## Unsealing Settlements: Empirical investigation of Patent litigation and Bargaining

## Abstract

Out of court settlements are ubiquitous in patent litigation, due to the significant costs of pursuing a trial and uncertainty over its outcome. This is believed to encourage "frivolous" litigation, however the secretive nature of settlement agreements poses a challenge to evaluating the quality of cases filed, and the cost they impose on innovators. I develop a dynamic model of litigation in which the defendant screens out plaintiffs through a series of sequential out-of-court settlement offers, exploiting heterogeneity in the likelihood of cases to be dismissed or successful. Employing a newly constructed dataset that combines granular information on all patent infringement cases filed in the US from 2007-2021 and data on the parties involved, I estimate my model. This allows me to retrieve (i) the distribution of the ex-ante probability of victory for plaintiffs, (ii) the unobserved distribution of settlement amounts and (iii) the relative bias of courts towards plaintiffs and defendants. I find that patent litigation costs over \$48.8 billion a year to listed defendants, \$24.7 billion of which are from settlement transfers.

Furthermore, cases brought to court by patent assertion entities are smaller in size, lower in quality and more likely to settle for smaller amounts. I then consider two counterfactuals. First, I consider several fee-shifting rules, finding that conditional feeshifting is effective in discouraging frivolous litigation, however it can induce costly delays before settlements. Then, I turn to forum shopping. I find that restricting plaintiffs' discretionality in the choice of venue would dramatically reduce the incentives to file low-quality cases, especially in the E.D. of Texas.