
**Patent Assertion Entities:
Effective Monetizers,
Tax on Innovation, or *Both*?**

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Impact of PAEs on Innovation: Conflicting Narratives

PAEs Spur Invention

- PAEs Enhance the Value of Patents
- Patent Value is Reward to Invention
- Poster Child: PAE Enables Small Inventor to Get Reasonable Royalties from Large Infringing Firms

PAEs Are a Tax on Innovation

- PAEs Skilled at Extracting Money from Innovators
- Payments to PAEs are Excessive & Do Not Fund Innovation: Ex Post Licensing & Nuisance Suits
- Poster Child: Large, Innovative Tech Company as Juicy Target of PAE with Fistful of Software Patents
- Poster Child: Tech Startup Facing Nuisance Suit

Goals and Structure of Talk

What Do We Really Know About the Impact of PAEs on Innovation?

- Framework Based on Economic Theory
- Use Framework to Interpret Empirical Evidence
- Which Narrative Better Fits the Evidence?
- Where Would Further Study Be Most Valuable?

Policy Implications

- Patent Policy
- Antitrust Policy

PAEs: Definition and Significance

Patent Assertion Entities (PAEs)

Specialists at Asserting Patents

- “firms whose business model primarily focuses on purchasing and asserting patents” (FTC Report)

