and *aircraft engine*. Many of these definitions even include the phrase *common carrier*. Three of the definitions in the Act, for *foreign air transportation*, *interstate air transportation*, and *intrastate air transportation*, contain the term *common carrier*. But a definition for *common carrier* is conspicuously missing. The term has been left to the FAA to define (and redefine) over the past 59 years.

To resolve this, Congress should amend 49 USC § 40102 to define *common carrier* more broadly than the FAA does and return to the traditional common law approach to common

²⁰ 49 U.S.C. § 40102(a) *et seq.* (2017).

carriage. A more flexible definition of *common carrier*—one that allows more private carriage operations—would increase innovation in the aviation industry. At the very least, it would allow innovative flight-sharing services such as Flytenow to resume operation. Perhaps more importantly, it would allow new service models to be tested without the costs currently associated with operating a common carrier and without the risk of FAA intervention.

A definition in statute is also good for the rule of law. Because *common carrier* is at present defined only in an advisory circular, which the FAA can amend in any way and at any time without public notice and comment, the agency can arbitrarily change the substance of regulations at any time with little recourse for those affected. Although likely a fanciful example, the agency could theoretically abolish general aviation at any time by ruling that all pilots are common carriers. This legal change might face challenge in the courts, but it would not be subject to notice and comment before it took effect.

In the remainder of this section, this paper examines the purpose of common carriage under the common law and discusses how to formulate a potential statutory definition in a way that conforms to this purpose and allows flight sharing to proceed.

What Is the Purpose of Common Carriage under the Common Law?

Common carriage is not a new concept but, under English common law, goes back at least to the Humber Ferryman's case of 1348, *Bukton v. Tounesende*.²¹ In that case, a ferryman (Tounesende) transported a load of horses across the Humber, a large tidal estuary. He overloaded the ferry, and as a result, a horse belonging to Bukton perished, presumably by drowning. Although the two parties had no prior contract specifying which of them should bear

²¹ *Bukton v. Tounesende*, (1348) 22 Lib. Ass. 94 (K.B.) (Eng.).

the loss of the horse, the court decided that no evidence of a contract was necessary to find that Tounesende had a duty to transport the horse safely.

The Ferryman case is considered a foundational precedent in the common law of common carriage. It shows that for centuries, the purpose of common carriage has been to establish a reasonable set of default rules that prevail in the absence of a contract. Without the expectations generated by a well-tailored common carriage standard, parties would need to engage in the haggling, execution, and other transaction costs associated with signing a contract every time they got on a bus, boarded an airplane, or put their horse on a ferry.

This understanding of common carriage as a set of default rules yields a critical point: under the common law, the reasonable defaults implied by common carriage are generally nonbinding. Except in some limited circumstances, parties can contract around any implied obligations under the common law. Over the last two centuries, courts in common law jurisdictions, namely Canada²² and England,²³ have held that airlines can contract out of the default rules implied by common carriage. The Supreme Court of the United States has also held, as far back as 1848, that common carriers may limit common-law liability through contract.²⁴

Perhaps, for example, a ferryman is only willing to transport horses across a river if their owners agree to hold the ferryman harmless should the horses not survive the crossing. If the owners are willing to accept this risk, they can sign a contract specifying the terms that override the common carriage defaults. Without this possibility of circumventing the defaults through contract, the only way to get the horses across the river would be to pay the ferryman so much money that he is willing to bear the risk of dead horses, which is an inefficient distortion of the market.

²² Ludditt v. Ginger Coote Airways Ltd., [1942] S.C.R. 406 (Can.).

²³ Ingate v. Christie, (1850) 3 Car. & K. 61 (Eng.).

²⁴ New Jersey Steam Navigation Co. v. Merchants' Bank, 47 U.S. 344 (1848).

Such contractual limitations are not completely unrestrained. Courts have put limits on the ability of parties to go beyond what may be deemed just and reasonable. For instance, the Supreme Court has held that a common carrier may not contractually limit responsibility for negligence.²⁵ What has resulted is a flexible standard that lets parties decide for themselves, within reason, how they structure their relationship.

