Motivation

“The country needs and, unless I mistake its temper, the country demands bold, persistent experimentation. It is common sense to take a method and try it: If it fails, admit it frankly and try another. But above all, try something.”

- **Franklin Delano Roosevelt, Address at Oglethorpe University, May 22, 1932**

Rigorous Policy Pilots*

Colleen V. Chien
Santa Clara University School of Law | Columbia Law School | @colleen_chien | colleenchien@gmail.com

*see also *Rigorous Policy Pilots: Experimentation in the Administration of Patent Law* ___Iowa L. Rev. ___(2019)

What is a Rigorous Policy Pilot?

The temporary introduction of a change in law or policy in order to learn from it using well-designed and well-implemented methods appropriate to the question being asked

Examples of Rigorous Pilots

HHS EITC development
USPTO Post Trademark Registration Proof-of-Use Pilot Program
CFPB Disclosure testing via field and lab pilots
FAA Drones pilots
SEC Short-sale restrictions pilot

and many more

Why Suggest Rigorous Policy Pilots?

To Address Problems in Law- and Policy- making including:

- Status quo bias, Uncertainty about what works/will work in law and policy
- The turn-out Problem in Admin Law
- And… the lack of uptake of empirical (academic) insights

Taking Advantage of Current Favorable Developments

- Evidence Based Policymaking Act of 2019, Evaluation mandates
- Growth of open data, reduction in cost of piloting
- Growing community of practice around rigorous evaluation in federal, state, private sector contexts

What does agency experience and caselaw teach about rigorous policy pilots?

*Rigorous Policy Pilots (*Iowa L. Rev. ___(2019)) draws from court decisions and the experiences of numerous agencies and to conclude that:

- Rigorous Policy Piloting is presumptively legal, feasible, and worthwhile.
- Proposing Rigorous Pilots is a way for policy entrepreneurs, academics, advocates to support agency learning.

How? Framework for Proposing a Rigorous Policy Pilot

1. **M** Address questions that **matter**
2. **A** Consider what can be done within existing **authority** and agency resources
3. **T** Identify the **theory of change** behind the intervention and how it fits into a broader strategy
4. **T** Specify a **testing** strategy
5. **E** Specify the **evidence**
6. **R** Find / allocate adequate **Resources** for evaluation

Framing Questions for the Day

1. What has your agency done and learned, with respect to rigorous policy pilots? (MATTER framework)
2. What have been blockers and enablers?
3. What would make rigorous piloting easier and how can rule/policy implementation be designed up front for evaluation?
4. How can academics and others help?

Breakout questions:

1. **What have been key blockers and enablers to rigorous piloting?**

1. **What 1-2 actions would make effective, rigorous piloting easier (for your agency or in general) and could be taken by, e.g. academics, agencies, and intra-agency / good government groups like ACUS or PPS?**

1. **Identify up to 3 ideas for action and who should take them to share out with the large group and someone to report out.**

Backup

Summary

Colleen Chien, *Rigorous Policy Pilots*, __ Iowa L. Rev.__ (2019)
https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3312696
Rigorous tests are being used every day to develop effective medical treatments, drive consumer engagement, and, more generally, discover what works. But so far, these powerful tools have not been used widely to the inform the development of law and policy partly because of the perception that experiments that treat like members of a population differently are unfair and possibly illegal, difficult, and rare. Drawing upon case law and agency practice, this Essay attempts to chip away at these obstacles by showing that rigorous policy pilots are presumptively legal, feasible, and increasingly common, proceeding in several steps. First, it finds that many kind of pilots, including those that vary internal agency processes or which are opt-in are unlikely to be controversial. But a review of relevant cases suggests that courts are likely to uphold even pilots that do vary the rules that apply, including through randomization, on the basis that they advance legitimate government objectives, such as discovering the effectiveness of policy interventions. Further, it finds experimentation, by itself, unlikely to create special procedural or substantive hurdles. Second, it finds that agencies are engaging in a range of rigorous piloting activities to fill informational gaps in policy- and law- making, some of which simulate and others which effect policy variation on a temporary basis, and that developments such as the growth of open data are making such forms of information gathering easier. It draws from agency experience to develop a framework for proposing a policy pilot and identify steps that would further support the use of rigorous pilots. Using the patent system as a case study, it describes the use of pilots by the United States Patent and Trademark Office (USPTO) to evolve its own policies and practices and proposes several additional rigorous pilots for informing patent law and policy-making with respect to the laws of patentability (by deferring patentable subject matter), patent quality (through the robust vetting of applications in view of non-patent literature and team/time examination on demand) and inclusion in innovation (through automated error correction and addressing gender bias in examination).

