

Empirical Patent Studies and Current Policy Issues

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Why review academic studies?

- **“Data” are the plural of “anecdote”**
 - **Conventional wisdom vs. solid evidence**
- **More solid social science foundation for policy**

Two Main Areas

- **Prosecution/Quality**
- **Litigation**

Prosecution Studies

- **Overall characteristics**
 - **Pendency**
 - **Grant Rate**
- **Comparative studies**
 - **US vs. EPO vs. JPO**

Basic Prosecution Facts

- **Pendency**

- **NAS Study: Increased from 18.3 months to 24 months between 1990 and 2002**

- **NAS Study, p. 51.**

Popp, Juhl & Johnson

“Time In Purgatory: Examining the Grant Lag for U.S. Patent Applications,” 4 Topics in Economic Analysis & Policy article 29 (2004)

- Pendency varies mostly by field; hiring more examiners will not necessarily diminish it

Grant Rate

- **Official estimate: 62%**
- **Cecil Quillen estimate: as high as 97%**
 - 12 Fed. Cir. Bar Ass'n J. 35 (2002)
- **“Moderate” assessment: Robert Clarke, USPTO: 75%**
 - Backed by systematic review, Lawrence B. Ebert, “Patent Grant Rates at the USPTO,” 4 CHI-K. J. INTELL. PROP. 108 (2004)

Individual Examiner Variation

- Several recent studies document what patent prosecutors have long known: much variation between individual examiners
 - [1] *Iain M. Cockburn, Samuel Kortum and Scott Stern, “Are All Patent Examiners Equal?”*
 - *NO! Lots of variation in observed characteristics of examination*
 - <http://www.nber.org/papers/w8980.pdf>

Examiner Variation – cont'd

- [2] Doug Lichtman, “Rethinking Prosecution History Estoppel,” http://papers.ssrn.com/sol3/papers.cfm?abstract_id=455380
 - Study of 20,000 published applications – later issued as patents – finds: *Extensive technology- and examiner-specific variation in prosecution (in particular, demands for claim “amendments”)*

Comparative Studies

Paul H. Jensen, Alfons Palangkaraya and Elizabeth Webster, “Patent Application Outcomes Across the Trilateral Patent Offices”

**Melbourne Institute of Applied Economic and Social Research,
and Intellectual Property Research Institute of Australia The
University of Melbourne, Paper No. 5/05**

Jensen et al.

- **For families of patents based on a common priority filing:**
 - **EPO: Fairly close harmony between US and EPO – only 3.8% of applications granted in US were rejected in EPO**
 - **BUT: longer EPO pendency may mean this understates ultimate US-EPO variation rate**

