

The America Invents Act: First-to-File and America's Innovation Climate

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I. INTRODUCTION

On September 16, 2011, H.R. 1249, the Leah-Smith America Invents Act, was signed into law, but only on March 19, 2013 did the most controversial section of the bill take effect.¹ Thought to be “the biggest shakeup” of the patent system in fifty years, the America Invents Act (AIA) includes reforms to patent fees, post-grant review proceedings, and prior user rights.² One change, however, stands out: the move from “first to invent” to “first to file.” As entrepreneur Dr. Ron Katznelson puts it, “now it’s the filing date that counts, not the invention date.”³ There are two specific amendments to 35 U.S.C. §§ 102-103 that effect this shift. First, in sections 102(g), 135, and 291, the AIA removes references to “interferences proceedings,” the process by which the Patent and Trademark Office determines “priority of invention...[by] respective dates of conception and reduction to practice of the invention.”⁴ Second, an amendment to section 103 changes the requirements for the novelty of an invention. Previously, an invention had to be non-obvious at “the time the invention was made.” Under the new rules it must be non-obvious “before the effective filing date.”⁵ Thus, prior art is determined from the date of filing, instead of from the date of conception.

For years, the American patent system has been the subject of heated debate. After Canada’s switch to first-to-file in 1989, the U.S. became one of only two countries in the world to retain the first-to-invent rule.⁶ The primary effect of the change is straightforward: it is an increased incentive

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1: Nathan Hurst, *How the America Invents Act Will Change Patenting Forever*, WIRED (Mar. 15, 2013), online at <http://www.wired.com/design/?p=146445>.

2: *Id.*

3: Ron Katznelson, Phone interview with author, May 17, 2013.

4: *Comparison of Selected Sections of Pre-AIA and U.S. Patent Law*, INTELLECTUAL PROPERTY OWNERS ASSOCIATION 1 (2011), online at http://www.ipo.org/wp-content/uploads/2013/03/Patent_Reform_Chart_Comparison_of_AIA_and_Pre-AIA_Laws_FINAL.pdf.

5: *Id.*

6: Bernarr R. Pravel, *Why the United States Should Adopt the First-to-File System for Patents*, 22 ST. MARY’S L. J. 797 (1990).

for inventors to file for patents quickly. This incentive isn't new—there are already many reasons to file early, including fundraising, ease of sale, and ensuring rights in the international market.⁷ So, why switch at all? And why the uproar over the switch?

Proponents of the first-to-file system maintained that America's stubborn refusal to switch lowered the efficiency of our system, hurt our ability to trade and export ideas, and delayed information disclosure that could have led to faster innovation. Proponents of the first-to-invent system argued that it improved patent quality and promoted the interests of the small businesses that lead innovation. With the passage of the AIA, it appeared that first-to-file has won the day. But two provisions in the Act suggest that Congress was not completely sure of its decision: subheadings (l) and (m) under Section 3 both call for studies of the effects of the switch to first-to-file, to be completed and reported back to Congress within the next year.⁸

Congress does not need to wait a year. Using current research, this article examines the question of whether the United States should return to its first-to-invent system, or join the rest of the world in using first-to-file. This article begins by laying out the relevant background on the United States patent system, and uses this context to determine which factors are most important in making decisions about the patent system. Next, the paper will analyze the three major differences between the systems: the overall efficiency, the effects on disclosure, and the effect on small businesses. Finally, the paper will conclude with a recommendation.

II. BACKGROUND

In its report to the House of Representatives, the Committee on the Judiciary wrote, "H.R. 1249 modernizes U.S. patent law to improve the operation of the U.S. Patent and Trademark office, inhibit frivolous patent lawsuits, protect the rights of all inventors, and spur innovation as a means to create American jobs and raise standards of living."⁹ The best way to assess the AIA is to assess its ability to achieve these objectives. And the most important objective to consider is the last one, that of "spurring innovation."¹⁰

The American government has always understood patents, first and

7: Steve Perlman, Phone interview with author, May 21, 2013.

8: H.R. 1249, 112th Cong. (2012).

9: U.S. House Committee on the Judiciary, *America Invents Act: Report Together with Dissenting Views and Additional Views*, 112th Cong., 1st sess., 2011, H. Rept. 112-98, 73.