In the hands of federal regulators, however, this critical element of common carriage jurisprudence has been all but lost. While courts continue to recognize contractual limitations on liability, the FAA has built a regulatory framework around whether or not a carrier is a common carrier. As a result, the FAA has discarded the flexibility afforded common carriers under the common law and provides no way to escape the defaults of common carriage regulation via contract—if a pilot merely “holds out” a willingness to transport persons or property from place to place for compensation, that pilot is a common carrier and subject to the FAA’s rules and regulations as such. In its advisory circular, the FAA contemplated the fact that carriers could use traditional contracts to sidestep this designation. “[T]ransportation pursuant to separately negotiated contracts,” the FAA concluded, “[is not] conclusive proof that the carrier is not a common carrier.”²⁶ Instead, the surrounding circumstances, regardless of how the parties choose to designate their transaction, are what the FAA bases its decision on. As noted above, the FAA created a four-part test that looks at whether a pilot is (1) holding out a willingness (2) to transport persons or property (3) from place to place (4) for compensation.²⁷ If a carrier meets these criteria, then, regardless of other circumstances, the FAA will find it to be engaged in common carriage.

²⁵ *New York Cent. R.R. Co. v. Lockwood*, 84 U.S. 357 (1873).

²⁶ *FED. AVIATION ADMIN., ADVISORY CIRCULAR NO. 120-12A: PRIVATE CARRIAGE VERSUS COMMON CARRIAGE OF PERSONS OR PROPERTY* at ¶ 4 (Apr. 24, 1986).

²⁷ *Id.*

While the common law created a reasonable set of flexible default rules, the FAA has transformed common carriage into something else—a set of inalterable requirements. In order to provide clarity, reclaim the original purpose of the common carriage framework, and create a more innovative market for aviation services, Congress should define *common carrier* on its own.

How Should Congress Redefine Common Carriage?

If operators and customers agree that a flight should not be bound by the FAA’s common carriage regulations, then Congress should ensure that those regulations are not applied. Therefore, Congress should define *common carriage* such that it provides a set of defaults in the absence of other contractual terms. When customers and operators agree to air transportation on terms other than common carriage, then the operators should be considered private carriers.

One way to write this feature into the law would be to first define the term *private carrier* as a person providing air transportation (1) without compensation exceeding what is allowable under 14 CFR § 61.113 or (2) on contractual terms that differ from what is prescribed by law for common carriers. A *common carrier* could then be defined as a person providing air transportation from place to place under the common law’s default rules, not as a private carrier.

These two definitions would place operators using web-based flight-sharing platforms such as Flytenow firmly in the private-carrier category. Further they would unwind the FAA’s rulings and opinion on the matter and allow these flight-sharing services to return. In addition, this approach would restore the original purpose of common carriage as a set of defaults that can be nullified through contractual agreement. They would generate considerable convenience for passengers and stimulate the market for general aviation.

What about Safety?

The FAA's primary mandate is safety, and it takes a strong position against needless risk. General aviation is commonly regarded as less safe than more regulated categories of air transportation, so it is worth addressing the safety concerns associated with flight sharing.

First, flight sharing could improve general aviation safety by allowing private pilots a way to cheaply remain current and gain proficiency. With more pilots able to fly routinely, general aviation safety could improve rather than deteriorate simply because pilots would be less likely to let their skills lapse.

Second, the prohibition on flight sharing affects more than just private pilots with relatively low skill levels. The prohibition also affects commercial pilots and even airline transport pilots operating in their spare time. In order to comply with the FAA's interpretation of the common carrier rule, these seasoned pilots, some of whom have thousands of hours of flight experience, may need to also apply for a Part 119 certificate for their recreational operations. Such a broad prohibition on flight sharing does not seem to be based on safety concerns.

Third, it is worth noting that the European Aviation Safety Agency (EASA) has already given flight-sharing startups the green light. Like the FAA, EASA has historically allowed cost-sharing in private flying. Unlike the FAA, EASA was open to innovation within aviation and encouraged startups to improve cost-sharing arrangements.²⁸

As flight sharing grew in Europe, EASA recognized that platforms were simply extending existing practices by leveraging the Internet. EASA thus expanded its existing cost-splitting regulations to these Internet-based platforms. The EU allows for the online services to operate "on the condition that the direct cost is shared by all the occupants of the aircraft, pilot

²⁸ Letter from Patrick Ky, Exec. Dir. of EASA, to Emeric Waziers (Mar. 14, 2016) (https://fr.wingly.io/media/doc/en/EASA_140316.pdf).

included, and the number of persons sharing the direct costs is limited to six.”²⁹ It approved this direct cost-sharing in 2016. In doing so, it opened the entirety of Europe for flight sharing.³⁰

So far, European flight sharing has seen more than 1,000 bookings and involves more than 10,000 users, including around 2,000 pilots.³¹ It has been notably safe—no accidents or fatalities have been reported. The fact that flight sharing is finding a robust market in Europe suggests that any safety concerns are outweighed by the benefits of flight sharing.