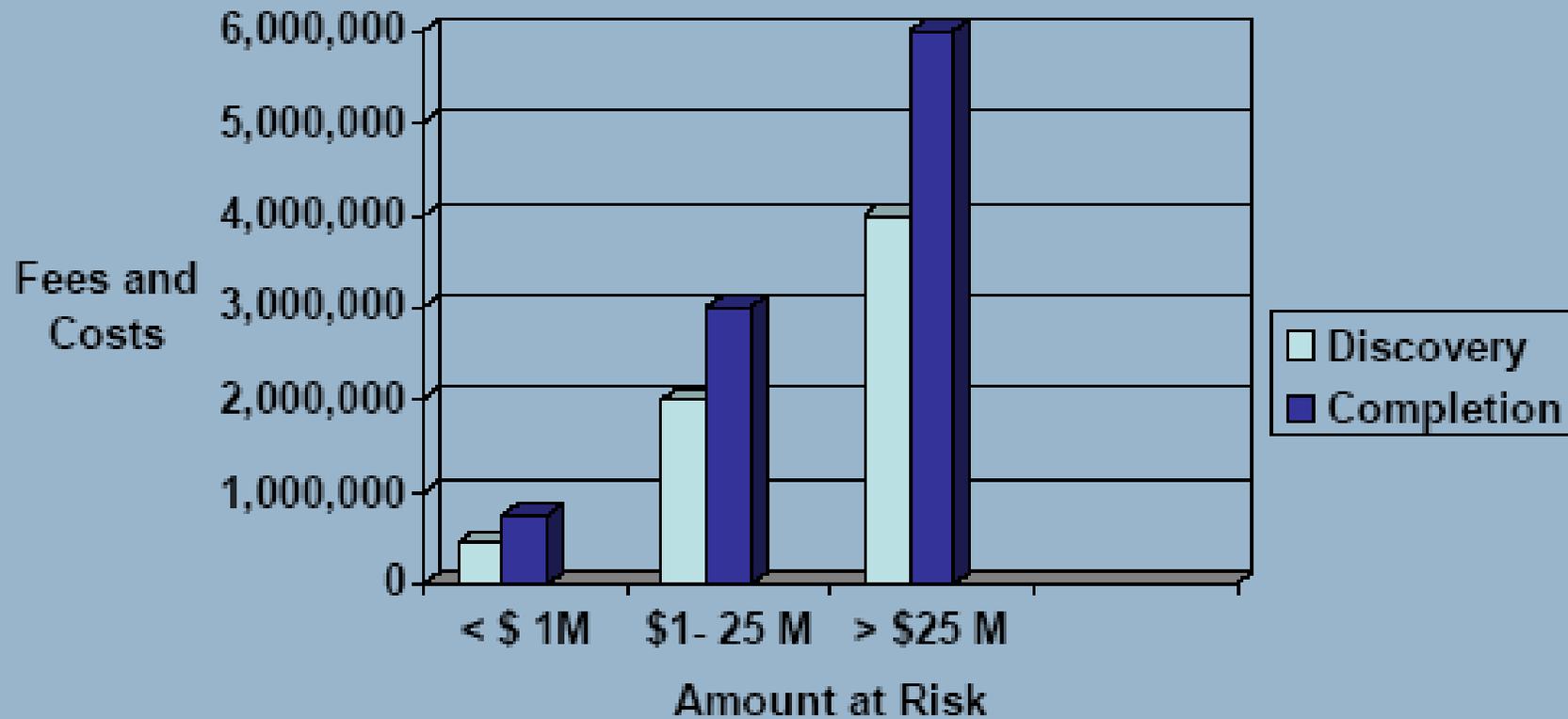
Jensen et al., cont'd

- **Serious differences between US/EPO and JPO**
 - **10% of patents granted by both US and EPO are rejected in JPO**
 - **24% of patents granted by both US and EPO were either abandoned (16%) or still pending (9%)**