10: *Id.*

foremost, as a way to stimulate innovation. We see this in the original provision of the Constitution concerning patents, which reads: “The Congress shall have the power...to promote the progress of science and useful arts by securing for limited ties to authors and inventors the exclusive right to their respective writings and discoveries.”¹¹ This wording makes it clear that the founders conceived of the patent system as a way to encourage progress. Professor Mark Lemley of Stanford Law School emphasizes that “the purpose of the patent system is to encourage innovation; it has no moral purpose—there is nothing intrinsically wrong with patent infringement.”¹² Thus, when deciding between the first-to-file and first-to-invent systems, our most important consideration should be which system induces more progress.

III. EFFICIENCY

The most common argument from supporters of first-to-file is straightforward: first-to-file is an easier rule to understand and enforce, leading to savings in both the private and public sectors. This is the first argument the House Report on the America Invents Act cites when discussing reasons to switch to first-to-file.¹³ Theoretically, the difference between first-to-file and first-to-invent should only come into play when two inventors independently produce the same thing around the same time. Then, there may be a question as to whether the first person to file was also the first person to invent. Professor Lemley explains why the situation suggests a first-to-file rule:

There are a lot of records of nearly simultaneous inventions. When both inventors are working in parallel, and neither is aware of the other, there’s no moral sense in which one is entitled to a patent and the other isn’t...We’re better off with a simple rule for choosing between them.¹⁴

The first-to-file system is simple, and its simplicity leads to efficiency. In order to enforce the first-to-invent system, the Patent and Trademark Office allowed for interference proceedings, in which the documentation of the current patent holder and the challenger were exhaustively examined

11: *U.S. Constitution*. Art. I, Sec., 8.

12: Mark Lemley, Interview with the author, Stanford, CA., May 13, 2013.

13: U.S. House Committee on the Judiciary, *America Invents Act* at 41 (cited in note 9).

14: Mark Lemley, Interview with the author, Stanford, CA., May 13, 2013.

to determine who invented what first. Studies find that the cost of these proceedings ranges from \$100,000 to \$500,000, and, on average, take two and a half years.¹⁵ Fewer than two in one thousand patents enter into interferences, but, given that the United States issues over 250,000 patents a year, the total cost of the interference system is almost \$277 million.¹⁶ To put this number in perspective, the total budget of the U.S. Patent and Trademark Office was almost \$3 billion in 2013.¹⁷ So, the switch should result in substantial savings to the government.

However, the AIA also adds two new types of proceedings: derivation proceedings, to determine if a patent was based in another invention,¹⁸ and prior user defenses, to determine if an entity had created and was using an invention before another entity patented it.¹⁹ These are necessary in a first-to-file system in order to a) ensure that the patent goes to the correct person, and b) ensure that other independent inventors of the same innovation can profit from their ingenuity.²⁰ The USPTO estimates that the cost of a derivation proceeding will be around \$322,000 to each party, similar to the cost of an interference proceeding.²¹ Since the prior user rights defense proceeding requires many of the same steps as an interference proceeding—as in an interference, defenders must establish that they conceived and reduced their invention to practice prior to the patent being filed—their cost will likely be similar to that of interference proceedings.²²

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- 15: Ryan K. Dickey, *The First to Invent Patent Priority System: An Embarrassment to the International Community*, 24 B. U. INT. L.J. 283, 303–304 (2006).
- 16: *U.S. Patent Statistics Chart, Calendar Years 1963–2012*, U.S. PATENT & TRADEMARK OFFICE (2013), online at http://www.uspto.gov/web/offices/ac/ido/oeip/taf/us_stat.htm. Also see Dickey, 24 B. U. INT. L.J. at 303 (cited in note 15).
- 17: Dennis Crouch, *USPTO Budget Cuts*, PATENTLYO (Apr. 18, 2013), online at <http://www.patentlyo.com/patent/2013/04/uspto-budget-cuts.html>.
- 18: *Derivation Proceedings Under the America Invents Act*, SCHWEGMAN, LUNDBERG, & WOESSNER, online at <http://www.slwip.com/videos/aia-topics/?play=12&?icamp=aia3>.
- 19: David J. Kappos & Teresa Stanek Rea, *Report on the Prior User Rights Defense*, U.S. PATENT & TRADEMARK OFFICE 47 (2012), online at http://www.uspto.gov/aia_implementation/20120113-pur_report.pdf.
- 20: Ron D. Katznelson, *Surviving the America Invents Act's Overhaul of U.S. Patent Law—Startup and Small Business Perspectives* (paper presented at Utah IP Summit, Salt Lake City, Utah, Feb. 2013), online at <http://works.bepress.com/rkatznelson/71>.
- 21: *Changes to Implement Derivation Proceedings*, 77 FED. REG. 7028-41 (Feb. 10, 2012).
- 22: Kappos & Rea, *Report on the Prior User Rights Defense* at 56-57 (cited in note