Interestingly, EASA has actively worked with flight-sharing platforms like Wingly to promote safety.³² To accomplish this, Wingly recently published a pilot checklist to ensure safety before and during flights.³³ Moreover, Wingly has taken active steps to develop tools to empower passengers to make better decisions about their own safety. It has adopted a user rating system similar to Uber’s that allows passengers to give low ratings to pilots who do not appear to be operating safely. By increasing the amount of information passengers have about potential pilots, this one innovation may produce greater safety than numerous regulatory requirements.³⁴

Finally, over the past several years the FAA has increasingly adopted a philosophy of a “safety continuum;” that is, the FAA is recognizing that one level of safety is not appropriate for all aviation. This philosophy informed the recent Part 23 rewrite, which will take effect in late 2017.³⁵ Virtually all pilots and passengers know that general aviation is not nearly as safe as Part

²⁹ Commission Regulation 965/2012, art. 6 § 4a (EU).

³⁰ Brief for Southeastern Legal Foundation et al. as Amici Curiae Supporting Petitioner at 21–22, *Flytenow, Inc. v. Fed. Aviation Admin.*, 580 U.S. ____ (U.S. Jan. 9, 2017) (No. 16-14).

³¹ Press Release, Wingly, Wingly Closes an Angel Round of Funding to Develop Flight Sharing in Europe (Jun. 6, 2016) (https://en.wingly.io/media/press/Wingly_06062016_PR-EN.pdf).

³² *Safety of Non-Commercial General Aviation Flights with Light Aircraft*, WINGLY (2017), <https://en.wingly.io/media/doc/easa/pdf/easa-charter.pdf>.

³³ *Pilot Check List for Wingly Passenger Handling*, WINGLY (2017), <https://en.wingly.io/media/doc/easa/pdf/EASA-Pilot-Checklist-en-GB.pdf>.

³⁴ Adam D. Thierer et al., *How the Internet, the Sharing Economy, and Reputational Feedback Mechanisms Solve the “Lemons Problem,”* 70 U. MIAMI L. REV. 830 (2016).

³⁵ FAA Revision of Airworthiness Standards for Normal, Utility, Acrobatic, and Commuter Category Airplanes, 81 Fed. Reg. 96,572 (Dec. 30, 2016) (to be codified at 14 C.F.R. pts. 21, 23, 35, 43, 91, 121, and 135).

125 airline service. Yet demand persists, both for general aviation broadly and for flight sharing specifically. Individuals are qualified to assess the risks of flight sharing for themselves and participate or not, as they choose. Even if the FAA's current policy results in higher levels of safety, it sacrifices other values such as individual liberty to achieve that small measure of safety.

Conclusion

Flight-sharing platforms are an exciting innovation that promises to bring convenience and efficiency. However, the FAA prohibits pilots and passengers from using flight-sharing platforms like Flytenow. This stands in marked contrast to the role EASA has played in Europe's acceptance of flight sharing. While others in the global community have embraced this technology, the FAA restricts pilots in the United States to pre-Internet methods of communication. This restriction does not forestall the future; rather, it ensures that the future will be shaped by innovators, companies, and policymakers outside the United States.

The FAA's approach undermines not only the continued implementation of new technology and innovation in flight-sharing arrangements, but also six centuries of legal understanding concerning common carriage. Fortunately, as outlined above, this problem can be solved by relatively simple congressional action. While writing a statutory definition would provide the most clarity and certainty, Congress could at the very least require the FAA to publish clearer standards on what constitutes common carriage. The world has changed dramatically since 1986, and allowing the FAA to continue to freshen up its decades-old advisory circular through ad hoc opinion letters provides no clear guidance to those hoping to operate in the aviation space.

Ultimately, a clear statutory definition for *common carriers* will accomplish two goals. First, it will re-establish long-held legal principles concerning the differences between common and private carriers. Second, it will cement the rule of law at the FAA, reducing the agency's inconsistent interpretations as aviation continues to change and providing a level of predictability to innovators, pilots, and passengers.

