## Where New Industries Get Their Start: Rebooting the Startup Economy

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## Tim Wu

Julius Silver Professor, Columbia University School of Law Author, "The Curse of Bigness: Antitrust in the New Gilded Age"

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Chairman, Ranking Member, and Members of the subcommittee, thank you for inviting me to testify today.

For more than a century now, the key economic advantage of the United States has been its startup economy and capacity for launching new industries. This is innovation, yes, but of a particularly important kind. It is not just the improvement of mousetraps, but rather the pioneering of entire industries that, in time, come to employ millions and generate trillions. Being the place companies get their start has given the United States an extraordinary advantage over the last century, and helped make it the world's preeminent economic power.

But this advantage, which we sometimes take for granted, is now threatened by excessive consolidation in the U.S. economy. The most obvious symptom is the decline of the American startup. As a recent Brooking study shows, startup rates have declined dramatically across the economy.<sup>1</sup> In an extraordinary development, the number of companies shutting down has grown to match the number that are starting up.<sup>2</sup> The Department of Labor shows a declining number of people working for startups, while the Center for American Entrepreneurship documents a relative decline in American VC funding relative to the rest of the world. We may, in short, be entering a "startup winter."<sup>3</sup> This is a problem that affects many industries, but is particularly obvious in the Internet economy.

There will, of course, be those who resist the implication that anything is amiss. Some argue that all is well, that the big guys are friendly giants, and really all we need to do is stop

<sup>2</sup> Ibid.

<sup>&</sup>lt;sup>1</sup> Jay Shambaugh, Ryan Nunn, Audrey Breitwieser, and Patrick Liu, The State of Competition and Dynamism: Facts about Concentration, Start-Ups, and Related Policies, Brookings Institute (June 2018).

<sup>&</sup>lt;sup>3</sup> Richard Floria and Ian Hathaway, Rise of the Global Startup City, American Center for Entrepreneurship (2018).

worrying and learn to love our national champions. When it comes to the platform economy we need not fear, because the giants will either invent everything, or buy whoever is. And venture capitalists can invest in startups confident that everyone will earn their payout.

I do not agree with this perspective. Economic structure matters, and I fear that the United States is losing a vital capacity: of being the best place for new industries to get their start. We are becoming a country of giant concerns, admirable in their way, but where incremental improvement is the norm, where bureaucracy rules, and stagnation may be inevitable. We will become a country where inventors and entrepreneurs dream of being bought, not of building something of their own. While it once seemed impossible, the Internet is becoming the case study of that development.

The solution, I believe, should be a broad effort to reboot the startup economy. That can be done not through one policy or passing any single law. It requires a thoughtful yet forceful reassertion of the bundle of pro-innovative laws and policies which have made up the best of American innovation policy over the last century. I see three essential elements in that policy:<sup>4</sup>

- Pro-competitive laws and regulations (also known as "competition catalysts");
- The reassertion of antitrust, including retroactive merger review; and
- The funding of visionary research projects, in the spirit of the ARPANET, both basic and applied.

These policies have several things in common. They open the economy by reducing barriers to entry — in economic jargon, "lower rivals' costs."<sup>5</sup> They reduce the power of older companies to control the new, allowing new industries to arise on their own. And they give newer or smaller competitors the opportunity to compete with larger concerns. Collectively, this mixture of policies and rules have had an extraordinary track record in putting the United States in a position of technological leadership in the world. It is to this, the best practices of the last century, to which we should return.

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Let me turn now to the Web, the specific topic of this hearing. Eleven years ago I was in San Francisco doing research for a book, *The Master Switch*, and thinking about the historic cycles of technological innovation.<sup>6</sup> In that research I noticed a pattern. Big inventions break open

<sup>&</sup>lt;sup>4</sup> Outside of the intellectual property laws, their own subject.

<sup>&</sup>lt;sup>5</sup> Cf. Steven C. Salop and David T. Scheffman, Raising Rivals' Costs, 73 American Economic Review 267 (1983).

