



Addressing Organizational Barriers to Patenting Through Opt-Out Framing and Other Diversity Nudges

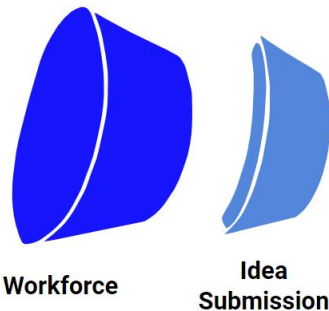
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(SCU and the Innovator Diversity Pilots
Initiative)





Presentation of Pilots

- Opt-Out Invention Harvesting
- Survey and Root Cause Analysis --> Piloting
 - Identity, Confidence and Perfectionism
 - Inventor Influencers
 - Social Networks



The Innovator Diversity Pilots Initiative

- Come pilot with us!



Should I raise my hand?

No, I don't really have much to add

No, I'm not totally sure of my answer

No, I'm not the kind of person who has interesting insights

Am I a person with innovative ideas?



Who has an ideas to share?

What are you working on?

OPT-IN



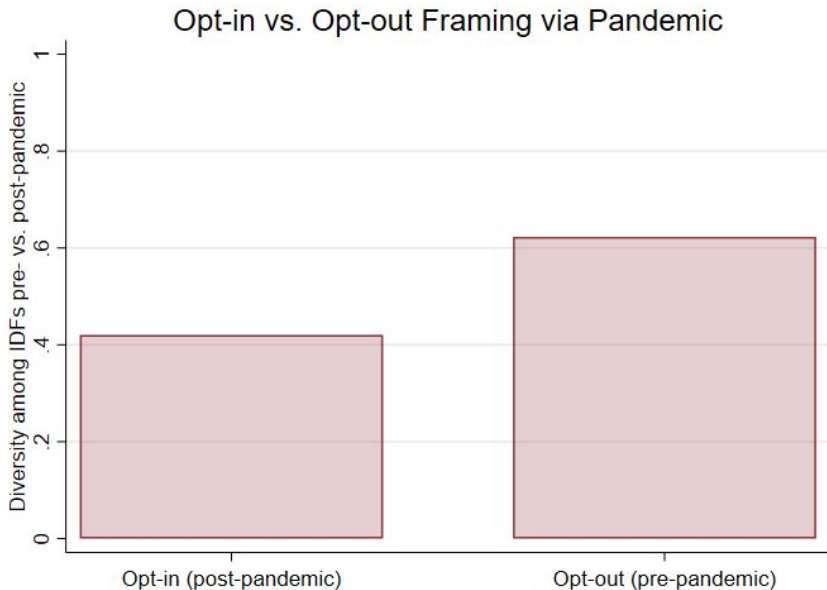
OPT-OUT



Opt-In v. Opt-Out in Setting 1

Intervention: Opt-Out

Policy change: AI Company that switched from Opt-Out to Opt-In with the Pandemic



Higher

Inventors from URGs (i.e., females, 1st time-inventors, african, and latinx) were **36 p.p.** were more likely to be inventors on an invention disclosure under an opt-out system.

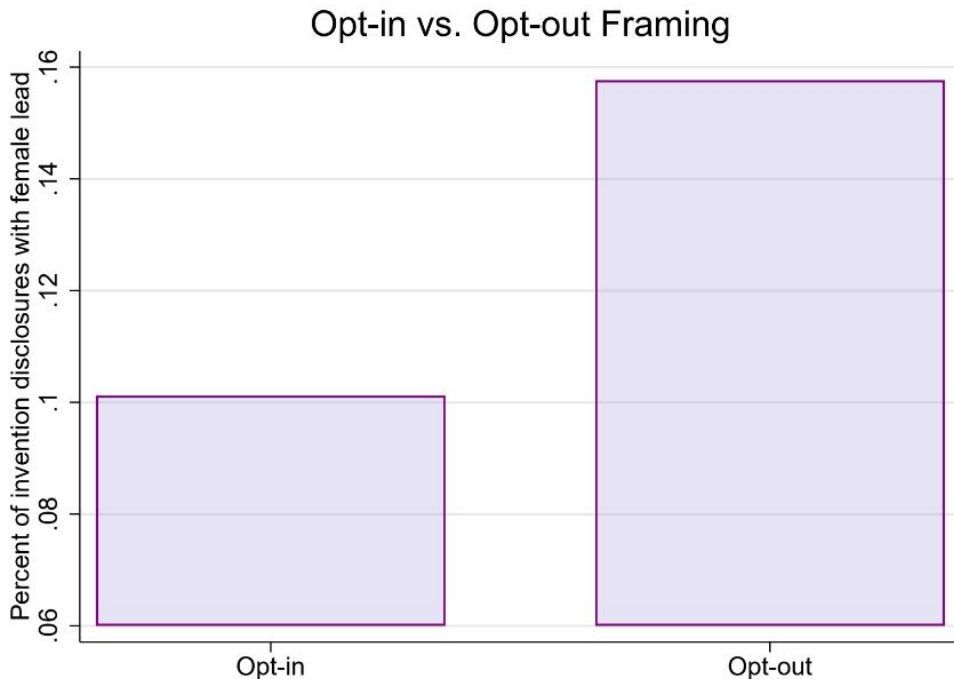
The point estimates are statistically significant across a variety of specifications including patent quality, inventor count, and research area.