**Testimony before the Joint Economic Committee
Hearing on “Breaking through the Regulatory Barrier: What Red Tape Means for
the Innovation Economy”
May 22, 2018**

**Jessica A. Milano
Former Deputy Assistant Secretary for Small Business, Community Development,
and Housing Policy
U.S. Department of the Treasury**

I would like to thank Chairman Paulsen, Ranking Member Heinrich, Vice Chairmen Lee and all of the distinguished members of the committee for inviting me to testify today. I am honored to be here to talk about my experience supporting safe and affordable access to credit for America's small businesses and entrepreneurs.

From 2012 to 2017, I served in President Obama's Administration, first at the Small Business Administration and then at the U.S. Treasury Department where I was the Deputy Assistant Secretary for Small Business, Community Development, and Housing Policy. At Treasury I oversaw three programs focused on access to capital; the Small Business Lending Fund (SBLF), the State Small Business Credit Initiative (SSBCI), and the Community Development Financial Institutions (CDFI) Fund. I am currently a member of the Board of Directors of Small Business Majority, a national small business advocacy organization, and the Vice President and Director of ESG Research for Calvert Research and Management. I am appearing today as a private citizen and the views expressed here are my own and should not be attributed to any of the organizations I just mentioned.

Given my background, my testimony today focuses on the important role small businesses play in the innovation economy. Small businesses are the foundation of our communities and the largest single source of new job growth in our economy. Over the last two decades, small and new businesses have been responsible for creating 2 out of every 3 net new jobs.¹ Importantly, these jobs are often the high-quality, higher-paying jobs that provide pathways to the middle class. Fully half our country's private sector workforce works for a small business.

Small businesses are also one of our country's greatest sources of innovation. All of our most successful innovators, from Apple to Amazon, started small. Their meteoric growth was not inhibited by regulation but could have been without access to capital needed to grow and scale their business.

In my testimony today, I wish to discuss three important points:

- Most small business owners believe some regulation is needed in a modern economy.

- Many small business owners rank access to capital as a bigger concern than regulation; and
- Smart policy can promote safe and affordable credit and encourage innovation.

Let me discuss these in turn.

Most small business owners believe some regulation is needed in a modern economy.

According to recent polling from Small Business Majority, 4 out of 5 small business owners agree that some regulation of business is needed for a modern economy.² While no one likes “red tape” and filling out paperwork, most American’s can appreciate that some regulation is needed to promote fairness and competition. Smart regulation ensures a level-playing field, promotes transparency, and encourages innovation through fair competition. Regulation, that over time, is applied unevenly between new market entrants and older competitors or unevenly between small and large businesses can have unintended consequences that distort a market.

That’s why, according to the same Small Business Majority poll, more than three-fourths of small business owners disagree that we should get rid of all regulations on businesses and think that some regulations are important to protect small businesses from unfair competition and to level the playing field with big businesses. What’s more, an overwhelming majority of 82 percent agree that their business can live with some regulation if it is fair, manageable and reasonable.³

Furthermore, the absence of regulation alone is not nearly enough to support innovation. Quite simply, in order to start, grow, and expand their businesses, entrepreneurs need capital. While our capital markets work well for most established, large- and mid-sized businesses, they are not suited for all businesses. For example, small, early-stage, rural, minority-owned, and women-owned businesses often struggle to find financing and consistently rank access to capital as a bigger concern than regulation.

Many small business owners rank access to capital as a bigger concern than regulation.

Access to financing is often one of the biggest hurdles small business owners face, particularly for the smaller loan amounts many new or very small businesses seek. Seventy-six percent of all businesses in the United States have average annual receipts less than \$100,000.⁴ For minority-owned and woman-owned businesses, that figure is even higher: 86 percent of minority-owned businesses and 88 percent of woman-owned business bring in less than \$100,000 per year.⁵

Importantly, business ownership is often a critical pathway to the middle class for minority and low income families. Recent research from the Center for American

Progress for example, found that business ownership is a critical component of wealth building for low-income families. African American business owners have more than \$52,000 in total wealth compared to just over \$7,000 for non-business owners.⁶ The same holds true for Hispanic business owning households, which have more than \$41,000 in total wealth on average compared to \$16,000 for non-business owners.⁷ Wealth building benefits both business owners and their communities. Greater savings helps families weather financial setbacks and move up the economic ladder, but it also means these households spend more money boosting their local economy too.

