

# Comments: “Who feeds the trolls?”

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# My two bottom-lines

- ▣ This paper makes material contributions to understanding the market for patents.
- ▣ I am not sure, however, that one of these material contributions is the big one claimed in the abstract:  
**“These results show that on average NPEs purchase and assert patents productive for litigation but lacking technological merit, thus adding to overall litigation fees without providing incentives for high-quality innovations.”**

# Material contributions

This paper pushes out the frontiers of research on patents

# The paper's main finding

- ▣ NPEs purchase patents with different traits from PEs.
  - ▣ NPE purchase patents approved by examiners who are less likely to block patents based on:
    - ▣ “Usefulness,”
    - ▣ “Non-obviousness,” and
    - ▣ “Definiteness.”
- ▣ But, NPE purchase patents approved by examiners with similar blocking patterns based on “Novelty.”

# This is a material contribution

- ▣ We know that NPEs litigate more.
  - ▣ But, this could be because they buy the same patents as PEs, but NPEs have a comparative advantage in litigation.
  - ▣ Do they purchase different types of patents?
- ▣ This paper shows that NPEs buy different types of patents.
  - ▣ Shows that examiners differ in the types of patents they approve.
  - ▣ Shows that NPEs purchase different types of patents: Patents approved by examiners who are less likely to block patents based on usefulness, non-obviousness, and definiteness.

# An additional key findings

- ▣ There are material differences across patent examiners.
- ▣ The random assignment of an application across examiners influences:
  - ▣ The degree to which there is subsequent litigation of the patent
  - ▣ The degree to which the patent is invalidated given it is litigated.
  - ▣ The ownership of the patent.

# These discoveries are first-order

- ▣ People might have suspected that NPEs purchased different patents from PEs, but now we have convincing evidence.
- ▣ We might have expected that differences in patent examiners had material effects, but now we have evidence that they do.

# Claims vs. evidence

At times, the paper claims more than it shows.



# Big claim

“These results show that on average NPEs purchase and assert patents productive for litigation but lacking technological merit, thus adding to overall litigation fees without providing incentives for high-quality innovations.”

Yet:

- No evidence is presented on the net present value (NPV) of NPE purchased patents.
- No evidence is presented on the NPV of NPEs more generally, including potential externalities on non-NPE purchased inventions.

# The goal and not the goals

**Goal:** Socially optimal innovation: Invest in  $NPV > 0$  innovations

## Not the goals:

- Minimizing patent litigation.
  - This could reduce investment in positive NPV projects.
- Patenting only the most useful, most novel, most non-obvious, and most narrowly defined applications.
  - This would reduce investment in positive NPV projects.
- Impeding NPEs from purchasing patents farther down the novel, non-obvious, and definiteness distribution
  - This would reduce investment in positive NPV projects.

# Two related thoughts ...

- ① There is a market for patents. Heterogeneous buyers value patent traits differently. Thus, given various frictions ...
  - ▣ If a patent is vague but the underlying idea is novel, PEs may view this as an opportunity to steal the idea and gamble on the courts.
    - ▣ This would lower the price of the patent ... and the idea.
    - ▣ This could reduce investment in positive NPV innovations.
  - ▣ If a patent is vague but the underlying idea is novel, NPEs might see this as an opportunity, as other potential purchasers are more dissuaded by potential litigation.
    - ▣ Their demand for the patent will boost its price.
    - ▣ This could boost investment in positive NPV innovations.

# Two related thoughts

- ② In a highly-innovative, rapidly changing industry, the definition of “sufficiently” novel, non-obvious, and definiteness might be uncertain and evolving.
  - The process of litigation might be the dynamic process through which the system efficiently defines the contours of these features.
  - The NPE, therefore, might be providing a crucial service as they are helping to define IP in rapidly innovating areas, contributing to that rapid growth.

# Three questions

## Question 1

Is there any evidence that patent litigation reduces technological innovation and commercialization?

## Question 2

Is there any evidence that NPEs reduce technological innovation and commercialization?

## Question 3

Is there any evidence examiners who are below the median in terms of blocking actions approve negative NPV patents?

# Summation

- ▣ This paper makes first-order contributions
  - ▣ Compared to PEs, NPE purchase patents approved by examiners who are less likely to block patents based on: “Usefulness,” “Non-obviousness,” and “Definiteness.”
  - ▣ The random assignment of an application across examiners influences subsequent: litigation, invalidation, patent ownership.
  - ▣ These push the boundaries of knowledge outward.
- ▣ I don't think the paper shows—or needs to show—that NPEs or differences in examiners slow the rate of socially beneficial innovation.