Two Main Areas

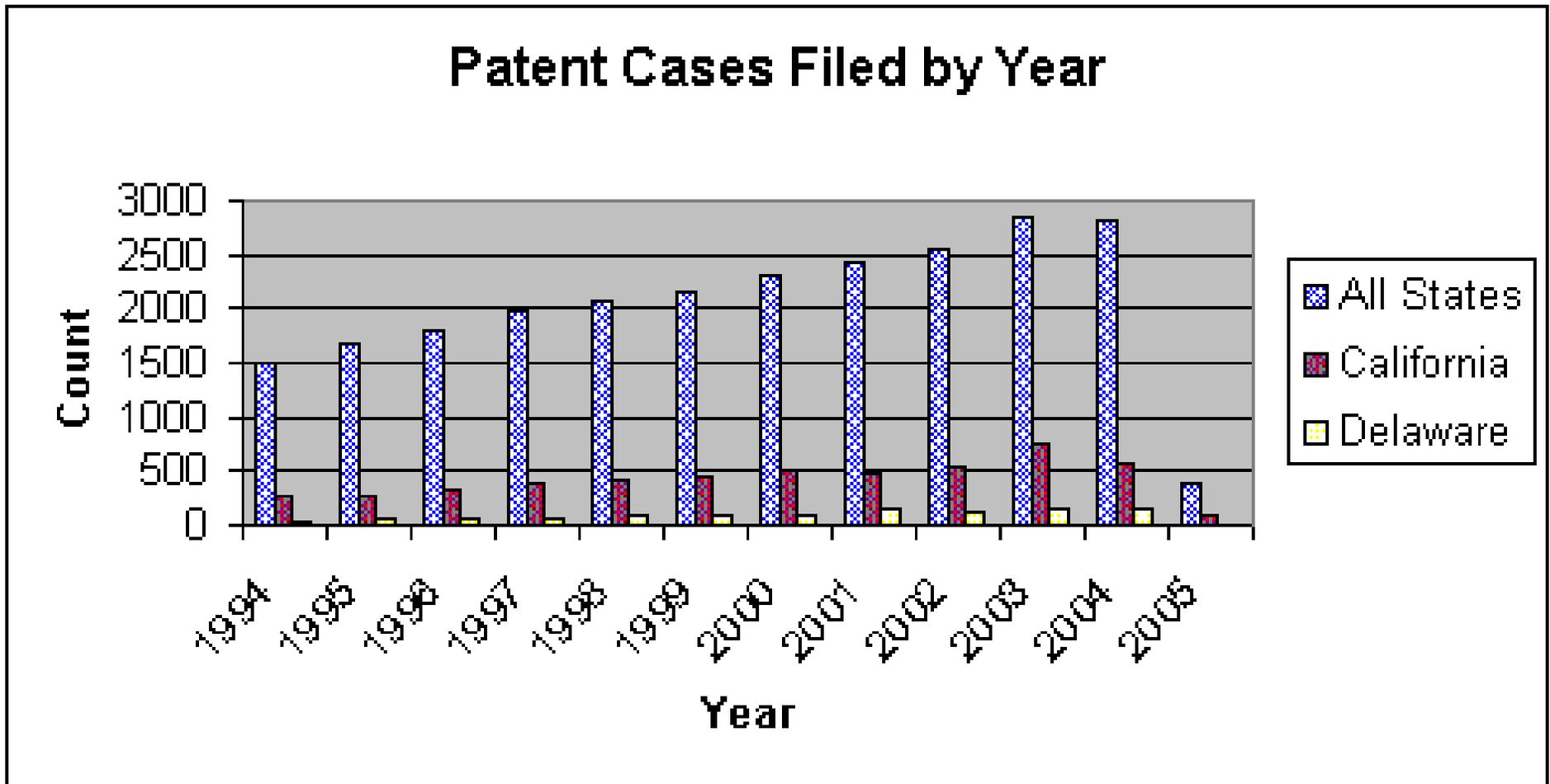
- **Prosecution/Quality**
- **Litigation**

Litigation Costs



AIPLA, 2003 Annual Economic Survey (prepared by William J. Robinson, Foley & Lardner)

Frequency of Litigation



<http://www.ipriori.com/statistics.htm>

Specific Issues

- **Use of juries in patent cases has risen from 2.8% from 1968-1970 to 59% from 1997 to 1998**
 - Kimberly A. Moore, *Judges, Juries, and Patent Cases – An Empirical Peek Inside the Black Box*, 99 Mich. L. Rev. 365, 366 (2000)

Juries more pro-patent

- **68% win rate before juries, 51% before judges**
- **Id., at 368.**

Characteristics of Litigated Patents

- John R. Allison, Mark Lemley, et al., *Valuable Patents*, 92 Geo. L. J. 435 (2004)
- Litigated patents are –
 - **More likely to be longer in prosecution, be the subject of divisional applications and continuations, to be cited more often, and to cite more prior art.**

Fear of Litigation?

- Arundel, Bordoy & Kingston, “Small Firms, Patent Infringement Litigation, and Innovation Deterrence”, working paper 2003
- **Survey evidence: firms “burned” by patent litigation (usually against larger firm) are somewhat deterred from R&D activities in related fields**

Litigation, cont'd

- ***O. Lanjouw and J. Lerner, "Tilting the Table? The Predatory Use of Preliminary Injunctions," [NBER Working Paper No. 5689](#), July 1996, and in The Journal of Law and Economics, (XLIV) (2) (2001), pp. 573-603.***
 - **Large firms often use injunctions strategically against smaller competitors**

Some Good News for the “Little Guys”

Do Patents Facilitate Financing in the Software Industry?

Texas Law Review, Vol. 83, p. 961, 2005

Ronald J. Mann

Interviews with startup and emerging software firms demonstrate that patents are associated with venture capital funding during a software firm’s developing years; a potentially “pro-entry” role for patents