Not surprisingly, most small businesses tend to seek small-sized loans. According to the 2016 Small Business Credit Survey, a national collaboration of the 12 Federal Reserve Banks, more than half of small businesses (55 percent) seek loans of \$100,000 or less.⁸ But while small loan amounts are the most sought after, they are also becoming the most difficult to obtain.

Historically, community banks (less than \$10 billion in assets) were the bedrock source of relationship lending to businesses in their communities. Community bankers are often closest to their borrowers and in a unique position to assess and address the credit needs of their customer base. This can lead to more effective risk assessments and better outcomes for lenders and borrowers. But this type of high touch lending is also expensive — it costs about the same to underwrite a \$5 million dollar loan as a \$200,000 loan.⁹ This decline in profitability has meant a widening small business credit gap even during an economic recovery.

A recent study by the Federal Reserve Bank of Chicago using flow of funds data showed just how dramatic the shift has been. From 1997 (long before the Great Recession) to 2015, community banks' share of originations less than \$100,000 declined from 82 percent to 29 percent in less than 20 years.¹⁰ It is estimated that this market share has been captured by larger banks (greater than \$10 billion in assets) which steer small businesses with limited credit needs into business credit card products with higher revenue generation potential and a growing market of nonbank alternative lenders hoping to leverage advancements in technology and the proliferation of data about small businesses to lower the cost of extending credit.

As more small businesses utilize internet-based services for shipping, ordering, or record keeping; make or accept digital payments; and engage with social media they are creating large, real-time datasets about their businesses that can be applied to credit underwriting. These developments are encouraging many new companies, or in some cases established companies with no history of extending credit, to begin offering small business financing products often without the regulatory oversight and supervision applied to banks. While I was at Treasury we studied how these new financial technology companies were changing the landscape for small business financing.

In a white paper Treasury released in May 2016, one of our findings was that an uneven regulatory and supervisory regime creates risks for small business borrowers and that more robust small business borrower protections were needed.¹¹ These findings are

supported by Small Business Majority polling which found 3 out of 4 small business owners felt that while online small business lending opened up new sources of capital and credit for small business owners, it should be regulated to ensure small business borrowers are protected from predatory practices. What's more, an overwhelming majority of 8 in 10 small business owners reported they were in favor of regulating online lenders to ensure interest rates and fees are clearly disclosed to borrowers.¹²

Since leaving my government service, I wrote a paper for the Progressive Policy Institute to describe how common-sense, low cost disclosures could help small business owners compare credit products and promote fair competition in the small dollar loan market.¹³ Starting a business is risky enough, getting a loan shouldn't be one of those risks.

Smart policy can promote safe and affordable credit and encourage innovation.

Smart policy can promote safe and affordable credit and encourage innovation at the same time. First, as the title of my PPI paper suggests, its time to "Shine a Light" on the small business credit market and end buyer beware practices that if left unchecked can curb small business growth and job creation. Second, while transparency will make credit safer and more affordable, there will still be some businesses that will need help qualifying for a loan or accessing critical early-stage capital. For these businesses, particularly early-stage, rural, tribal, minority-owned, and women-owned businesses, targeted federal support can unlock private sector resources and help drive capital to underserved markets.

I would like to elaborate on each of these points in turn.

Promoting a Transparent Marketplace

Transparency is critical to promoting market competition which should ultimately provide small business borrowers better products at better prices. But to ensure a market is fully transparent, disclosure requirements should apply equally to all small business financing products regardless of whether the provider is a bank, credit card, merchant cash advance, online marketplace lender, or any new companies yet to emerge.

To minimize the cost to finance providers of extending "truth in lending" disclosures to small business credit products, I recommend in my paper targeting them to small business 'loans or credit products of \$100,000 or less where the use of proceeds is for business purposes.' The \$100,000 threshold allows policy makers to target protections to borrowers that are more likely to have very small businesses and to approach financial decisions as they would in their daily life as consumers. Importantly, since merchant cash advances and some working capital products offered by payments processors are not defined as loans, legislation would need to explicitly define this type of financing as a covered credit product.

