Secrecy Rules and Exploratory Investment Theory and Evidence from the Shale Boom

**Author:**Thomas R. Covert, Richard L. Sweeney

We analyze how information disclosure policy affects investment efficiency in non-cooperative settings with information externalities. In a two-firm, two-period model, we characterize equilibrium behavior under policies which disclose whether investment returns exceed a predefined level. These policies include complete secrecy, in which players only observe rival actions, as well as full disclosure, in which players also perfectly observe rival returns. With less disclosure (higher disclosure thresholds), there is less free riding, but additional losses from incomplete information aggregation. We characterize the surplus maximizing disclosure threshold in this environment, and show how it depends on firms' patience. We then apply the model to the early years of the shale boom in Pennsylvania and West Virginia, which at the time were governed by complete secrecy and full disclosure, respectively. We find that full disclosure would have maximized surplus in both states, generating 49% and 160% more value than complete secrecy.

**Url:**<https://www.nber.org/papers/w30548>