What are Rigorous Policy Pilots?

Rigorous Policy Pilots are tools for filling informational deficits in policy- and law- making, through rigorous evaluation of already implemented or proposed rules or policies. The method of evaluation should be well-designed and well-implemented, and appropriate to the question being asked. When the question is about a policy impact, experimental or quasi-experimental methods are appropriate. But survey or case-study evaluation of a policies implemented on a pilot basis can also be appropriate. Carrying out a rigorous pilot generally involves specifying a question that matter, relevant authority, the underlying theory of change, testing protocol, evidence and resources. (“MATTER”)

Rigorous Policy Piloting Is Presumptively Legal

Part II reviews the relevant case law and finds rigorous policy pilots to raise no particular legal barriers to agency action. Many will be uncontroversial because they do not require the mandatory, selective application of law or policy to the public. But pilots that do, including through randomization, have by and large been found by courts to pass constitutional muster, on the basis that they further learning and other legitimate government objectives. The applicable Administrative Procedure Act (APA) requirements will also vary depending on the design and features of a pilot but should not present special procedural hurdles nor elevated substantive hurdles to the use of the evidence they generate. No decision has held that experimentation rendered an agency rule per se arbitrary and capricious because it demonstrated a lack of sufficient information to select a course of action.

Rigorous Policy Piloting Is Feasible and Worthwhile

Part III explores the wide variety of questions that agencies have addressed through rigorous policy pilots. Their experiences show that, while not necessarily easy, rigorous agency pilots are both feasible and worthwhile in a variety of contexts. It nests lessons that can be learned from these experiences into a basic framework for proposing rigorous policy pilots that comprises attending to questions that matter, relevant authority, the underlying theory of change, testing protocol, evidence and resources. It aspires to audiences of not only policymakers but also those engaged in forming policy recommendations, on the theory that framing new policy ideas as pilots to learn from, not just new policies to adopt, can increase their uptake.

Assumptions

We can do better

“The typical government regulatory framework represents ‘500 pages of untested assumptions’”

-Tom Loosemore, ex-UK govt

Up-front design and implementation details matter, the same risks of misuse apply

See,e.g. 1115 Medicare experiments, examples of misuse

Experimental proposals on policy represent novel and important contributions

Just as other empirical work does

One Agency Example: Patent Pilots at the PTO

The Good

Tradition of pilots, inquiry (Edison Scholars, RFCs); innovation culture

Good data/data infrastructure

Limited if any PII concerns

The Bad

No consensus re:what to optimize wrt, e.g. patent quality; Court vetting takes $Ms and years

The Future?

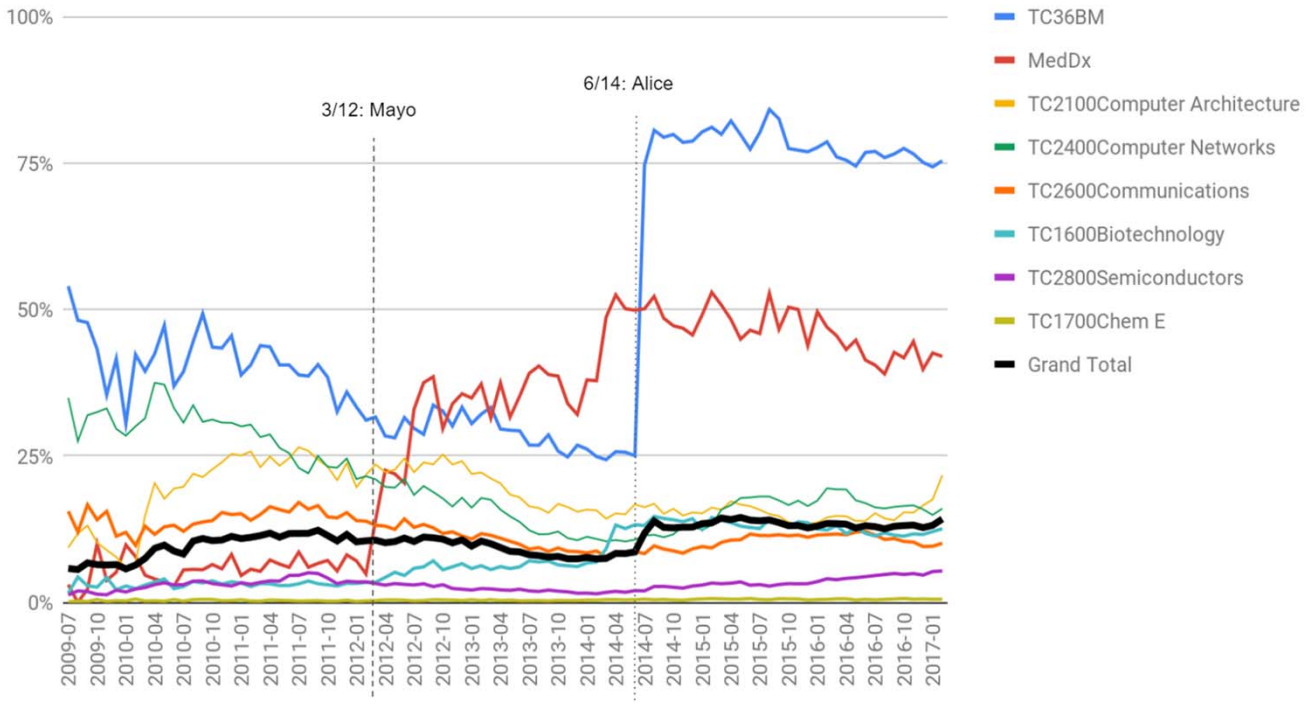
Patent Pilots to support learning by the USPTO