When Small Business Majority polled my proposal after it was published, they found a decisive majority of 87 percent of small business owners support a “truth in lending” act for small business lending to ensure loan rates and terms are disclosed transparently and consistently.¹⁴

Encouraging Public-Private Partnerships to Unlock Capital for the Innovation Economy

Transparency will go a long way toward promoting better products at better prices for the majority of small businesses that seek smaller loan sizes but to truly unlock innovation and support growth some entrepreneurs will need a little extra boost tapping the capital markets. I'd like to highlight one of the very successful and innovative public-private programs I had the privilege of working on during my time at Treasury as a model for Federal support for innovation and entrepreneurship.

The State Small Business Credit Initiative (SSBCI) was funded with a one-time authorization of \$1.5 billion through the Small Business Jobs Act of 2010. It was a new program and a true experiment borne of the need to jump start small business lending and investment during the financial crisis. The program worked by allowing states to set-up their own small business support programs targeted to local economic needs. It was so flexible there were just two primary requirements: 1) states had to establish at least one from a list of 5 possible credit or equity programs; and 2) states had to provide a plan for leveraging \$10 of new private sector small business financing for every \$1 of SSBCI funds expended.

Unlike other Federal programs, like those administered by the Small Business Administration for example, it was not a one-size-fits-all approach. Some communities chose to target micro-businesses while others targeted manufacturers or high-tech companies. Each state has its own needs and, with them, developed a unique set of partners to administer the programs. In total SSBCI funded 154 programs nationwide, over 80 of them new, and dedicated \$1 billion to lending programs and over \$400 million to venture capital programs targeting investment in early stage businesses.¹⁵

From 2011 through 2016 (the last year data was collected), SSBCI supported over \$10.7 billion in new lending or investments and was estimated to have created or retained over 240,000 jobs. In total, SSBCI supported over \$2.5 billion in financing for small manufacturers, \$1.5 billion in financing for women or minority-owned small businesses, and \$4 billion to early-stage businesses with high growth potential. Even more remarkable, with no Federal requirement to do so, over 42 percent of SSBCI-supported loans or investments were made to businesses in low- and moderate-income (LMI) communities.¹⁶

I would like to share a couple of examples of how states took advantage of SSBCI's flexibility to target local market needs.

It is well documented that 75 percent of venture capital dollars in this country go to just three states: California, New York, and Massachusetts. New Mexico, which boasts

strong research universities and three federal laboratories, saw SSBCI as an opportunity to attract venture capital to New Mexico to help with the commercialization of innovative technologies already being developed in the state. With \$5 million from SSBCI, \$10 million from the State Investment Council, and \$5 million from private institutional investors, New Mexico created the Catalyst Fund to invest in seed and early-stage technology companies. Portfolio funds which receive investment from the Catalyst Fund must provide at least matching private investment, bringing the total investment to at least \$40 million.

By contrast, California which already has a robust venture capital market, chose to focus on credit support programs. One in particular, CalCAP, was a capital access program that partnered with community development financial institutions (CDFIs) to provide micro-loans in LMI communities. An example is Opportunity Fund, a CDFI based in San Jose and serving the Bay area. Through the end of 2017, Opportunity Fund extended more than 8,500 loans worth \$142 million through CalCAP which supported businesses as diverse as tamale makers to restaurants and grocery stores and helped commercial companies in many sectors and neighborhood service providers grow. According to Luz Urrutia, Opportunity Fund's CEO, "CalCAP has been key to our ability to finance thousands of California businesses. It enables us to take reasonable risk and to say 'yes' to more than 10 promising businesses every day. These businesses create jobs and local economic activity."¹⁷

These two examples illustrate the power of leverage — a little bit of Federal support partnered with state and private sector resources — and the power of flexibility to drive innovation and inclusive economic growth. We need more smart policy like SSBCI, but sadly many of the 154 state programs SSBCI seeded will not survive without some continued Federal support. The program expired in 2017 and I recommend to the Committee if you are considering policies to support innovation and small businesses, you should consider reauthorizing SSBCI in some form again.

Conclusion

The source of America's strength in the world is our vibrant economy. From Main Street shops to high-tech startups, small businesses are the backbone of our economy and are critical to supporting inclusive economic growth. They play an outsized role in providing the high-quality, higher-paying jobs that sustain America's middle class. To maintain our reputation as the best country in the world to start and scale a great company, we must continue to make smart investments in small businesses through programs like SSBCI and ensure that where regulations exist, they exist to level the playing field for free and fair competition — not just create red tape.

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Trump White House quietly issues report vindicating Obama regulations

By David Roberts, www.vox.com

March 6th, 2018

President Donald Trump's administration has been on a deregulatory bender, particularly when it comes to environmental regulations. As of January, the New York Times counted 67 environmental rules on the chopping block under Trump.