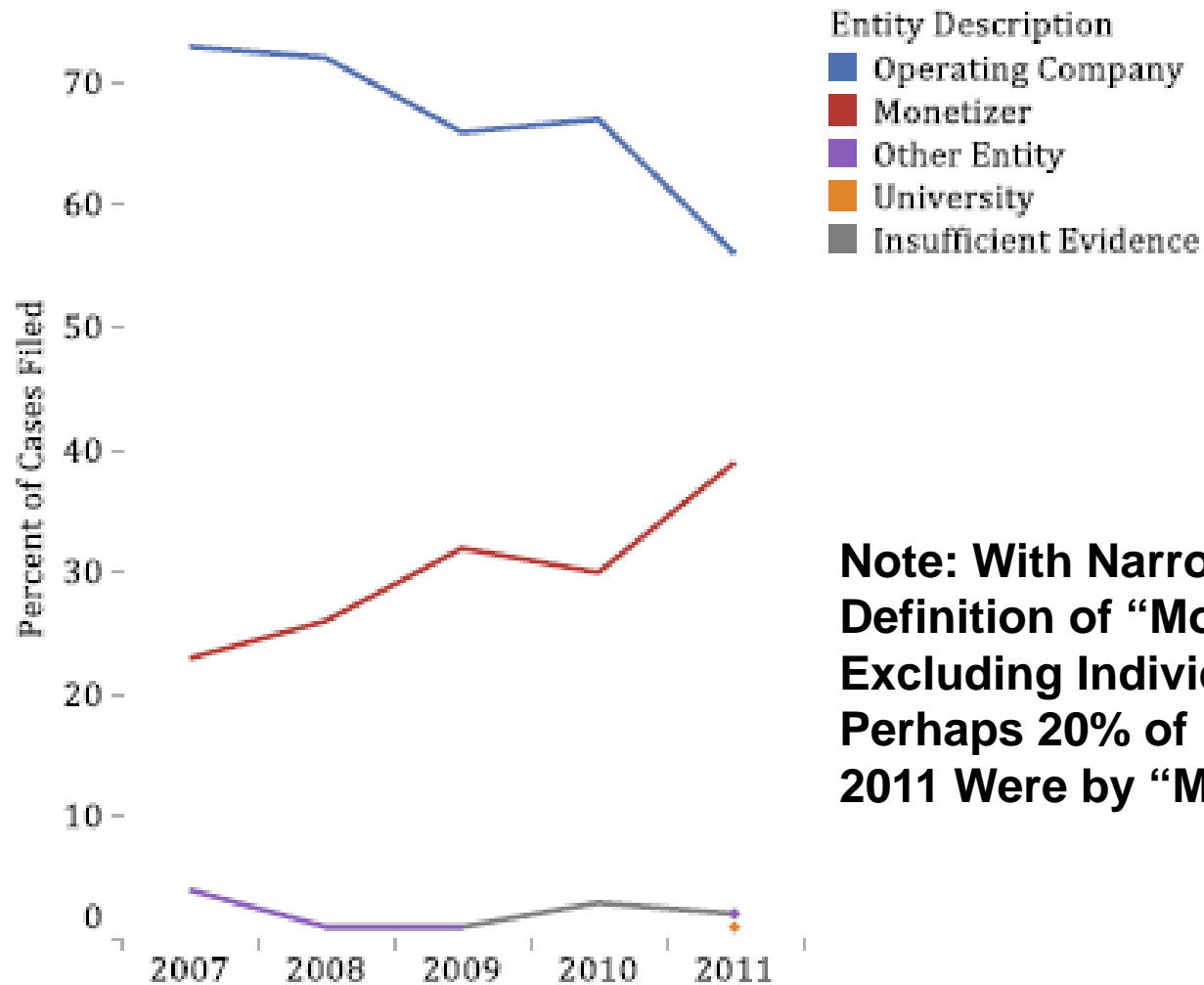
“Pure” PAEs

- No Operating Company Exerts Control Over PAE
- PAE Maximizes Profits from Patent Assertions

“Hybrid” PAEs

- Operating Company Exerts Some Control Over PAE
- PAE Accounts for Impact on Operating Co. Profits
- Different Creature for Antitrust Analysis

The Ascent of Patent Monetization



Note: With Narrower Definition of “Monetizer,” Excluding Individuals, Perhaps 20% of Lawsuits in 2011 Were by “Monetizers”

Source:
Jeruss,
Feldman &
Walker
(2012)

Be Careful Classifying Patent Owners

Table 1: Entity-Status Classes

Entity Class	Description
1	Acquired patents
2	University heritage or tie
3	Failed startup
4	Corporate heritage
5	Individual-inventor-started company
6	University/Government/NGO
7	Startup, pre-product
8	Product company
9	Individual
10	Undetermined
11	Industry consortium
12	IP subsidiary of product company

Source: Allison, et. al. 2009

**Economists Generally Welcome
Trade & Specialization**

Trade in Patents: Late 20th Century

Trade in Patents Was Fairly Common

- 14% of Patents Traded at Least Once
- 18% of Patents Granted to Individuals Traded
- Serrano (2010) – Study Covers 1983 to 2001

Patent Sales by Individuals *Reduced* Litigation

- Due to Defensive Purchases by Larger Firms
- Not True for Sales to Individuals or Small Firms
- Galasso, et. al. (2011) – Study Ends in 2001

Gains from Trade Primarily Attributed to Technology Transfer

- PAEs Do Not Appear to Facilitate Tech Transfer

PAEs Are Effective Monetizers

Strong Presumption that PAEs are Superior at Monetizing Patents

- Otherwise There Would Be No Gains from Trade When PAE Acquires Patent
- No Reason to Think PAEs are a Flawed Business Fad that Soon Will Fade Out

Sources of the Private Gains from Trade

- Risk Sharing & Liquidity for Inventors
- Specialization & Economies of Scale
- Skill at Selecting Patents to Assert
- Capabilities at Negotiation & Litigation
- Reputation as Litigators; Immunity from Retaliation

Why Now?

Rise of PAEs Seems Driven by Large Numbers of Computer & Communications Patents

- Ample “Raw Material” Available
- Many of These Are Software Patents

Ironic Legacy of Defensive Patenting

- Monetize Portfolios of Failed Companies
- Plus Healthy Business Units Spinning Off Patents to Unlock Value

Growth of PAEs Was Inevitable Given Accumulation of Patents

- American Ingenuity in Action

Impact of PAEs: Follow the Money

**How Do PAEs Alter the Alignment of
Innovation Rewards and Incentives?**

Follow the Money: Very Leaky Bucket?

PAEs Unlikely to Spur Innovation if Small Share of Costs Borne by Targets Goes to Patentees

- Short Run: Big Drag on Implementers
- Long Run: Small Boost to Patenting Incentives

Stock Market Event Study is Provocative

- Look at 14 Public NPEs, 2000-2010
- 574 Litigation Events, Defendant Losses \$87B
- \$152M Loss Per Event – Really?
- NPE Revenues = 9% of Defendant Losses
- Net Cash Flow to Investing = 2% of Losses
- Bessen, Ford and Meurer (2011)

If Bucket is Not Too Leaky ...

PAEs Discourage Investment at Target Companies

- Look at the Total Costs Imposed on Targets
- Check: Do the Targets Contribute to Innovation?

