An Open Letter: Innovation Is Thriving

The High Tech Inventors Alliance (HTIA), comprised of highly innovative companies that collectively spent $63 billion last year in research and development (R&D), promotes technological advances and innovation that are so essential to our economy. We also are significant patent holders, collectively owning hundreds of thousands of patents. For these reasons, we felt the need to respond to recent claims from some commentators that the patent reforms spurred by the U.S. Congress and the U.S. Supreme Court over the last decade supposedly have harmed American innovation. These criticisms of our nation’s highest court and our elected representatives simply are devoid of evidentiary support. Hyperbolic hand waving is no substitute for empirical data, and the data shows that innovation is thriving in the U.S.

Congress enacted the America Invents Act (AIA) in late 2011. The AIA’s inter partes review (IPR) process, which became effective in 2012, provides a vital means to challenge the thicket of erroneously granted patents that slow progress by stifling the inventors creating new technologies. And in 2014, the Supreme Court issued its Alice Corp. v. CLS Bank Int’l decision to confirm that patents can be issued only for actual inventions and not for abstract ideas. These changes are helping clear out the invalid patents that have hampered America’s innovation engine for far too long. America’s inventors now are being freed up to do what they do best—invent.

Some critics claim, however, that the recent patent reforms have brought about a parade of horribles ranging from decreased innovation, to depressed values of patents, to lower rates of R&D and venture capital investment, to fewer startups, and to increased uncertainty in the patent system. They argue, for example, that the Alice decision has undercut innovation in the software and internet industries and is “sending a destructive message” that “[t]he United States is no longer a hospitable place to invest in heavy-weight software innovation.”

But the facts tell a completely different story. Innovation has thrived—indeed exploded—as measured by every significant metric. Research and development spending, venture capital investment, startup activity, and patent applications each have increased dramatically, while the United States Gross Domestic Product (GDP) has grown by a healthy 9% to the highest level in history. In the past five years, the United States climbed from 10th to 4th in the rankings of the Global Innovation Index, which measures the innovation performance of 127 countries. The U.S. Chamber of Commerce ranks the United States first as the overall most innovative nation. Consider the following statistics:

First, R&D spending in the United States has risen significantly since 2012. The 300 U.S. companies with the highest R&D
spends—which includes companies in high tech, pharmaceutical, automobile, and aerospace industries—collectively invested $293.4 billion in R&D in FY 2017—a 44\% increase from 2012 levels.\(^\text{10}\)

High tech companies spend significantly on R&D, comprising four of the top five spots. In the year following the Alice decision, R&D investments in the software and internet industry grew faster than any other industry.\(^\text{11}\)

Second, venture capital funding in the United States increased dramatically since 2012. The amount of venture capital investments has risen consistently over the last 15 years and nearly doubled from 2012 to 2016, from $32.8 billion to $61 billion—an 86\% increase.\(^\text{12}\) Venture capital funding for software and internet companies in the three years following the Alice decision increased by 88\% compared to the three years prior.\(^\text{13}\)

Third, startup activity also has accelerated sharply. The Kauffman Index of Startup Activity shows a 194\% increase in overall startup activity from 2012 through 2016.\(^\text{14}\)
Fourth, U.S. economic output as measured by the **Gross Domestic Product has climbed sharply** since 2012. From 2012 to 2016, the real GDP for the U.S. **grew approximately 9%**.

Fifth, the **number of U.S. patent filings continues to rise**. From FY 2012 to 2016, filings increased 15%. In 2016, more than 650,000 applications were filed, and over 334,000 patents were issued—the highest number ever on both counts. While levels of patenting do not necessarily provide a measure of meaningful innovation, this data nonetheless shows that many inventors perceive the U.S. patent system as effective because they continue to invest in patenting at record levels.

As a result of a steady increase in innovation in the U.S., there has been an explosion in revolutionary technologies. Over the past few years, we have seen the development of cloud computing, self-driving cars, drones, virtual and augmented reality, 3D printing, cryptocurrency, biometric security, Internet-of-Things, artificial intelligence, natural language processing, genomics, robotics, blockchain, and much more. In the past, these emerging technologies could have been more easily blocked by antiquated claims of patents from different fields, whose claims were stretched to abstractness in an attempt to portray relevance to these new industries. But the IPR procedure and the *Alice* decision have paved the path for these revolutionary technologies by providing inventors with a streamlined mechanism to challenge the weak patents that all too frequently stifled their innovation. Such examples include patents that cover a system for selecting a TV channel or a system for looking up a name associated with a phone number, which are the types of patents that have previously been used to chill innovation through long and costly litigation.

In sum, the data clearly contradicts any claim that patent reform has harmed innovation. On the contrary, innovation in the U.S. is flourishing more than ever following the introduction of the IPR
procedure and the Supreme Court’s Alice decision. We are only now just beginning to realize the substantial benefits of our new focus on patent quality.

1 See www.hightechinventors.com.
3 Id; see also Charles Fain Lehman, Federal Panel Destroys U.S. Inventors’ Property Rights, Oct. 28, 2017 (available at freebeacon.com/issues/federal-panel-destroys-u-s-inventors-property-right).
6 Id.
9 Annual R&D spends are reported for fiscal years ending June 30. See PwC Global Innovation 1000 Methodology (available at https://www.strategyand.pwc.com/innovation1000#Methodology).
10 PwC 2017 Global Innovation 1000 Study.
12 PwC / CBInsights MoneyTree™ data explorer (available at http://www.pwc.com/moneytree).
16 Id.