So, what is the final number? Projections from the Congressional Budget Office find that the cost to create these two new procedures and amend the interference proceedings would “increase spending by \$1.1 billion over the 2012 to 2021 period.”²³

Additional costs may also appear in terms of wasted productivity. Since firms can’t appeal to a first-to-invent system, they have a strong incentive to file every invention they come up with, even if the purpose of the invention is not currently clear.²⁴ Thus, businesses waste time and money patenting inventions that they will never use. A survey of Japan’s first-to-file patent system found that only 27% of patents were actually used by owners.²⁵ Similarly, a survey of patent applications made under first-to-file systems in Europe found that only 42% of applications were used by their owners.²⁶ In the United States, 270,000 patents are granted every year, for a conservatively estimated average cost of 15,000 dollars per patent.^{27 28} An increase of a single percent in unused patents—which, the research suggests, is likely to happen—would result in a loss of more than \$40 million in wasted effort.

There’s another way in which first-to-file improves efficiency in a meaningful way—that of international harmonization. As mentioned earlier, before the American Invention Act passed, the United States was one of only two countries that retained the first-to-invent system; everyone else was on a first-to-file system.²⁹ Proponents of harmonization point to reduced costs in obtaining and defending patents internationally, and better global enforcement of patent protection.³⁰ While the United States has taken steps to harmonize its patent system with the rest of the world—including signing

19).

23: U.S. House Committee on the Judiciary, *America Invents Act* at 68 (cited in note 9).

24: Steve Perlman, *Letter to Senator Dianne Feinstein* (Mar. 1, 2011).

25: Hiroyuki Odagiri, “Advance of Science-Based Industries and the Changing Innovation System of Japan,” in *Asia’s Innovation Systems in Transition* 218 (2006).

26: Katznelson, *Surviving the America Invents Act’s Overhaul of U.S. Patent Law* (cited in note 20).

27: Gene Quinn, *The Cost of Obtaining a Patent in the U.S* (Jan. 28, 2011), online at <http://www.ipwatchdog.com/2011/01/28/the-cost-of-obtaining-patent/id=146668/>.

28: *U.S. Patent Statistics Chart, Calendar Years 1963–2012* (cited in note 16).

29: Pravel, 22 ST. MARY’S L. J. at 800 (cited in note 6).

30: Vito J. DeBari, *International Harmonization of Patent Law: A Proposed Solution to the United States’ First-to-File Debate*, 16 FORD. INT’L. L. J. 687, 693 (1992). Also see U.S. House Committee on the Judiciary, *America Invents Act* at 43 (cited in note 9).

several treaties and a series of recent amendments—its first-to-invent rule remained a bone of contention.³¹ The switch to first-to-file is not sufficient to fully harmonize the American system—the U.S. still differs in terms of its year-long grace period, rules for publication of applications, and willingness to extend the patent term—but proponents say that it would still be meaningful progress towards that goal.³²

Some experts, however, question the benefits of harmonization; indeed, they point to the first-to-invent system as a reason for the United States' dominant position in global patenting. The current system preserves flexibility. As long as American companies follow other countries' rules, they get the benefits of international patent protection.³³ However, the U.S. first-to-invent rule preserves a slower system for those who want to wait to file. Steve Perlman, a prolific inventor involved in this issue, summarizes the situation: "Start-ups can take their time—they could lose rights in other countries; that's a risk they take. But their rights will be preserved in the U.S."³⁴ In the meantime, foreign inventors can file in the United States. Perlman further notes, "Most inventors in the world file first in the United States—we are the world's patent office... There was never a pall over the United States patent system from the [first-to-invent system]."³⁵ The numbers back him up: in 2012, more than half of patents granted by the USPTO were foreign in origin.³⁶ Perlman attributes the U.S. patent system's popularity to its unique rule. While the AIA was being considered by Congress, he notes, "there were a number of editorials by people from other countries arguing that the U.S. should keep the patent system the way it is because other countries rely on it."³⁷

From this section, we see that the goal of efficiency is not enough to motivate this major change. While there will be savings from the lack of interference proceedings, there will also be increased costs from the new types of proceedings and diminished productivity. While this brings us closer to international harmonization, there are also convincing arguments that our unique patent system attracts foreign investment and patenting in our economy. Ultimately, since it is unclear whether the change in costs will increase innovation, this argument about efficiency does not answer our main

31: DeBari, 16 *FORD. INT'L. L. J.* at 690 (cited in note 30).