PAEs Encourage Patenting by Their Suppliers

- Look at the Boost to Patentee Reward
- Check: Do These Patents Promote Innovation?

How Leaky is the Bucket?

- Ratio: Boost to Patentee Reward/Total Cost to Target
- Surely This Ratio Varies Across PAE Activities

Need to Look More Closely at PAE Activities

- Do Not to Paint with Too Broad a Brush

Focus on Patent Origins & Targets, Not on Form of the Assertion Entity

No Deep Distinction Between Patent Asserted
By PAE and Same Patent Asserted By

- Failed Company, Individual Inventor, University

Do Not Get Hung Up on Whether the Invention
& Patenting Function is Vertically Integrated
with the Patent Assertion Function

Ultimately, Impact of PAEs on Innovation
Depends on How They Affect

- Total Cost Imposed on the Target
- Reward to the Original Patentee/Inventor
- Contribution of Targets & Patentees to Innovation

Evidence on PAE Patents

Sources

- PAEs Appear to Be Acquiring More of Their Patents from Smaller Companies Than Are Practicing Firms

Technology Mix

- PAE Patents Are Tilted Towards Information and Communication Technology, Including Software
- PAE Patents Tend to Have Broader Scope Than Patents Acquired by Practicing Entities

Evidence on PAE Litigation

Targets

- PAEs Appear to Target Small Companies More Than Do Practicing Entities

Timing

- PAEs Typically Initiate Litigation After Target Has Incorporated Patented Technology in its Products
- PAEs Assert Much Older Patents Than Do Product Companies

Outcomes

- PAE Litigation Appears to Yield a Substantially Higher Fraction of Non-Infringement Findings Than Does Litigation by Practicing Firms

Do PAEs Spur Invention or Tax Innovation: Testing the Narratives

Timing is Telling

PAEs Typically Assert Patents Against Targets Who Have Already Introduced Products

- Poster Child: Software Patents of Uncertain Scope
- Complex Technology, Patent Thickets
- Targets Are Not Copying Patentee's Invention
- Dubious Contribution of Patent to Innovation

Hard to See How Boosting Rewards to These Software Patents Spurs Innovation

Pattern of PAE Patents, Timing, and Targets Fits Much Better with “Flaws in the Patent System” Story Than “Virtuous Inventor” Story

Do PAEs Exploit Patent System Flaws?

Injunctions

- Excessive Bargaining Power Based on Hold-Up
- Much Less a Threat from PAEs Following *eBay*
- International Trade Commission Exclusion Orders?

Excessive Damages

- Royalties for Patents Covering Minor Features
- Royalty Stacking
- Courts Seem to Be Moving in the Right Direction

Nuisance Suits

- PAE Establishes Reputation for Litigating
- Startups as Vulnerable Targets?

Policy Implications

Patent Policy

Seems Like a Bad Idea to Limit the Ability of Patent Holders to Use Intermediaries to Assert Their Patents

Better to Fix the Flaws PAEs are Exploiting than to Attack the PAE Form

- Improve Patent Quality, Use Post-Grant Review
- Written Description and Enablement
- Convince Dave Kappos to Stay Longer at PTO
- Patent Remedies – Reasonable Royalties, ITC
- Nuisance Suits – Fee Shifting?

Better Disclosure of Real Party in Interest

- Stuart Graham, PTO

Antitrust Policy

I Believe in Antitrust, But Antitrust (Even Section 5) Cannot Fix the Patent System

Hard to Make Mere Assertion of Patents an Antitrust Violation

What About the Acquisition of Patents?

- Combining Substitute Patents: Clear Role for Antitrust, But Not What PAEs Are Generally Doing
- Combining Complementary Patents: No General Reason to Think This Reduces Competition

Hybrid PAE: Apply Vertical Merger Analysis

- Stay Tuned for Afternoon Panel

Summary

Growth of PAEs Was Inevitable

- Cheap, Plentiful Inputs (Notably: Software Patents)

Evidence Suggests Most PAE Activity Does Not Promote Innovation

- Timing and Technology Mix are Highly Suggestive
- Do Not Get Hung Up on PAE Form

If You Believe the Patent System is Functioning Well ... You Will See PAEs as an Efficient Layer

If You Believe the Patent System Has Some Big Flaws ... You Will See PAEs Exploiting Flaws

Nice to Be Back in the Nation's Capital!