A APA requires agency action to be procedurally proper, consistent with the law, and representative of a permissible policy judgment.

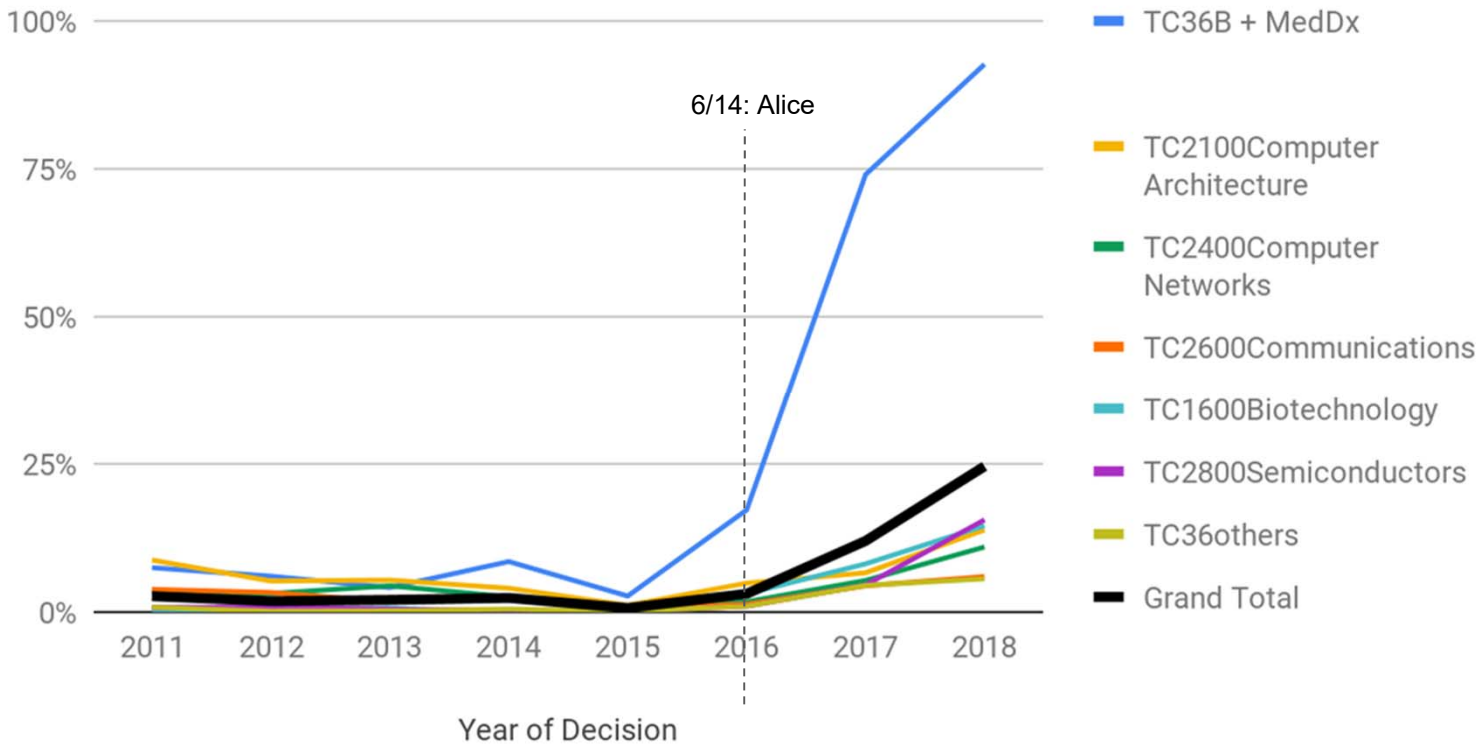
Pilots/testing are precedented, to gain information. Formal rulemaking not necessarily required. (T) Randomize among applicants who opt-in or select participant examiners as with limited rollouts.

