Research and Teaching Statement

Florian Ederer
Yale School of Management & Cowles Foundation

1 Research

My research fields are organizational economics, innovation, antitrust, and experimental economics. Specifically, I focus on incentive design in organizations, how it shapes innovation and how it is in turn affected by social interactions, product market competition, and more realistic assumptions about the motives of principals and agents. I often combine theoretical models, experimental methods, and empirical analysis drawing on insights from economics, corporate finance, strategy, and entrepreneurship.

1.1 Incentives for Innovation

Ederer & Manso (2013) [11] lies at the intersection of three of my research fields. The paper shows that in order to motivate people to undertake innovative endeavors, incentives need to tolerate early failure as well as reward long-term success. Standard pay-for-performance can fail badly in situations that require creativity and innovative thinking, but properly designed incentive plans lead to better innovation outcomes. Specifically, in a newly designed controlled laboratory experiment, subjects under an incentive scheme that tolerates early failure and rewards long-term success explore more and are more likely to discover a novel business strategy than subjects under fixed-wage or standard pay-for-performance incentive schemes. In addition, the threat of termination can undermine incentives for innovation, whereas golden parachutes can alleviate these innovation-reducing effects. **Ederer & Manso (2011)** [10] documents that the same principle also applies to bankruptcy protection, labor laws, corporate takeover provisions, and CEO compensation. **Ederer (2013)** [8] extends the theoretical and experimental results to social learning settings in which several innovators explore new research avenues in parallel, and shows that optimal incentives for innovation should reward long-term *group* success.

These papers resolve a debate between economics and psychology on whether performance-based financial incentives encourage or inhibit innovation. They offer the first causal evidence that the combination of tolerance for early failure and long-term rewards leads to more exploration and innovation and therefore feature in PhD courses at NYU, MIT, Northwestern, HBS, Berkeley, Stanford, Toronto, and many other top institutions. The laboratory experiment itself is widely used for teaching undergraduates, MBAs, and executives and has been adopted to study innovation in numerous research papers. **Ederer & Manso (2013)** [11] won the 2018 INFORMS TIME Award for most influential paper in innovation in the last 5 years.

Cunningham et al. (2020) [6] emphasizes disincentives for innovation: the threat of future competition creates incentives to acquire and *terminate* innovation.[1] Such "killer acquisitions" arise from an incumbent's desire to prevent the profit cannibalization of existing products that overlap with the target's innovation. We provide empirical evidence for this phenomenon from 35,000+ pharmaceutical drug projects and show that acquired drug projects are less likely to be developed when the acquired project overlaps with the acquirer's product portfolio and when the acquirer has strong incentives to protect profits due to weak existing competition. Furthermore, killer acquisitions are quite common (50 per year) and often avoid antitrust scrutiny. The paper won the Satterthwaite Healthcare Prize, the WFA Corporate Finance Best Paper Prize, the Academy of Management Sumantra Ghoshal Award, AdC Competition Policy Award, and the Robert F. Lanzillotti Antitrust Paper Prize. Its results have also been widely cited in Congressional antitrust reports and antitrust lawsuits against big tech companies and it has already become a staple of MBA and PhD courses around the world.

1.2 Incentive Design and Social Interactions

Campbell et al. (2014) [4] continues my work on social learning and incentive design and applies it to entrepreneurship and R&D management within firms. The paper theoretically shows that deadlines and performance visibility need to be carefully examined when individuals can observe each other's innovation breakthroughs. The desire to maintain a partner's

[1] Impediments to innovation stemming from product market competition are also the focus of **Antón et al. (2018)** [2].

motivation to exert effort leads to a reluctance to share information and impedes social learning. Both freeriding on effort provision and the lack of information sharing between workers can inefficiently delay project implementation. The optimal deadline depends on the degree of peer observability, trades off between these two forces and maintains effort incentives while avoiding delays.