32: Mark Lemley & Colleen Chien, *Are the US Patent Priority Rules Really Necessary?*, 54 *Hast. L. J.* 1299, 1305 (2003).

33: Ned L. Conley, *First-to-Invent: A Superior System for the United States*, 22 *ST. MARY'S L. J.* 779 (1990).

34: Steve Perlman, Phone interview with author (cited in note 7).

35: *Id.*

36: *U.S. Patent Statistics Chart, Calendar Years 1963–2012* (cited in note 16).

37: Steve Perlman, Phone interview with author (cited in note 7).

question: does the switch to first-to-file spur innovation?

IV. DISCLOSURE

Let us consider the next argument proponents of first-to-file make: increased disclosure.³⁸ An obvious consequence of faster filing is earlier disclosure. Economic models of disclosure find that it encourages innovation since it allows companies to have access to the technical progress already made by their competitors, helping them to avoid wasting time re-discovering the same idea.³⁹ Of course, for this very reason, inventors do not want to disclose their inventions, especially if they are in the intermediate stages of a longer product development; they do not benefit from their competitors catching up. In a first-to-invent system, inventors do not have to disclose. Instead, they can wait until they have a finished product, and then patent all the relevant innovations at the same time, preventing their competitors from using their intermediary research.⁴⁰ The same rationale does not hold in a first-to-file system: since companies do not know where their competitors are in the innovation process, they need to patent their innovations as they develop them, at whatever stage they are in the process, in order to secure their ownership.⁴¹ Thus, first-to-file encourages a) earlier disclosure and b) more disclosure, since companies will patent innovations at all stages, rather than just the innovations that contribute to their final product. This earlier and greater disclosure, say proponents of first-to-file, will encourage innovation.⁴²

The literature, however, does not agree. Researchers suggest that patents do not encourage disclosure because companies only disclose information in patents that is non-concealable, information that would have been disclosed anyway. If the firm had been able to keep it as a trade secret, it would have preferred to do so.⁴³ Using a game theoretical model, Bessen finds that patents do not encourage the diffusion of information, and may, in some cases, impede it.⁴⁴ Furthermore, researchers suggest that disclosures made on patents do not encourage innovation since competitors do not pay attention

38: *U.S. House Committee on the Judiciary, America Invents Act* at 38 (cited in note 9).

39: Suzanne Scotchmer & Jerry Green, *Novelty and Disclosure in Patent Law*, 21 RAND J. ECON. 131, 144 (1990).

40: *Id.* at 136.

41: Steve Perlman, *Letter to Senator Feinstein* (cited in note 24).

42: Scotchmer & Green, 21 RAND J. ECON at 144 (cited in note 39).

43: James Bessen, *Patents and the Diffusion of Technical Information*, 86 ECON. LETTERS 121 (2005).

44: *Id.*

to them. Surveys of firms have found that they a) rarely read the patents of their competitors; and b) when they do, their purpose is usually not to piggyback on their competitor's technology.⁴⁵ Indeed, the patent system incentivizes against competitors reading patents. Heidi Lubin, CEO of the tech start-up HEVT, says, "Reading through patents can set you up for a patent infringement. If we've been asked to collaborate with someone, we look at their patents. Otherwise, it's a risky thing to do."⁴⁶ The model does not match with the reality. The incremental increase in patent disclosure does not encourage innovation, so it does not matter whether or not first-to-file encourages disclosure.

V. SMALL BUSINESSES

Finally, we need to consider the argument made by opponents of the America Invents Act: that it negatively affects small businesses. Sheel Tyle, an associate at the venture capital firm New Enterprise Associates, explains:

The America Invents Act doesn't help start-ups. They're resource-constrained initially. When the system is first-to-invent, they can prove [their invention] out, raise some money, and then go and patent it. Now that the system is first-to-file – well, patenting costs money, and they're trying to hire people, trying to build a business, and they're not going to put that money into patents.⁴⁷

It's an argument that makes sense, and one that many people have made. In numerous letters to congress, individual inventors, associations of small businesses and startups, and even professional groups have reiterated this point.⁴⁸ But is it true, or just a good line?