Problem #1 - 101

Figure 1: Share of Office Actions Including a 101 Subject Matter Rejection by PTO Tech Center Grouping (by mail date)



Problem #1 - 101



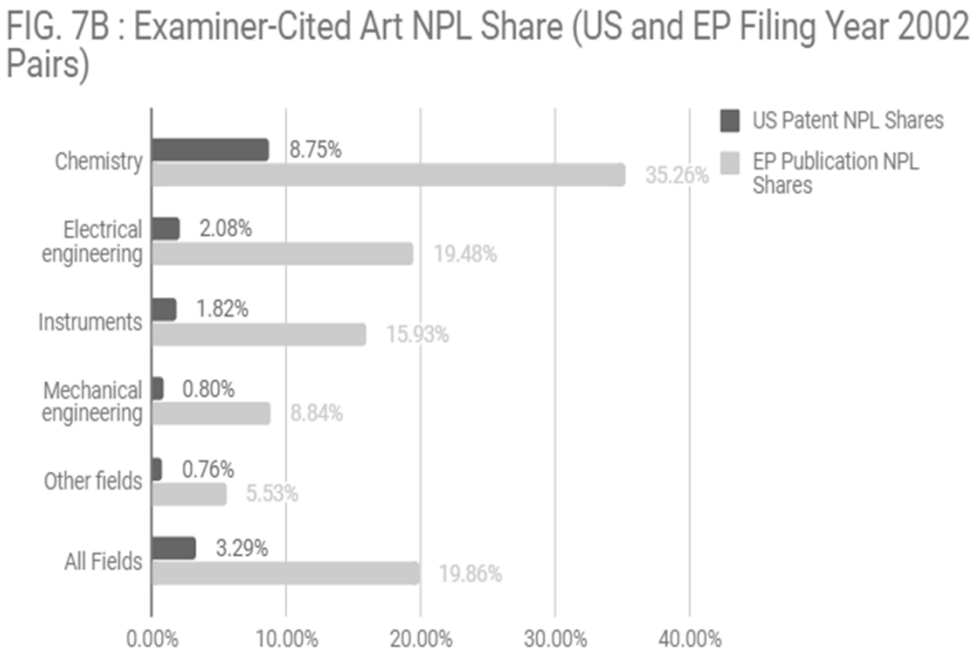
*Based on text search of decisions including "101 and (bilski or benson or alice or mayo or diehr or nuijten or ariosa or enfish or smartgene)," accuracy of which, based on manual inspection of 142 cases, correctly identified 138 of them. Excludes IPR/CBM, Interference cases. Site: https://www.uspto.gov/patents-application-process/patent-trial-and-appeal-board/decisions

Proposal #1 - 101 Deferral

Patentable Subject Matter law is unpredictable, esp in key tech areas. The PTO could (T) permit then randomize the deferral or waiver of subject matter issues until all others have been exhausted,(T)assuming that 101 issues would rarely be decisive or addressing other rejections will resolve 101 SM.(T)Using an intent-to-treat approach,see if there's(E)a difference in outcomes & reduction of time to a merits-based resolution & get information on how 101 is operating,(M)saving political capital and time, and generating information for lawmakers.

