

Internet Appendix A85: Innovation/Finance

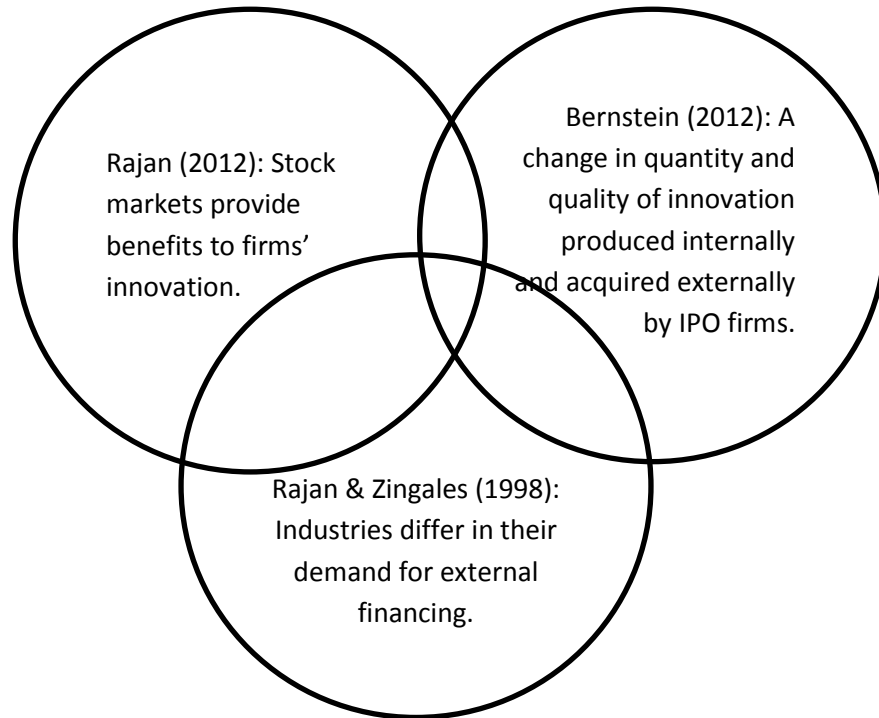
A85.1 Illustrative Pitch Template Example - Reverse-engineered

This pitch is reverse engineered from the paper: Acharya, V. V., & Xu, Z. (2016). Financial Dependence and Innovation: The Case of Public versus Private Firms, forthcoming Journal of Financial Economics doi:10.1016/j.jfineco.2016.02.010

Pitcher's Name	Jie Teng	For Category	Innovation/finance	Date Completed	11/04/2016
(A) Working Title	Innovation and financial dependence				
(B) Basic Research Question	How does innovation depend on the need for external capital?				
(C) Key paper(s)	Rajan, R. G. (2012). Presidential address: The corporation in finance. The Journal of Finance, 67(4), 1173-1217. Rajan, Raghuram G., & Luigi Zingales, (1998). Financial development and growth. American Economic Review, 88, 393-410. Bernstein, Shai. (2012). Does going public affect innovation?, Working Paper, Available at SSRN: http://ssrn.com/abstract=2061441 .				
(D) Motivation/Puzzle	According to Brown et al (2009) young firms appear to be depending more on public equity to finance their R&D. But the relationship between innovation and firms' need for external capital – which is called financial dependence – is still unclear and under-explored. Exploring this relationship would be beneficial both for explaining the phenomenon and making financial decisions.				
THREE	Three core aspects of any empirical research project i.e. the “ IDioTs ” guide				
(E) Idea?	The core idea is to examine the relationship between innovation and firms' dependence on external capital by analysing the impact of public listing. The central hypothesis is the positive linkage between innovation and the degrees of external finance dependence gets stronger when the firms go public. According to Rajan (2012) and Stein (1989) public listing has both benefits and costs on innovation. Thus, the effect of public listing on innovation is based on the cost-benefit trade-off associated with listing on stock markets. Then the innovation activities of matched private and public firms are compared in both external finance dependent industries and internal finance dependent industries. The comparison is expanded into four parts: the relaxation of financial constraints, efficiency of converting R&D into patents, agency problems and patent acquisitions.				
(F) Data?	The data contain two parts. Firm-year patent counts and patent citations data are collected from the NBER Patent Citation database. It contains every patent granted by the United States Patent and Trademark Office from 1976 to 2006. The financial data on U.S, private and public firms are obtained from S&P Capital IQ from 1994 to 2004. The reason for stopping in 2004 is because the average time lag between patent application date and grant date is two to three years. However S&P Capital IQ categorizes a firm's status (public or private) based on its most recent status. So the paper reclassifies a firm's status with IPO date from Compustat, Thomson One, Jay Ritter's IPO database, the first trading date from CRSP and the delisting date from Compustat. Firms with no SIC codes and firm-years with total assets less than \$5 million USD are excluded. No missing data.				
(G) Tools?	The research uses both univariate analysis and multivariate analysis to compare innovation activities of public and private firms. In multivariate analysis a panel data model is used to control for the distinctness in observable firm attributes and the influence of industry characteristics and time on innovation. To control for the potential endogeneity, a treatment effect model is used to correct for selection bias. To further ease the concern about the non-randomness of public and private firms, three quasi-experiments are used to isolate the causal effect of public listing on innovation.				
TWO	Two key questions				
(H) What's New?	The novelty is in the introduction of a new variable, namely public listing, to examine the relationship between innovation and financial dependence. Unlike previous literature focusing on IPO firms, innovation activities of both public and private firms are compared in the research.				
(I) So What?	The research shows that public listing has a significant effect on innovation for the firms in external finance dependent industries. It gives us an explanation of the firms' increasing dependence on public equity to finance their R&D. It would also help firms to take innovation into consideration when deciding to go public.				
ONE	One bottom line				
(J) Contribution?	The paper makes a nascent exploration between innovation and financial dependence. It contributes to the literature on identifying economic factors driving firm innovation by introducing firms' access to stock market. It also adds new evidence to the debate on the trade-off between public listing and staying private and its influence on firms' real activities.				
(K) Three Key Findings	<ol style="list-style-type: none"> 1. The positive relationship between innovation and firms' financial dependence grows stronger when the firms go public. 2. Public listing is an economic factor driving firm innovation. 3. Public firms have a significantly better innovation profile than private firms only in external finance dependent industries. 				

Cued Template taken from Faff, Robert W., Pitching Research (January 11, 2015). Available at SSRN: <http://ssrn.com/abstract=2462059> or <http://dx.doi.org/10.2139/ssrn.2462059>

Mickey Mouse Diagram 1



Mickey Mouse Diagram 2