Before we get deep into the research, we should establish why this question is important. A drop in small business innovation matters because small businesses matter. Small businesses, especially start-ups in new industries, are more innovative on a per dollar basis than other companies, and patents help them get the funding they need to keep innovating.⁴⁹ Small companies

45: *Id.* at 128.

46: Heidi Lubin, Phone interview with author, May 20, 2013.

47: Sheel Tyle, Interview with author, Palo Alto, CA, April 30, 2013.

48: Steve Perlman, *Letter to Senator Feinstein* (cited in note 24), and see Ron Katznelson, *Letter on Loss of Grace Period* (2010), online at <http://works.bepress.com/rkatznelson/58/>.

49: Joshua Lerner, "Small Business, Innovation, and Public Policy," in

backed by venture capital have been found to be especially productive. In their landmark survey of innovation across twenty industries, Samuel Kortum and Josh Lerner found that every dollar of venture capital funding has an effect *three* times that of a dollar of R&D spending: even though venture capital funding accounted for less than 3% of funding, it accounted for 8% of innovation.⁵⁰ But venture capitalists only back start-ups who have proven themselves by getting patents. Tyle, speaking with industry experience, says that when considering funding for hardware companies in industries like clean technology, “No matter what, [I look] at their patent portfolios, even if the company is just in the idea stage.”⁵¹ Indeed, a study of 370 U.S. semiconductor start-ups found that a “doubling in patent application stock [was] associated with a 24% boost in funding-round valuations beyond what would otherwise be expected.”⁵² So, the question of whether the switch to first-to-file hurts small businesses is also question of whether first-to-file hurts the American climate for innovation. Does it?

Let’s begin by considering interference proceedings, which are unique to a first-to-invent system and thought to be the unique way the system is enforced. Do interference proceedings help small businesses to the point that small businesses will be hurt by their removal? A study of U.S. interference proceedings found that around 18% were initiated by individuals or small businesses, while the majority, 77%, were initiated by large entities.⁵³ From this evidence, Ryan Dickey concluded that small businesses were not taking advantage of the legal rights that the “first-to-invent” system gave them.⁵⁴ A separate study, which examined the results of interference proceedings, found that these interference proceedings harmed small businesses as frequently as it benefited them.⁵⁵ Given the high cost of interference proceedings, these results make sense—small entities simply do not have the cash to engage in them.⁵⁶ So, in this respect, the first-to-invent system does not help small businesses.

Understanding the Digital Economy: Data, Tools and Research 203 (2002).

50: Samuel Kortum & Josh Lerner, *Assessing the Contribution of Venture Capital to Innovation*, RAND JOURNAL OF ECONOMICS, 674 (2000).

51: Sheel Tyle, Interview with author (cited in note 47).

52: David H. Hsu & Rosmarie H. Ziedonis, *Patents as Quality Signals for Entrepreneurial Ventures*, ACAD. MANAGEMENT PROCEEDINGS 1 (2008).

53: Lemley & Chen, 54 Hast. L. J. at 1299 (cited in note 32).

54: Dickey, 24 B. U. INT. L.J. at 303 (cited in note 15).

55: Gerald J. Mossinghoff, *The U.S. First-to-Invent System Has Provided No Advantage to Small Entities*, 84 J. PAT. & TRADEMARK OFF. SOC’Y 425, 427–428 (2002).

56: *Id.* at 428.

But interference proceedings are not the only things changed by first-to-file. Small businesses are more worried about the other amendment: what counts as prior art. While the America Invents Act accommodates a one-year grace period in which an inventor can disclose her own work, inventors say that that does not go far enough.⁵⁷ “In a first-to-invent world,” says innovator Steve Perlman, “if a piece of prior art is submitted a week before my patent application, I can submit my notebook, and show that I conceived and reduced my invention to practice before the prior art, and I can receive my patent. In a first-to-file world, that’s not true.”⁵⁸ The strategy changes—no longer can an inventor wait to go through all the iterations of an idea before she files the final, best one. In a first-to-file environment, she is pressured to file for patents at all stages of the development of a product, even at stages where it’s unclear whether the innovation will contribute to the final profitable product.⁵⁹ The problem is not having to file faster—it is having to file more. Small businesses argue that, given the expense of patents—commercial-grade patents can cost up to \$30,000—first-to-file makes innovation prohibitively expensive for many companies.⁶⁰ Heidi Lubin, the start-up CEO, confirms that “It’s more of a race now. Before, if we could prove that we were the first to invent, whether or not we had a patent was less important. Now, patent strategy is part of our product development... Organizations are going to have to be a lot more tactical and forward thinking in patent filing and innovation.”⁶¹

