



Statement before the Joint Economic Committee
On "How the Innovation Economy Leads to Growth"

Innovation and Growth

Today's Opportunities and Challenges

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Chairman Paulsen, Senator Heinrich, and Members of the Committee, thank you for the opportunity to appear before you today to discuss innovation and economic growth. It is an honor.

ECONOMIC GROWTH IS CRITICAL

Economic growth drives increases in living standards and improves quality of life. A simple examination of the fruits of economic growth over the past two centuries — dramatic reductions in child mortality rates and poverty rates, significant increases in leisure time, longer lifespans, access to modern education and medical care — demonstrates what growth can do for individuals and societies. It has been discouraging to see some downplay the importance of economic growth in the public square. Imagine if our forefathers had done the same. Public policy is rightly concerned with increasing the rate of economic growth. Indeed, it should be among Congress' top concerns.

HOW ECONOMIES GROW

Economic output is a function of economic inputs. The growth rate of output, therefore, is determined by how quickly capital and labor grow, along with technology and the skill and knowledge with which factors of production are employed. Especially over longer time horizons, the most important driver of growth is innovation. And fundamentally, innovation is driven by letting loose the creative power of individuals to invent new and better ways of producing goods and services and, of course, new goods and services themselves.

FOSTERING INNOVATION

How can Congress foster innovation? One important way is to improve the skills of workers, helping to enable individuals to innovate. Education reform designed to teach twenty-first century skills is critical. A stronger emphasis on work-based learning for workers with high

school degrees is critical. And, in my view, increasing the number of highly skilled immigrants allowed to live and work in the United States is critical as well. Immigrants start businesses at a higher rate than native-born workers.¹ Perhaps more importantly, businesses in science and technology industries are disproportionately likely to be founded by an immigrant.² Many of the most innovative companies in the United States were founded by immigrants.

Government has a role to play in supporting the basic research that innovation requires. Two important ways government supports innovation are through funding basic research and producing the economic and social statistics required by businesses, researchers, and policymakers. It is critical that Congress not step back from these responsibilities.

Beyond encouraging innovation through increasing skills and supporting basic research, there is a wide variety of actions government can take. Avoiding excessively high tax rates, reducing regulation and other barriers to technological progress, and maintaining a posture of openness to the rest of the world through international trade are just some of the ways public policy can support innovation.

THREATS TO INNOVATION

Congress can also foster innovation by helping to create and enforce an appropriate regulatory environment. Likewise, imprudent regulation can stifle innovation, slowing economic growth and the rate of improvement of living standards.

¹ Immigrants are more than twice as likely as those born in America to start a business; see Robert Fairlie. “[Open for Business: How Immigrants Are Driving Small Business Creation in the United States](#),” The Partnership for a New American Economy, August 2012.

² One fourth of all technology and engineering companies had at least one immigrant cofounder between 2006 and 2012; see “[The Economic Case for Welcoming Immigrant Entrepreneurs](#),” Entrepreneurship Digest, Ewing Marion Kauffman Foundation, September 2015.

I have been quite concerned about imprudent regulation recently in the conversation around “Big Tech.” It has been common to hear calls from both the political left and right to break up major technology firms using the government’s antitrust powers.

In my view, such action would be a major policy mistake.

For the past half century the federal government has followed the best standard that experts have crafted to identify anticompetitive behavior: consumer welfare. More specifically, when deciding whether a firm is hurting competition, the following questions should be asked: Is the company reducing the welfare of consumers by pushing up the prices consumers face, and/or by reducing the quality and variety of products and services consumers enjoy?

This antitrust standard stands in contrast to a different view, which rests on the presumption that large and powerful companies should be suspect because of their size, under the assumption that with size comes undue economic power and a lack of competition.

I would highlight three primary reasons why latter view is inferior to the consumer welfare standard. First, it is much more vague and harder to define. This vagueness invites regulatory mischief at worst. More than that, though, is the concern that due to its vagueness regulators might be swayed more by the public debate around a particular company than by relatively more objective metrics (keeping in mind that there is always a large subjective element to determinations under any standard).