Opt-In v. Opt-Out in Setting 2

Intervention: Opt-Out

Harvesting difference: ~Attorney Harvesting v. voluntary applicant submission



Females are about **5 p.p.** more likely to be lead filers on an invention disclosure under an opt-out system.

The point estimates are statistically significant across a variety of specifications including ones that control for invention disclosure quality (e.g., patenting filing and granting) and time.



Surveys are an excellent way to discover root causes of the innovator-inventor gap

We developed a variety of survey modules:

- Awareness and participation in IP process
- Self-identity, confidence, and risk-taking
- Factors working for and against invention
- Culture, management, mentors, and affinity groups
- Feedback, satisfaction, and bias in IP process



Surveys Indicate Identity Matters

Root Cause: Identity

Q: Do you self-identify as an inventor?

- ***Women are statistically significantly less likely to self-identify as inventors***
- ***33% female vs. 50% male at one firm (N=3,056, t-stat=7.13), 4% female vs. 28% male at another firm (N=160, t-stat=2.53)***

Statistical difference disappears when ask about self-identity using related notions:

- ***88% of females and 89% of males self-identify as ``problem-solvers``***

Pilots around asking about inventions vs. problems & solutions



Surveys Indicate Confidence Matters

Root Cause: Confidence

Q: If you were unsure whether to submit an invention disclosure what would you do?

- ***Women are less than half as likely as men to submit if they are unsure***

Also of note:

- ***Men, especially white and Asian men, are more comfortable with deciding their idea is worthy relative to women and members of URGs.***
- ***URGs exhibit greater discomfort disclosing ideas to patent review boards.***
- ***URGs are more likely to indicate perfectionism is holding their invention.***

Try pilot around informal/comfortable channels (e.g., Slack) to allow engineers to receive advice on early-stage ideas

Surveys Uncover Inventor Influences

Root Cause Influences

- **Surveys indicate most influential are:**
 1. Patent awards
 2. Culture of innovation
 3. Knowing that I'm solving a problem for the greater good
 4. **Peers**
- **Surveys indicate least influential are:**
 9. Trainings
 10. Performance reviews
 11. Current manager
 12. **Famous inventors**



vs



- **Try pilot with peers in an inventor spotlight and evaluate clicks, subsequent IDFs**



Surveys Show Social Networks Matter

Root Cause: Social Networks

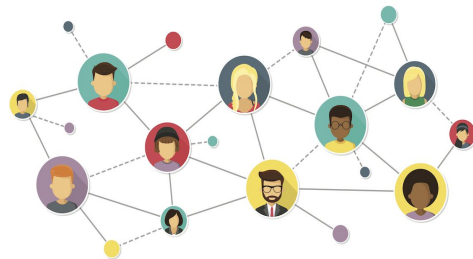
- Members of URGs are less aware of invention process
- Members of URGs are less likely to have a mentor or confidant to seek out when they are unsure of the worthiness of their invention disclosure
- Members of URGs are more likely to indicate the culture is not collaborative and that workplace interactions inhibit invention.
- Members of URGs are less likely to believe engaging in the IP process is a good use of their time



Pilots to Change Social Networks

Interventions:
Mentorship, ERGs

- **Social connections between employees:**
 - Channel valuable information and resources about the IP process
 - Yet people tend to form ties to similar others, leading ERGs to be socially isolated
 - This is problematic because high-value patents are often cross-group IDFs
- **Pilots to change engineers' social connections**
 - Lunch-and-learns to meet those not already in one's network and different on key attributes (e.g., race, gender, dept)
 - Randomized affinity group or mentorship programs





The Innovator Diversity Pilots Initiative

- We work with companies and academics to test, evaluate, and disseminate our
- learnings. Thank you to our partners, including Pure Storage and others.
- Come pilot with us!
- Present results at next conference at Emory.



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