This comes through in the data. A recent paper from the National Bureau of Economic Research compared Canadian patent assignments under a first-to-invent system with assignments after they switched to a first-to-file system. It found that after the Canadian reform, the percentage of patents owned by small businesses declined while the percentage owned by large corporations grew.⁶² Controlling for the general business environment by comparing U.S. individual inventor patenting rates with those of Canada, another study corroborated the same conclusion.⁶³ These studies are extremely compelling

57: U.S. House Committee on the Judiciary, *America Invents Act* at 43 (cited in note 9).

58: Steve Perlman, Phone interview with author (cited in note 7).

59: *Id.*

60: Perlman, *Letter to Senator Feinstein* (cited in note 24).

61: Heidi Lubin, Phone interview with author (cited in note 46).

62: Shih-tse Lo & Dhanoos Sutthiphisal, *Does It Matter Who Has the Right to Patent: First-To-Invent or First-To-File? Lessons from Canada*, NATIONAL BUREAU OF ECONOMIC RESEARCH Working Paper 14926, 26–27 (2009).

63: David S. Abrams & R. Polk Wagner, *Poisoning the Next Apple? How the America Invents Act Harms Inventors*, 65 STAN. L. REV. 517 (2013).

since they studied the number of patent applications both before and after the passage of a law in the same countries, allowing them to eliminate confounding variables and isolate any changes as a result of the law. The initial results from the switch in the United States suggest the same conclusion. Before March 16th, the day the system switched, around 25 percent of those filing patent applications were small entities, a little above average.⁶⁴ After the 16th, small entities only made up 8% of filers.⁶⁵

So, it is clear that the change to first-to-file hurts small businesses by increasing their costs to innovate, and that, given small businesses' unique position as key innovators, this shift hurts innovation. Are there any solutions that both help small businesses and keep the first-to-file system?

The most obvious answer would be for the USPTO to lessen the financial burden on small entities. First, the USPTO offers steep discounts of 75% and 50% respectively on patent application fees for micro- and small- entities.⁶⁶ Second, the Act allows for provisional applications, which are less rigorous and arguably less difficult to prepare. Business owners, however, feel that neither of these solutions is adequate. The fee to the USPTO is a negligible part of the costs of filing a patent—it's frequently less than 1% of the total cost—so lowering it has little effect.⁶⁷ Furthermore, provisional applications do not lower their costs since, in order for the provisional application to be of use, it must be of the same quality—i.e., cost the same amount of legal work—as a regular patent.⁶⁸ Otherwise, it does not serve as sufficient protection. Thus, it appears that a first-to-file system cannot be made consistent with protecting small business innovation.

VI. CONCLUSION

In this article, we've examined the three main arguments for and against the America Invents Act. We began by setting the terms of the discussion: since the purpose of the patent system is to increase innovation, we should judge the AIA by its effect on innovation. We started with efficiency, the main argument of proponents of the Act, and concluded that a) the marginal increase in economic efficiency from the Act was small, and b) there's no evidence linking efficiency in the patent system to increased innovation, so

64: Ron Katznelson, *Surviving the America Invents Act's Overhaul of U.S. Patent Law* (cited in note 20).

65: *Id.*

66: *Setting and Adjusting Patent Fees*, 78 FED. REG. 4212-13 (Jan. 18, 2013).

67: Quinn, *The Cost of Obtaining a Patent in the U.S.* (cited in note 27).

68: Steve Perlman, Phone interview with author (cited in note 7).

it should matter less in our decision. Next, we considered disclosure, the argument which links first-to-file with increased innovation. However, we found no evidence to back this claim. Finally, we focused on the impact to small businesses. We began by establishing that small businesses were key to innovation, and thus could be a deciding issue in the debate. Then, we weighed the empirical evidence and found that a switch to first-to-file has hurt small businesses in other countries. From the analysis of these three issues, a clear conclusion emerges: the America Invents Act ought to be amended to restore the first-to-invent system in order to protect America's unique innovation climate.