Female Inventors: The Drivers of the Gender Patenting Gap

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Abstract

We analyze the gender gap in the success of patent application at the USPTO. We leverage quasi-exogeneous variation from the random assignment of patent examiners within technology fields, allowing us to find the causal impact of examiner characteristics on the application success. We find evidence that the applications of women inventors have a 3% lower likelihood of patent approval. This gender gap does not seem to be impacted by the gender of the examiner of the application.

When we focus on time-variant characteristics of the examiner, we find that high workload of the examiner leads to a decrease in the likelihood that the patent application of a female inventor would be approved. This finding is consistent with a mechanism where a time-constrained examiner would rely on stereotypes to assess the merits of an application. Finally, we focus on characteristics of the application that require more attention from the examiner. By writing out more detailed claims, women positively influence their probability of success.