<sup>&</sup>lt;sup>6</sup> Tim Wu, *The Master Switch* (Knopf: 2010).

industries, leading to the birth of new and innovative industries, and a characteristic pattern of hundreds if not thousands of startups.

But that doesn't last. The new industry is prone, after some time, to consolidation, monopolization, and in time, stagnation that can last for decades. And, importantly, once consolidation occurs, existing industries often try to co-opt or prevent the emergence of new industries — the so-called "Kronos effect."<sup>7</sup> That was the pattern for the telephone, radio, television, cable, automobile and many other "high tech" industries.

The question, back in the 2000s, is whether the same might happen to the web. At the time, the idea that the web might undergo consolidation seemed crazy. Many, in fact, believed it impossible. The web was intrinsically different, went the prevailing wisdom: it was open by design, and new entrants would always be "one click away." No firm could expect to hold lasting power: the 5 year-old firm was already middle-aged; the 8-year was on life support. For this was an ecosystem, not an industry, and ecosystems just don't tolerate monopoly.

Ten years later, at the risk of stating the obvious, things look a little different. History has, in fact, repeated itself and traditional economics — matters like economies of scale — have reasserted themselves. The ecosystem has been replaced, and the idea that the web is dominated by a handful of large firms is a mystery to no one.

A symbolically key moment, in retrospect, was in 2012, when Facebook bought Instagram. At the time, Facebook was about 8 years old, ancient in web terms, and seemed destined to be replaced by something like Instagram; something newer, better, and more in tune with a younger generation. But Facebook broke the narrative by buying Instagram — paying double the previous offer — and managing to get the merger past the Federal Trade Commission despite documentary evidence that the merger was intended to eliminate a nascent competitor.<sup>8</sup> That moment demonstrated the power of buyouts to eliminate competitive threats, and the willingness of government to let a threatened firm get away with it.

Today, the 2019, the old slogan that competition is one click away seems like a bad joke. Unlike in 2008, the big firms seem in no danger of fading under the onslaught of smaller rivals. Instead (often in violation of the antitrust laws) most of those would-be rivals have been bought or effectively tamed. I'm not alone in this assessment. Most Silicon Valley observers, from Mary Meeker through Tim O'Reilly believe that the American tech is in a lull, innovation-wise. We can tell by the conversations: instead of talking about a crazy new firm that is trying something new, the talk is all "what will Google do? What will Amazon launch?" Or, alternatively, we talk about China is up to. That, to my mind, is a sign of where things stand.

<sup>7</sup> Ibid.

<sup>&</sup>lt;sup>8</sup> Josh Kosman, "Facebook boasted of buying Instagram to kill the competition: sources," N.Y. Post, February 26, 2019.

I don't think "rely on the giants" is a good innovation policy for this country. We've tried it before: in telecommunications for almost 70 years, in the car industry for many decades, and in many other industries as well. It is not as if giant firms don't innovate, but they do so incrementally, carefully, and in a way designed to protect their existing revenue streams. Over the last century, competitive, open sectors — ecosystems — have proved themselves superior to those monopolized or dominated by a "big three" or "big four."<sup>9</sup>

Fortunately, it is not too late to act. The United States has faced excessive consolidation before, and found ways to encourage innovation and entrepreneurship in cycles where dominance is the pattern. Looking back at the 20th century, three major tools were employed.

The first was regulatory: so called "competition catalysts" laws and regulations that limit the power of monopolists or other dominant firms exercise power beyond its market, and to treat fairly those who depend on it.<sup>10</sup> The telecom laws and net neutrality are the key examples of this approach, but there are others as well, like the rules that force optometrists to issue written prescriptions so that you can buy glasses anywhere.<sup>11</sup> In telecom, the government fostered the growth of industries "on top" of AT&T's network (and "at the ends"), limiting AT&T to providing transmission. That policy led to the birth of the first dial-up network providers, AOL and Compuserve, and ultimately, in the 1990s what we now call the mass Internet.