Proposal #2 - 102/103 Ex-Cited NPL

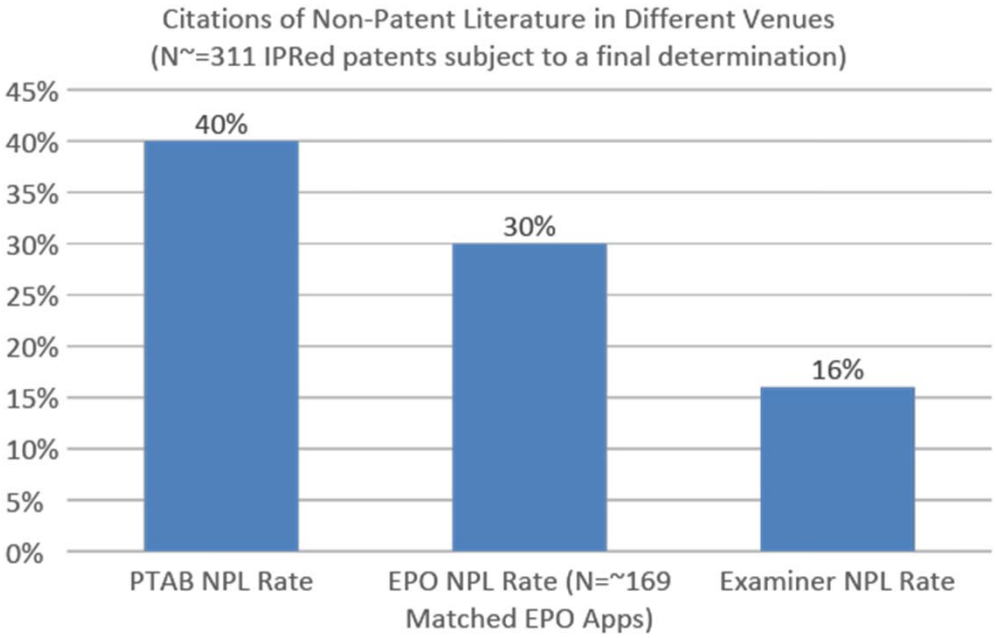
Examiners often do not consider relevant non-patent literature(NPL).



Chien, *Comparative Patent Quality* *Ariz L. Journ.* (2018)