However, social learning is not the only way in which peers influence each other. **Bursztyn et al. (2014)** [3] is the first paper to separately identify and empirically quantify two channels of social influence: social learning and social utility. When someone purchases a good, her peers may also want to purchase it, both because they learn from her choice ("social learning") and because her possession of the asset directly affects others' utility of owning the same asset ("social utility"). Using a high-stakes field experiment conducted with a financial brokerage, we randomize over (i) possession of an asset and (ii) information about the peer's revealed preference for an asset to estimate large effects of social learning and social utility. Social learning effects vary with the degree of financial sophistication of peers. Social utility effects are consistent with "keeping up with the Joneses" preferences. These results shed light on the mechanisms underlying herding behavior in financial markets and suggest how to use peer observability in structuring incentives in organizations. Because of its innovative experimental design as well as its sharp empirical results the paper was a finalist for the 2015 Exeter Prize for Experimental and Behavioral Economics and features in MBA and PhD courses at MIT, Berkeley, Toronto, Chicago, and Rochester.

I also investigate the impact of social comparison in incentive design in **Ederer & Patacconi (2010)** [13]. When workers care about their relative pay, tournament incentives can be too strong and have to be muted to avoid promoting the most competitive rather than the most able individuals. But as was stressed in my other work, monetary incentives are by no means the only feature of organizational design: feedback mechanisms are equally important. For example, without feedback, workers do not know whether their innovation efforts actually improve on already existing approaches. **Ederer (2010)** [7] shows under which conditions feedback has motivational effects in promotion or research contests. Although the paper is entirely theoretical its predictions have subsequently been investigated in several empirical settings including high school & university students, furniture sales staff, computer retail

sales outlets, and even World War II fighter pilots.

In contrast, **Ederer & Fehr (2017)** [9] documents the dark side of performance feedback: motivational feedback creates incentives for contest designers to misreport performance to contestants. If workers dislike being lied to, allowing discretionary feedback can have a deleterious impact on morale and tournament performance. However, lying aversion or a moral desire to keep promises may counteract these negative performance effects by forcing economic agents to report truthfully and in a way that is consistent with their future actions– even in environments where contractual enforcement or reputational incentives are absent. **Ederer & Stremitzer (2017)** [15] provides the first causal evidence that guilt aversion leads to more promise-keeping and estimates a model of conditional guilt aversion that nests the previously contradictory findings of the gigantic literature on communication in experimental trust games as special cases. **Ederer & Schneider (2018)** [14] shows that promises have a long-lasting effect even outside the confines of economic laboratories.

1.3 Other Work on Incentive Design

Gaming of incentive plans (e.g., hospital evaluations, law school rankings) is a common problem in incentive design and is often exacerbated by the informational advantage that agents possess. Bentham (1830) suggests that deliberate lack of transparency about the incentive scheme can reduce gaming. **Ederer et al. (2018)** [12] formally investigates these arguments and shows that opaque incentives (incentives that make agents uncertain about how exactly they will be rewarded) effectively curb gaming. However, opaque incentives impose more risk, thereby creating a trade-off between gaming deterrence and more expensive incentive pay. Opaque incentives are better than transparent ones when (i) the principal suffers a lot from gaming, (ii) the agent's informational advantage is small, (iii) the agent is more risk-averse, and (iv) the available performance measures are less noisy.

Antón et al. (2020) [1] recognizes that incentive design is influenced by the motives of principals, in particular when large shareholders hold ownership stakes in multiple firms that compete in the same product market (common ownership). The paper combines canonical models from organizational economics, industrial organization, and corporate governance and empirical analysis to show managerial compensation is less performance-sensitive in firms

whose investors hold greater stakes in industry competitors. Because the paper provides a theoretical foundation and the first empirical evidence for a plausible mechanism linking common ownership and reduced product market competition it has received a tremendous amount of academic, policy, and corporate attention (including the DOJ, FTC, OECD, and European Competition Commission) in the debate on common ownership. The paper also won a number of academic research awards including the SIOE Oliver Williamson Award and the IEAF-FEF Prize.

