IPO Webinar:
Gender diversity in innovation

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Value-creation through innovation

Entry of new people → IP & innovation ecosystem → Value creation

Exit of experienced people
Progress and Potential
A profile of women inventors on U.S. patents

Available at:
What did we do in the P&P report?

• USPTO collects certain limited information on patent inventors.

• To study women’s participation in patenting, it is necessary to classify inventors as men or women based on their names.

• Our report models similar prior studies, but offers two novel contributions:
  – Leverage the origin of an inventor’s last name to classify the inventor’s gender using his/her first name
  – Focus on the percentage of inventors that are women (“women inventor rate”) rather than the share of patents with a female inventor
Two metrics: patents vs. inventors

- Share of patents with a female inventor: The percentage of patents granted in a given year with at least one female on the inventor team.
- Women inventor rate: The percentage of all unique inventors granted a patent in a given year that are women.
Women patent and invent more over time

- Patents with at least one woman inventor
- Women inventor rate
- Women's share of total patenting
Leaky pipeline increases inventor gender gap

- **2015 OVERALL WORKFORCE**: 50% Men, 50% Women
- **2015 SCIENCE AND ENGINEERING WORKFORCE**: 72% Men, 28% Women
- **2016 U.S. PATENT INVENTORS**: 88% Men, 12% Women
Gender disparities across technologies

Women are specializing in technology fields and sectors where female predecessors have patented rather than entering male-dominated fields or firms.
More women inventor-patentees in universities & hospitals
Women are better represented in biopharma
Women patent in mixed-gender teams
Women patent in larger teams

- All inventor teams
- Teams with at least one woman inventor


Percent of patents

1 inventor
2-3 inventors
4-5 inventors
6+ inventors

Report to Congress pursuant to P.L. 115-273, the SUCCESS Act

Available at:
What is the SUCCESS Act of 2018?

• SUCCESS: Study of Underrepresented Classes Chasing Engineering and Science Success
• Focused on patenting and entrepreneurship by women, minorities, and veterans
• Required the USPTO (with SBA collaboration) to prepare a report to Congress
SUCCESS Act report requirements

1. For women, minorities, and veterans:
   – Identify publicly available data on the number of patents applied for and obtained
   – Identify the individual and small business benefits of increasing the number of patents applied for and obtained

2. Provide legislative recommendations to:
   – Promote the participation of women, minorities, and veterans in entrepreneurship activities and
   – Increase the number of women, minorities, and veterans who apply for and obtain patents
USPTO study process

- Federal Register Notice (April 2019)
- 3 public hearings (Alexandria, San Jose, Detroit)
  - 34 oral comments and 69 Written comments
- Direct communications (e.g. Patent Alert)
- Engagement with other federal agencies
  - SBA, Treasury, Army
- Reviewed 200 studies and cited about 50 in report
  - Academic, government reports, think tanks, etc.
Key sections of the study

1. Diversity among U.S. inventor-patentees
2. Benefits from patenting
3. External factors
4. USPTO and SBA programs
5. Legislative recommendations
External factors are important

1. Social norms and education
   – Social, cultural, and educational

2. Institutional norms and practices
   – Organizational and legal

3. Resource availability and access
   – Personnel, financial, and physical capital
Major follow-on initiative

1. National Council for Expanding American Innovation
   – A 25 member group composed of CEOs and other organizational leaders.
   – Purpose: To help formulate a national strategy to maintain U.S. global leadership in innovation.
Thank you!

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