Firm Effects in Innovation Research

A Review of Readings

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11 February, 2017

Outline

Firm Effects in Innovation Research

- Antecedents
- Consequences

Diffusion of Innovation

- Cohen (2010) - Technological diffusion from demand and supply side, at different levels of analysis
- Teece (1986) - Empirical study on organizational impediments to adoption of technology
- Agrawal et al. (2014) - Empirical study of peer effects in technology diffusion
- Igami (2015) - Empirical study of peer effects in technology diffusion

The Diffusion of New Technology

Agenda

- Scope of Definition of Technology Diffusion
- Demand and Supply Side
- Diffusion at different levels of aggregation - worldwide, industry, household

Organizational Barriers to Technology Adoption

Summary

- Firms take long to adapt to new technology
- Misalignment of incentives may be a major barrier in technological adoption

Peer Effects in Technology Diffusion

Summary

- Is there a causal social interaction effect for the social spillovers to exist?
- The canonical Bass (1969) model assumes social contagion to be a driving force behind accelerating adoption rates
- This article documents and estimates the magnitude of peer effects in diffusion of solar photovoltaic panels
- Issues in indentification of peer effects: endogenous group formation leading to self-selection of peers, correlated unobservables, and simultaneity
- Using daily adoption data, leveraging a DiD to avoid functional or distributional assumptions on the data generating process, controlling for endogeneity, and avoiding the fixed effects biases

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Agrawal, A., Cockburn, I., Galasso, A., and Oettl, A. (2014). Why are some regions more innovative than others? the role of small firms in the presence of large labs. *Journal of Urban Economics*, 81:149 – 165.

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