Second, the view that is suspicious of size ignores the good things that come from size. Economies of scale allow companies to produce goods and services more efficiently, at a lower cost, than relatively smaller firms. These efficiencies can take many forms, including more specialized management and production techniques.

Third, focusing on size distracts regulatory attention from consumers. This argument is circular. It is equivalent to asserting that consumer welfare should be the regulatory goal in a normative sense.

Big Tech has significantly increased consumer welfare. Consider prices. Many products are offered to consumers free of charge. For example, Google searches, Gmail, Google-hosted websites, Facebook accounts, and Twitter accounts are all free. Amazon does not sell its products at a price of zero, but it has significantly reduced the prices faced by consumers for many products. Some even argue that Amazon is reducing the rate of consumer price inflation for the overall economy.³

Now consider product quality and innovation. The services mentioned above are remarkably innovative. In addition to them, for example, Apple first put an entire music library into the palm of our hands and then put a computer in all our pockets.

While it is very clear that Big Tech is advancing innovation and consumer welfare today, it is reasonable for regulators to ask whether its actions today might stifle innovation and consumer welfare in the future. In my view, there is little evidence to support this concern. Major technology companies spend significant sums of money on research and development for new products—i.e., on fostering innovation. Alphabet, the parent company of Google, spends sixteen percent of revenue on R&D. Facebook spends twenty-one percent. Microsoft spends fourteen percent. These ratios are far higher than for other companies. For example, General Motors, General Electric, Procter and Gamble, and AT&T each spend less than five percent of revenue on R&D.⁴

³ This is often referred to as the “Amazon effect.” See, for example, Mark Whitehouse, “[Amazon Might Help Explain the Inflation Mystery](#),” *Bloomberg View*, 16 October 2017. (Disclosure: I am a Bloomberg View columnist.)

⁴ Greg Ip, “[The Antitrust Case Against Facebook, Google, and Amazon](#),” *The Wall Street Journal*, 16 January 2018.

The argument that Big Tech is a threat to innovation and consumer welfare in the future must also contend with the amount of churn in the technology industry. It was not long ago that the dominant web browser was Netscape, not Google; the dominant email service was not Gmail; and America Online was the dominant ISP. It is imprudent to assume that Google, Facebook, Apple, Amazon, and other tech giants will be dominant in perpetuity.

The public conversation also seems to misrepresent the actual dominance of these companies in the present day. For example, despite the concern about Amazon's dominance, online sales represent less than ten percent of total retail sales.⁵ Walmart's revenue is more than twice that of Amazon's.⁶

In summary, I do not view Big Tech as a threat to consumer welfare or innovation, and I am not convinced by arguments that antitrust action is required to advance those goals. Instead, Big Tech is advancing consumer welfare through offering consumers a wide variety of high-quality products at low (and sometimes zero) prices. In addition, Big Tech is advancing consumer welfare and innovation in the future through high amounts of spending on research and development, which will fuel innovation for the future.

And the innovation created by Big Tech will fuel faster economic growth and higher living standards for American families.

CULTURE

I will close with brief remarks on the importance of culture. Social attitudes that value hard work and openness to new ways of doing things are critical for fostering innovation, growing the economy, and increasing living standards. The same is true for social capital, which affects trust and cooperation both in and out of economic life. Politics and policy are largely

⁵ U.S. Census Bureau, [Quarterly Retail E-Commerce Sales](#), Fourth Quarter 2017.

⁶ Wal-Mart's [2018 revenue](#) was \$500.34B. Its 2017 revenue was \$485.14B. Amazon's [2017 revenue](#) was \$177.87B.

downstream from culture, but it is an overstatement to argue that they don't affect culture. Where innovation comes from is largely a mystery. But a hypothesis worth taking seriously is the intersection of strong institutions and a culture that supports risk taking, skill accumulation, hard work, and creativity. Many public policy decisions in a wide array of domains subtly and indirectly affect these values and dispositions. The total effect of those decisions might be significant.