This is not one of Trump's idiosyncrasies, though. His administration is more ham-handed and flagrant about it, but the antipathy it expresses toward federal regulation falls firmly within the GOP mainstream. Republicans have been complaining about "burdensome" and "job-killing" regulations for so long that their opposition to any particular health, safety, or environmental regulation is now just taken for granted.

For instance, why would the Environmental Protection Agency close a program investigating the effects of toxins on children's health? Is there some evidence that the money is wasted or poorly spent? Why would the EPA allow more unregulated disposal of toxic coal ash? Don't people in coal regions deserve clean air and water? Is there any reason to think coal ash is currently well-regulated?

These questions barely come up anymore. Republicans oppose regulations because they are regulations; it's become reflexive, both for the party and for the media the covers them.

One of Trump's many executive order ceremonies, reversing Obama climate regulations. As it happens, though, we know something about the costs and benefits of federal regulations. In fact, Trump's own administration, specifically the (nonpartisan, at least for now) White House Office of Management and Budget (OMB), just released its annual report on that very subject. (Hat tip to E&E.)

The report was released late on a Friday, with Congress out of session and multiple Trump scandals dominating the headlines. A cynical observer might conclude that the administration wanted the report to go unnoticed.

Why might that be? Well, in a nutshell, it shows that the GOP is wrong about regulations as a general matter and wrong about Obama's regulations specifically. Those regulations had benefits far in excess of their costs, and they had no discernible effect on jobs or economic growth.

OMB, more like OMG, amirite?

OMB gathered data and analysis on “major” federal regulations (those with \$100 million or more in economic impact) between 2006 and 2016, a period that includes all of Obama’s administration, stopping just short of Trump’s. The final tally, reported in 2001 dollars:

- Aggregate benefits: \$219 to \$695 billion
- Aggregate costs: \$59 to \$88 billion

By even the most conservative estimate, the benefits of Obama’s regulations wildly outweighed the costs.

According to OMB — and to the federal agencies upon whose data OMB mostly relied — the core of the Trumpian case against Obama regulations, arguably the organizing principle of Trump’s administration, is false.

Environmental regulations have the highest costs and highest benefits

At least since Reagan, conservatives have had particular and growing hostility toward environmental regulations. This has proven a source of great anguish to (older) environmentalists, who lament that such regulations used to be bipartisan.

But the right-wing turn against environmental rules is no great mystery. The OMB report reveals the core reason: Of all the regulations passed from 2006 to 2016, it is environmental regulations, specifically air pollution regulations, that had both the highest costs and the highest benefits.

Table 1-1: Estimates of the Total Annual Benefits and Costs of Major Federal Rules (For Which Both Benefits and Costs Have Been Estimates) by Agency, October 1, 2006 - September 30, 2016 (billions of 2001 or 2015 dollars)²¹

Agency	Number of Rules	Benefits		Costs	
		2001\$	2015\$	2001\$	2015\$
Department of Agriculture	5	0.5 to 1.1	0.6 to 1.5	0.4 to 0.9	0.5 to 1.1
Department of Energy	27	17.6 to 30.0	20.3 to 39.3	6.0 to 9.0	7.9 to 11.9
Department of Health and Human Services	18	4.5 to 24.1	5.9 to 31.6	1.4 to 4.8	1.9 to 6.3
Department of Homeland Security	4	0.4 to 1.2	0.5 to 1.6	0.4 to 0.8	0.6 to 1.0
Department of Justice	3	1.5 to 3.7	1.9 to 4.8	0.7 to 0.9	0.9 to 1.2
Department of Labor	10	7.5 to 20.8	9.8 to 27.2	2.1 to 5.0	2.7 to 6.5
Department of Transportation (DOT) ²²	27	17.0 to 31.1	22.3 to 40.8	6.5 to 11.9	8.5 to 15.7
Environmental Protection Agency (EPA) ²³	39	149.2 to 537.8	195.8 to 705.7	41.2 to 49.4	54.1 to 64.8
Joint DOT and EPA	4	34.0 to 59.3	44.6 to 77.8	8.2 to 15.1	10.7 to 19.9

EPA rules, OMB writes, "account for over 80 percent of the monetized benefits and over 70 percent of the monetized costs" of federal regulation during this period.

