# The Novelty of Innovation: Competition, Disruption, and Antitrust Policy

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  - How does the prospect of being acquired affect the novelty & disruption of entrant innovation?



#### Model

Solving the Model

Allowing for Acquisitions

Conclusion





Existing product: owned by incumbent location  $l_0 = 0$ 

































#### Model

#### Solving the Model

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Conclusion

























Market share of the new product



Market share of the new product









![](_page_41_Figure_1.jpeg)

![](_page_42_Figure_1.jpeg)

Drawn for t = 1/5,  $v_0 = 1/2$ , and  $\sigma = 0$ .

![](_page_43_Figure_1.jpeg)

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![](_page_44_Figure_1.jpeg)

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![](_page_45_Figure_1.jpeg)

Drawn for t = 1/5,  $v_0 = 1/2$ , and  $\sigma = 0$ .

![](_page_46_Picture_0.jpeg)

PROPOSITION 1. The incumbent locates the new product closer to the existing one than the entrant does, that is,  $l_1^M < l_1^C$ .

![](_page_47_Figure_1.jpeg)

![](_page_48_Figure_1.jpeg)

![](_page_49_Figure_1.jpeg)

![](_page_50_Figure_1.jpeg)

![](_page_51_Figure_1.jpeg)

PROPOSITION 2. The new product is more likely to make the existing one obsolete if it is developed by the incumbent than the entrant.

![](_page_53_Picture_0.jpeg)

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# Acquisition

![](_page_54_Figure_1.jpeg)

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#### Acquisition

![](_page_56_Figure_2.jpeg)

![](_page_57_Figure_1.jpeg)

![](_page_58_Figure_1.jpeg)

![](_page_59_Figure_1.jpeg)

![](_page_60_Figure_1.jpeg)

![](_page_61_Figure_1.jpeg)

![](_page_62_Figure_1.jpeg)

![](_page_63_Figure_1.jpeg)

• If the entrant expects to be acquired, it locates at

$$l_1^A(\alpha) = \max_{l_1 \in \left[0, \frac{1}{2}\right]} \mathbb{E}\left[\pi_1^C + \alpha \left(\pi_0^M + \pi_1^M - \pi_0^C - \pi_1^C\right)\right] - c(l_1).$$

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• If the entrant has no bargaining power, it locates at

$$l_1^A(0) = \max_{l_1 \in \left[0, \frac{1}{2}\right]} \mathbb{E}\left[\pi_1^C\right] - c(l_1).$$

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• If the entrant has all the bargaining power, it locates at

$$l_1^A(1) = \max_{l_1 \in \left[0, \frac{1}{2}\right]} \mathbb{E}\left[\pi_0^M + \pi_1^M - \pi_0^C\right] - c(l_1).$$

![](_page_66_Picture_7.jpeg)

PROPOSITION 3. If the incumbent can acquire the entrant, the entrant locates at  $l_1^A(\alpha)$ , which is decreasing in its bargaining power  $\alpha$  and satisfies  $l_1^A(0) = l_1^C$  and  $l_1^A(1) \in (0, l_1^M)$ .

![](_page_68_Picture_0.jpeg)

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# Conclusion

- Simple model to explore novelty of innovations.
- Focus on effect of novelty on competition and risk.
- This paper examined ownership and innovation.
- Subsequent paper builds on this framework to study dynamics of innovation (Callander et al. 2022).