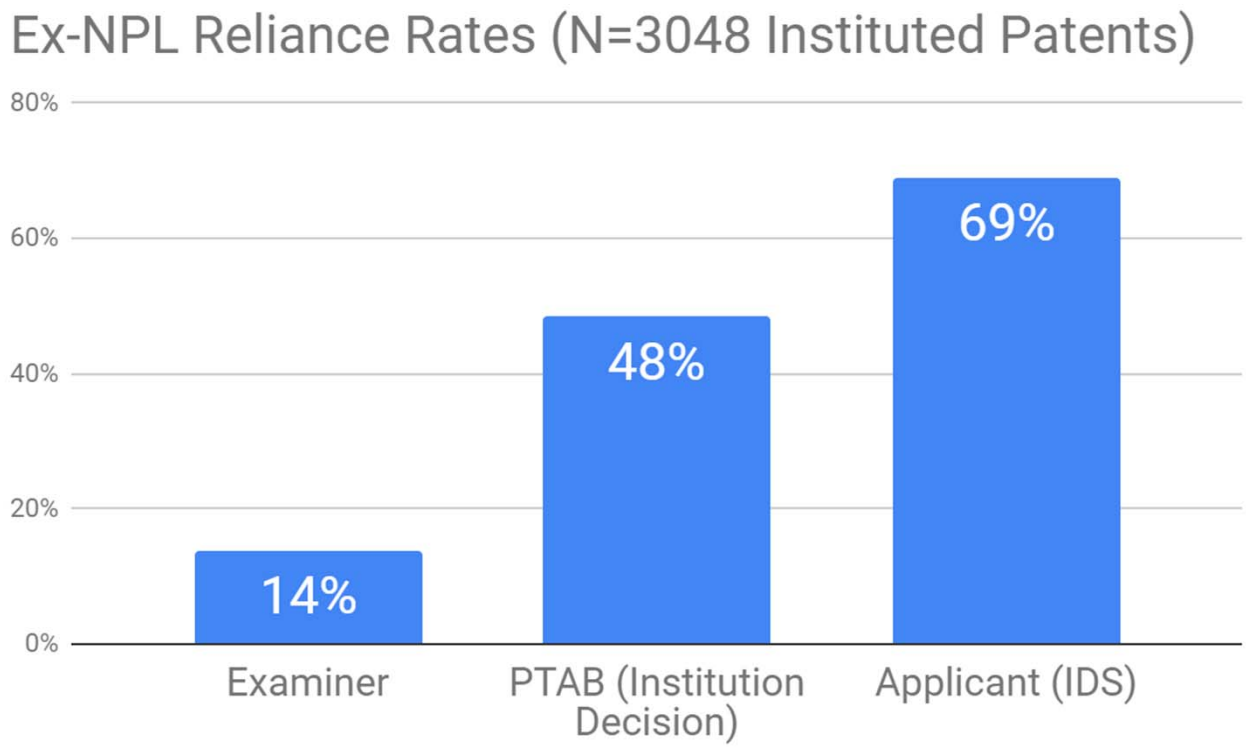
Proposal #2 - 102/103 Ex-Cited NPL

Examiners often do not consider relevant non-patent literature(NPL).



Chien, *Comparative Patent Quality* *Ariz L. Journ.* (2018)

Proposal #2 - 102/103 Ex-Cited NPL



Proposal #2 - 102/103 Ex-Cited NPL

Examiners often do not consider relevant non-patent literature(NPL)(Chien, *Comparative Patent Quality* 2018). The PTO could(E)take make search robustness (including non-patent literature (NPL)), a metric to measure and manage to as it carries out randomized (T,R)pilots to enhance search and quality(M)and test the assumption that enhanced access leads to enhanced robustness (T).

Problem #3 - Mistakes

27% of office actions include objections, smaller entities make more mistakes.

FIG___. OA includes 112(b) rejection

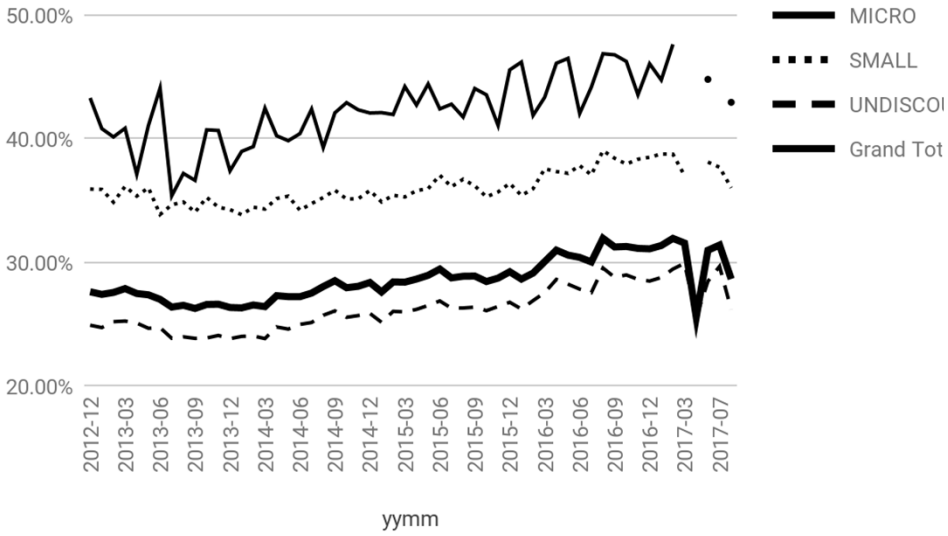
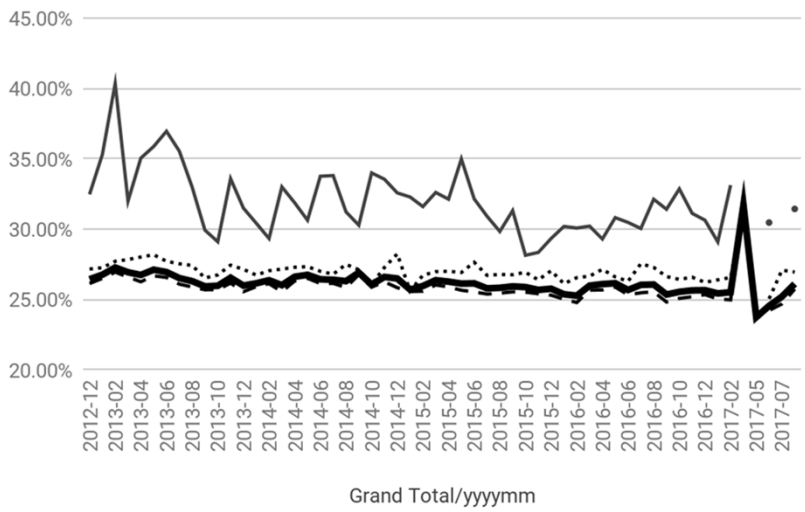


