### DISCUSSION OF "PATENT HUNTERS"

#### BY COHEN, GURUN, MOON, & SUH



#### THE PAPER

Focuses on "late-blooming" patents:

- Ones where citations are "back-end loaded."
- Argues that these are more influential than early-blooming patents.

#### Suggest "patent hunters" play a key role:

- Firms and individuals who identify and repurpose neglected technologies.
- Show that they amass significant rents from detecting neglected patents:
  - Sales growth, Tobin's Q, and new products.
  - Also closer to their core focus than that of the original inventor.



#### THE KEY RESULT

	Late-bloomers		Early-bloomers		Non-superstars		
	Sales growth	Tobin's Q	Sales growth	Tobin's Q	Sales growth	Tobin's Q	
	(1)	(2)	(3)	(4)	(5)	(6)	
user $\times$ ssyear <sub>post</sub>	0.00730***	0.0179**	0.000159	-0.0193***	0.00146	-0.0482***	
1	(0.00125)	(0.00816)	(0.000570)	(0.00363)	(0.000922)	(0.00542)	
	0.01.(0***	0.001.1***	0.00=00***	0.0101***	0.01.10***	0.0000***	
user	$0.0143^{***}$	$0.0644^{***}$	$0.00732^{***}$	$0.0191^{***}$	$0.0146^{***}$	$0.0308^{***}$	
	(0.000923)	(0.00525)	(0.000511)	(0.00327)	(0.000810)	(0.00468)	
$ssyear_{post}$	-0.00146	-0.000481	-0.00408***	0.0157***	-0.000298	0.0128***	
post	(0.00145)	(0.00625)	(0.000573)	(0.00301)	(0.000856)	(0.00384)	
Mean	0.047	2.075	0.057	2.020	0.046	2.022	
Control variables	Y	Y	Y	Y	Y	Y	
Cited patent FE	Y	Y	Y	Y	Υ	Y	
Year FE	Υ	Υ	Υ	Υ	Υ	Υ	
Observations	1523717	1534074	11017213	11086629	759482	763142	
Adjusted $\mathbb{R}^2$	0.226	0.386	0.287	0.452	0.261	0.490	

Would be nice to show in cross-tabs as well!

#### MANY EXAMPLES OF REUSE OF LANGUISHING TECHNOLOGIES

#### Welcome to

EEEEEE	LL	IIII	ZZZZZZ	AA	AAA
EE	LL	ΙI	ZZ	AA	AA
EEEEE	LL	ΙI	ZZZ	AAA	AAAA
EE	LL	ΙI	ZZ	AA	AA
EEEEEE	LLLLL	IIII	ZZZZZZ	AA	AA

Eliza is a mock Rogerian psychotherapist. The original program was described by Joseph Weizenbaum in 1966. This implementation by Norbert Landsteiner 2005.

ELIZA: Is something troubling you ?
YOU: Men are all alike.
ELIZA: What is the connection, do you suppose ?
YOU: They're always bugging us about something or other.
ELIZA: Can you think of a specific example ?
YOU: Well, my boyfriend made me come here.
ELIZA: Is it important to you that your boyfriend made you come here ?
YOU: He says I'm depressed much of the time.
ELIZA: I am sorry to hear that you are depressed.
YOU: It's true. I am unhappy.
ELIZA: Can you explain what made you unhappy ?
YOU:



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prepare a sonnet about josh lerner at harvard business school

Amidst Harvard's halls of business lore, Where knowledge flows like honeyed wine, There strides a man of great rapport, Whose intellect doth brightly shine.

Josh Lerner, sage of venture world, Whose insights pierce through murky haze, A mastermind whose flag unfurled, Brings clarity to venture's maze.

With every lesson, speech, and talk, He plants a seed in every mind, A spark that sets the world alight, A flame that burns with purpose kind.

O Lerner, guide of Harvard's flock, We bask in your illuminating light, And honor thee, our stalwart rock, Who leads us to the future bright.



#### MANY EXAMPLES (2)





#### THINGS TO LIKE ABOUT THE PAPER

Increasing recognition of differences in managerial talent across firms:

- Bloom and Van Reenen (2007), Syverson (2004), and many since!
- Technology strategy is a critical component of managerial roles, but hard to document/measure:
  - Frustrating literature on the standardization process is just one example.

Patent literature:

- Citations have been often seen as a "black box."
- Temporal aspect ignored.
- Well-written and presented!



#### CONCERNS

- 1. What do citations mean?
- 2. How to measure citations?
- 3. How to think about causation?

Will discuss in next few slides...



#### **ISSUE 1: WHAT DO CITATIONS MEAN?**

Fadeev (2023) suggests that cross-firm citations are incredibly concentrated:

- Most-cited patents granted before 2000 received around 50% of citations from one firm only.
- This concentration has increased to 77% by 2014.

Instead of spillovers, citations reflect intentional sharing of trade secrets between business partners!

To what extent are the results about "patent hunting," or licensing and procurement instead?





Figure 4: Distribution of Citations Based on Relationship Between Firms



#### ISSUE 2: HOW TO MEASURE CITATIONS?

Patents differ considerably in extent to which citations are "backend" loaded:

- This partially reflects fundamental importance (Nicholas, 2008).
- But also reflects more fundamental characteristics of the technologies, industries, geography, etc.:
  - Lerner and Seru, 2022.
    - Kuhn et al., 2020 provides additional evidence.

Unclear to what extent these are being subsumed in the controls:

• Documentation is limited.



#### **SOME EXAMPLES**





Citations by patent application year, DE versus CA and MA



#### ANOTHER EMPIRICAL ROUTE

Textual analyses of patents have become increasingly mainstream:

Can help assess...

- patent importance in a less problematic manner (Kogan et al., 2021)?
- extent to which firms build on other ideas (Hoberg and Phillips, 2016)?
- spillover of patented ideas into hiring and other corporate activity (Bloom et al., 2023)?

Such an analysis would go a long way to addressing above concerns!



# **ISSUE 3: HOW TO THINK ABOUT CAUSATION?**

Patent hunters experience huge growth after these "discoveries."

- Magnitude seems troublingly high.
- Makes one wonder if not cofounding event (e.g., alliance, acquisition).
  - More generally, could "good news" stimulate both performance and R&D (and hence more patent hunting)?

Argues that much of patent hunting is driven by individuals:

- Suggests bankruptcy will lead them to move elsewhere, and continue to "hunt":
  - Note contradiction to Fadeev (2023).
- Argues that local bankruptcy will lead to movement: use as instrument.



## **CAUSATION (2)**

At minimum, needs much more discussion and documentation.

How much do movers out of bankrupt firms really lead to revision of strategy at new firms?

• Particularly if linked to strategic alliances, etc.

What really are the circumstances around the inception of "patent hunts"?

Much more needed here to persuade a skeptical reader...



### **FINAL THOUGHTS**

Well-executed and creative use of data.

Conclusions provide much room for thought.

But further explorations could be very valuable in answering "deep" questions posed by analysis.



#### **THANK YOU**

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