2 Teaching

Since arriving at Yale in 2013-14 I have taught elective courses in Behavioral Economics and Competitive Strategy. I won the Elective Teaching Award in 2013-14 and 2017-18. Due to Yale SOM policy which excludes past winners for the following three years, I was ineligible for any teaching award in the other years. I was chosen as one of the "Best 40 Business Professors Under 40" by Poets & Quants in 2017. My courses are ranked #1 and #2 as the most popular electives at Yale SOM by student enrolment. They draw on my research expertise and feature insights from recent research in organizational economics, industrial organization, entrepreneurship, and behavioral economics.

Teaching MBA students has significantly contributed to my research. My papers on killer acquisitions and common ownership originated from teaching sessions on entry deterrence, antitrust, and innovation management in my Competitive Strategy course. I will continue to explore and exploit such synergies between research and teaching in the future.

3 Personal

My wife is a tenured law professor and we have two daughters born during my time at Yale SOM. As the primary caretaker for our younger daughter during my wife's tenure process I took a one-semester teaching reduction and an additional year on my tenure clock. I did not take a teaching reduction or extension of my tenure clock when my older daughter was born or for COVID-19.

References

[1] **Antón, M., F. Ederer, M. Giné, and M. Schmalz** (2020): "Common Ownership, Competition, and Top Management Incentives," *SSRN Working Paper*. (132 citations)

[2] **Antón, M., F. Ederer, M. Giné, and M. Schmalz** (2018): "Innovation: The Bright Side of Common Ownership," *SSRN Working Paper*. (18 citations)

[3] **Bursztyn, L., F. Ederer, B. Ferman, and N. Yuchtman** (2014): "Understanding Mechanisms Underlying Peer Effects: Evidence from a Field Experiment on Financial Decisions," *Econometrica*, Vol. 82, No. 4, pp. 1273-1301. (402 citations)

[4] **Campbell, A., F. Ederer, and J. Spinnewijn** (2014): "Delay and Deadlines: Freeriding and Information Revelation in Partnerships," *American Economic Journal: Microeconomics*, Vol. 6, No. 2, pp. 163-204. (54 citations)

[5] **Carlin, B., and F. Ederer** (2018): "Search Fatigue," *Review of Industrial Organization*. (10 citations)

[6] **Cunningham, C., F. Ederer, and S. Ma** (2020): "Killer Acquisitions," *Journal of Political Economy*, forthcoming. (118 citations)

[7] **Ederer, F.** (2010): "Feedback and Motivation in Dynamic Tournaments," *Journal of Economics & Management Strategy*, Vol. 19, No. 3, pp. 733-769. (262 citations)

[8] **Ederer, F.** (2013): "Incentives for Parallel Innovation," *SSRN Working Paper*. (47 citations)

[9] **Ederer, F., and E. Fehr** (2017): "Deception and Incentives: How Dishonesty Undermines Effort Provision," *SSRN Working Paper*. (67 citations)

[10] **Ederer, F., and G. Manso** (2011): "Incentives for Innovation: Bankruptcy, Corporate Governance, and Compensation Systems," *Handbook of Law, Innovation, and Growth*, Edward Elgar Publishing. (30 citations)

[11] **Ederer, F., and G. Manso** (2013): "Is Pay-for-Performance Detrimental to Innovation?" *Management Science*, Vol. 59, No. 7, pp. 1496-1513. (523 citations)

[12] **Ederer, F., R. Holden, and M. Meyer** (2018): "Gaming and Strategic Opacity in Incentive Provision," *RAND Journal of Economics*, Vol. 49, No. 4, pp. 819-854. (60 citations)

[13] **Ederer, F., and A. Patacconi** (2010): "Interpersonal Comparison, Status and Ambition in Organizations," *Journal of Economic Behavior & Organization*, Vol. 75, No. 2, pp. 348-363. (57 citations)

[14] **Ederer, F., and F. Schneider** (2020): "Trust and Promises over Time," *American Economic Journal: Microeconomics*, forthcoming. (4 citations)

[15] **Ederer, F., and A. Stremitzer** (2017): "Promises and Expectations," *Games and Economic Behavior*, Vol. 106, pp. 161-178. (75 citations)

Total (including papers not mentioned): 1,861 citations (December 11, 2020)