FIG. __ : OA includes an Objection

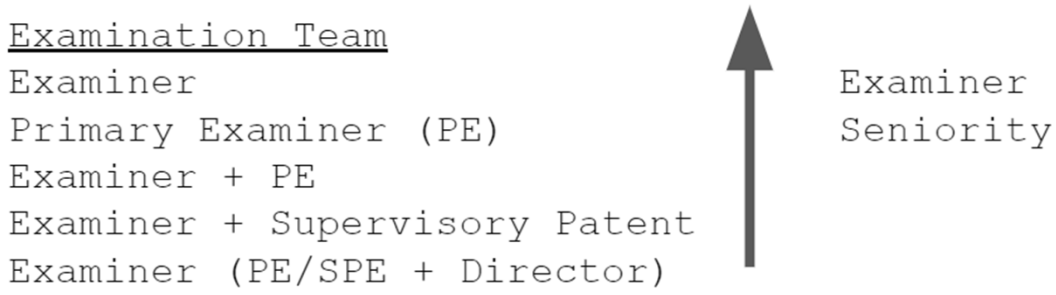


Proposal #3 - 112/other error correction

30% of office actions include objections, and the rate is higher among small and micro entities who also attrite more.(M)To increase application readiness and decrease examiner time spent correcting errors, the PTO could make (T)error correction tech available to applicants using an intent-to-treat design(T)and measure (E)objection and 112 (b) rejections.

Problem #4 - Time pressure

Seniority is correlated with less time, less team, less IPR survival (Love et al), and higher allowances (Wasserman & Frakes).



Proposal #4 - team/time examination on demand

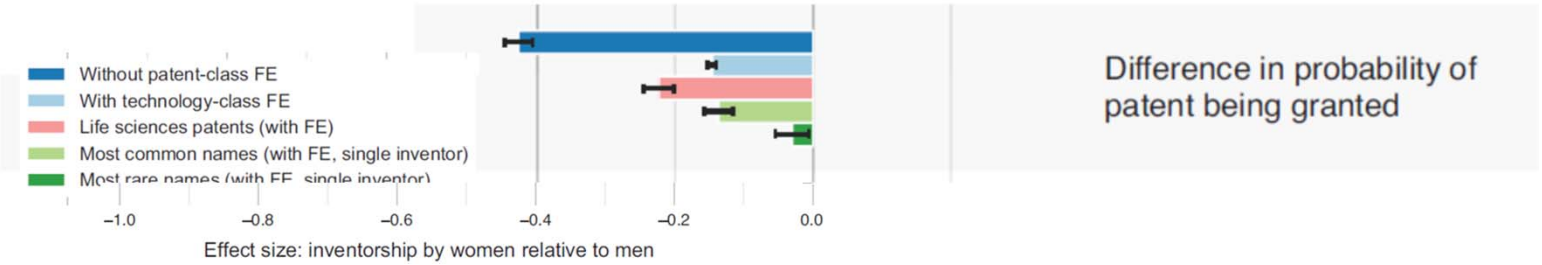
Seniority is correlated with less time, less team, less IPR survival, and higher allowances. Give (T) senior examiners time credits that they can allocate on demand as they wish, (T) assuming they know best which cases are hard or need more time, in order to (M)increase consistency and quality as (E) measured through objective measures

Problem #5 - possibility of implicit bias in patents

Gender differences in obtaining and maintaining patent rights

Kyle Jensen, Balázs Kovács & Olav Sorenson

An examination of the prosecution and maintenance histories of approximately 2.7 million US patent applications indicates that women have less favorable outcomes than men.



Problem #5 - possible implicit bias in patenting Patenting grant rates to female applicants are ~7% than to males, with a larger difference among more gendered names. Test for examiner role by running a pilot by providing otherwise identical applications to set of examiners(T)to test implicit bias (T) measured through rejections(E), to support potential name blinding intervention. (T)

* Bonus Tests!
 - Default to open upon application
 - Forms for pro se applicants
 - For more, look out for *Redesigning Patent Law, forthcoming,* by Chien and Cotter

Do you know of an important policy problem that could be addressed through rigorous policy pilot? Please get in touch at @colleen_chien or colleenchien@gmail.com.