For example, new fuel economy standards for medium- and heavy-duty engines had (in 2001 dollars) between \$6.7 billion and \$9.7 billion in benefits. But they cost industry \$0.8 billion to \$1.1 billion.

The MATS rule, aimed at reducing toxic emissions from power plants, had between \$33 billion and \$90 billion in benefits (in 2007 dollars, for some reason), but it cost industry \$9.6 billion.

In short, air quality rules secure enormous health benefits for the American public, but they also ask a great deal of industry.

To frame the same point another way: Air quality regulations serve as a downward redistribution of wealth, out of the pockets of industrialists and into the pockets of ordinary Americans, particularly the poor and vulnerable Americans (African Americans and Hispanics in particular) who tend to live closest to pollution sources. They shift costs, from the much higher health and social costs of pollution remediation to the comparatively smaller costs of pollution abatement.

And therein lies the source of industry and GOP rage toward EPA. It's why EPA delayed and delayed air rules under Bush. It's why the GOP Congress worked so furiously to block air rules under Obama. And it's why EPA is weakening or repealing air rules as fast as possible under Trump.

The GOP is opposed to downward redistribution of wealth. If one policy goal has unified the right above all else, it is *upward* redistribution. Even as its base drifts further into a fog of xenophobic, reactionary ressentiment, its moneyed interests and policy leaders remain laser-focused on reducing taxes and regulatory burdens on the wealthy. Upward redistribution is what unites GOP health care policy, tax policy, financial sector policy, and environmental policy.

That is why Republicans hate EPA and its rules: They are a burden to industry, but worse, they are a burden to industry that is very obviously *worth it*. Industry makes a small sacrifice, public health improves, and economic growth continues apace. EPA rules are a living demonstration of the good that government can do.

Okay, environmental regulations produce enormous health and social benefits, but don't they kill jobs?

Not really. This is another myth that conservatives have simply repeated with such tenacity that no one bothers to scrutinize it anymore.

The OMB report has a long section looking into the employment effects of environmental regulations, assessing several studies and literature reviews. Mostly it is devoted to explaining how complex and vexed such analysis is. Jobs may be eliminated in one place/industry and created in another. Jobs may be eliminated in the short term but a larger number created in the long term. Effects on employment must be disentangled from contemporaneous social and economic trends, many of which have much larger effects. And so on.

The conclusion — which is in keeping with the broader literature, as I described in [this post](#) — is that there may be local and temporary employment effects from environmental regulations, either positive or negative, but at the aggregate national level, such regulations simply aren't a significant factor in employment. Their effects are lost amid the noise of demographic shifts and macroeconomic drivers.

They don't "kill jobs." From the perspective of the overall economy, they don't do much of anything to jobs, other than shift them from certain regions/industries to others. As it happens, those shifts are often unfavorable to GOP constituencies, but that's not a license to, you know, lie about them.

There is no coherent policy justification for Trump's deregulatory frenzy

If the GOP wants to explicitly align itself behind the interests of particular polluting businesses and against the broader public interest, well, it can. If it doesn't think the costs to industry of

reducing pollution are worth much larger benefits to public health, it can say so. If it wants to transfer wealth back from the public to industrialists by reversing all of Obama's rules, that is its right as the party in power.

But GOP lawmakers shouldn't be allowed to simply burp up the words "burdensome" and "job-killing" and move on. The OMB finds no evidence that federal regulations have any noticeable impact on aggregate national employment or economic growth. There *is* evidence that they produce public benefits well in excess of their costs.

If EPA head Scott Pruitt wants to say that defending children from toxics or rural communities from coal ash pollution is burdensome, he ought to offer some numbers, or evidence, or ... *something*. Goofy homilies are not enough. (His latest claim is that the Bible recommends the deregulatory agenda.)

Believing in the inherent costliness and ineffectiveness of federal regulation is not a religious matter. It's not an article of faith. It's an empirical assertion, an argument, and the available evidence indicates that it is incorrect.

It is certainly not a belief to which journalists owe any particular deference.

Until Trump's administration makes a case that its own OMB and agencies are wrong — not just by a little, but by tens of billions of dollars — the presumption of every journalist and politico in Washington should be that there is no coherent policy rationale for Trump's deregulatory agenda.

It is, like his health, tax, and infrastructure initiatives, simply the polar opposite of populism: the targeted transfer of wealth to the already wealthy, at the public's expense.