The second is the use of antitrust, the topic of this hearing. The United States brought a trilogy of tech cases — AT&T, IBM, and Microsoft — that I see as foundational in terms of shaking up industry and creating room for new firms and new industries to grow.<sup>12</sup> At the time, for each of those cases, the naysayers suggested that the law was obsolete, that monopoly was inherently fragile, or that to interfere with America's national champions would simply hand the future to Japan — a country that knew how to support its tech companies, not attack them.<sup>13</sup>

Yet in retrospect, the breakup of AT&T, and the challenges to IBM and Microsoft helped create the tech economy we now take for granted, along with American leadership in the sector. This is not to say that the engineers, entrepreneurs and capital markets are undeserving of the credit they are given. But it is to say that technologies like the personal computer, the emergence of a software industry, the ISP industry, the web, and even the very companies we discuss today benefited from the economic structure created by both regulatory action and antitrust.

<sup>&</sup>lt;sup>9</sup> On whether monopoly or competition generates more competition, see Jon Baker, Beyond Schumpeter vs. Arrow: How Antitrust Fosters Innovation, 74 Antitrust L. J. 575 (2007).

<sup>&</sup>lt;sup>10</sup> For a survey of these rules and laws, see Tim Wu, Antitrust via Rulemaking: Competition Catalysts, 16 Colorado Technology L. Rev. 33 (2017).

<sup>11</sup> *Ibid.* 

<sup>&</sup>lt;sup>12</sup> See Tim Wu, The Curse of Bigness (2018).

<sup>&</sup>lt;sup>13</sup> See Tim Wu, Don't Fall for Facebook's 'China Argument,' The New York Times Dec. 10, 2018.

"I do not believe in trust-busting for trust-busting's sake," as Robert Jackson once said. But I do believe, after a century of experience, that industries do consolidate, that today's vibrant and dynamic industries can get too large and begin to stagnate. The American car industry, for example, was considering a highly innovative industry in the 1950s, but by the 1970s was showing severe signs of consolidation and lack of entry.

One key tool we need to make more use of is retroactive review of mergers that have led to anticompetitive consequences. Today, almost all merger review is prospective; but predictions are hard, especially about the future. The antitrust agencies are, I believe, beginning to develop ways to look at mergers retrospectively under Section 7 of the Clayton Act, or consider a merger as part of a program of monopoly maintenance under Section 2 of the Sherman Act, but this a key for fixing a big blind spot in antitrust enforcement.

The third is government's own investment in innovative research projects. The Internet, we often forget, began as a bold and visionary project funded by the federal government. Importantly, it didn't have a business model, nor need to make money — instead, it served as a platform for others to launch from, including all of the platforms who are here today. If the Apollo moon project remains the most visible example of government-backed engineering achievement, the spin-offs and spillovers from the Internet project have clearly yielded more, overall for the American people than any other.

One of the best ways to see the advantage of this bundle of policies is by comparison. It is almost natural to worship great and powerful companies, and they have a way of becoming favorites of government. But the nations who fully embraced and supported their tech powers in the 1970s and 80s — Europe and Japan — have fallen behind. The United States forced its companies to face the heat of competition created opportunities for the new and the unknown, and has benefited greatly from that approach.

In fact, what makes the United States so distinctive is that, just about every decade, it produces new winners. We aren't waiting around seeing what IBM and Hewlett-Packard, the powers of the 1970s will do next, and we should not have an innovation policy that consists of depending on what Google, Facebook and Amazon will do or who they will buy.

In closing, we must never forget that the story of America's preeminence in the tech industry is not a story of just one actor or set of actors. It has been a joint project that involves engineers, entrepreneurs, managers, investors, venture capitalists, and also wise action and thoughtful setting of the ground rules by government. It is a grave mistake to confuse wisdom with doing nothing; for doing nothing is its own form of industrial policy, one that has not served us in the long run.