# Regulating Business Innovation as Policy Disruption: From the Model T to Airbnb

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*Many scholars have invoked the term "disruptive innovation" when addressing the platform (sharing) economy, with sweeping claims about the dramatic changes this development promises for law, regulation, and the economy. The challenges raised by the platform economy are surely important, but we argue that recent scholarship focusing on the immediacy and novelty of the platform economy has been ahistorical, and has therefore missed the bigger picture about how to regulate it. History is full of technological and management advances that fundamentally disrupted business models for a brief period of time. When business innovation upends a preexisting business model in a regulated industry, the result can be a disjunction between the structure of the regulatory system governing incumbent firms and the firms disrupting the industry: a* policy disruption. *Policy disruption can result from conscious choices by entrepreneurs to exploit legal loopholes or to challenge regulatory protections for incumbents. But it can just as easily result from gaps in a regulatory regime or fundamentally new business models that solve problems legal regimes have been designed to address. This Article is the first to offer a comprehensive analytical framework of*

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*how business innovation can create policy disruption and how regulators should respond. We develop a three-step process that should guide regulators in responding to policy disruptions, suggesting that, as a default, regulators should strive to be neutral as between incumbents and innovators. We conclude by offering specific policy instruments that regulators can use to draft laws more neutrally to avoid or limit such policy disruptions in the future.*



## INTRODUCTION

The platform economy (also known as the "sharing economy") has recently burst onto the scene as *the* hot topic in legal scholarship.[1]

1. These new economic relationships have been called the "sharing economy," "collaborative consumption," the "mesh," and the "gig economy," among other monikers, each of which captures some, but not all, features of these new economic relationships. RACHEL BOTSMAN & ROO ROGERS, WHAT'S MINE IS YOURS: THE RISE OF COLLABORATIVE CONSUMPTION 67 (2010); ROBIN CHASE,

The internet's virtual elimination of transaction costs between service providers and customers has enabled entirely new markets to emerge for renting out rooms, using private cars for rides, hiring labor for small tasks, and selling other goods and services. The rise of the platform economy has been proclaimed as revolutionary, disrupting and destroying long-established competitors, and forcing us to rethink regulation of entire sectors.[2]

This business innovation certainly raises a wide range of important legal issues: Should service providers be considered employees of the firm managing the platform? Who bears liability for harm caused during service provision? Should legacy (and now-threatened) service providers such as hotels and taxi drivers be given special protections or compensation based on their reliance interests in the old legal regime? Regulators, policymakers, and scholars around the nation have been exploring how the law and legal institutions should adapt (or not) to the challenges posed by the practices of upstart companies such as Airbnb and Uber. Legal scholars have made sweeping claims about the dramatic changes that the platform economy promises for law, regulation, and the economy.[3]

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PEERS INC.: HOW PEOPLE AND PLATFORMS ARE INVENTING THE COLLABORATIVE ECONOMY AND REINVENTING CAPITALISM 18 (2015); LISA GANSKY, THE MESH: WHY THE FUTURE OF BUSINESS IS SHARING (2010); BRAD STONE, THE UPSTARTS: HOW UBER, AIRBNB, AND THE KILLER COMPANIES OF THE NEW SILICON VALLEY ARE CHANGING THE WORLD (2017); Rachel Botsman, *Defining the Sharing Economy: What is Collaborative Consumption-And What Isn't?*, FAST COMPANY (May 27, 2015), https://www.fastcompany.com/3046119/defining-the-sharing-economy-what-is-collaborative-consumption-and-what-isnt#12 [https://perma.cc/HEX5-HUFG] (noting conflicting definitions); Mark R. Warner, *Asking Tough Questions About the Gig Economy*, WASH. POST (June 18, 2015), https://www.washingtonpost.com/opinions/asking-tough-questions-about-the-gig-economy/2015/06/18/b43f2d0a-1461-11e5-9ddc-e3353542100c_story.html [https://perma.cc/GN4F-T7X3]. We adopt the term "platform economy" for purposes of this Article, both to signify the common denominator of using online apps to match providers with users, such as lodging rental "hosts" and "guests" and ride-for-hire "drivers" and "passengers," and to clarify that the underlying transactions are commercial, rather than based on gratuitous sharing. *See* Orly Lobel, *The Law of the Platform*, 101 MINN. L. REV. 87 (2016) (discussing the platform economy). We acknowledge that genuine sharing does occur in some contexts. *See* Michèle Finck & Sofia Ranchordás, *Sharing and the City*, 49 VAND. J. TRANS. L. 1299 (2017) (designing a sharing taxonomy differentiating between noncommercial "couch surfing" and commercial enterprises like Uber); Kellen Zale, *Sharing Property*, 87 COLO. L. REV. 501 (2016) (same). However, our focus is on the commercialized version.

2. *See, e.g.*, Lobel, *supra* note 1 (discussing how the platform economy is disrupting regulated industries and causing a shift in legal theory); Irving Wladawsky-Berger, *The Rise Of The Platform Economy*, WALL STREET J.: CIO J. (Feb. 12, 2016, 3:26 PM), http://blogs.wsj.com/cio/2016/02/12/the-rise-of-the-platform-economy/ [https://perma.cc/GPW6-DJ8B] (discussing how "[p]latform companies are major drivers of innovation" and how "[t]raditional companies are challenged to keep up or risk being left behind").

3. *See, e.g.*, Yanelys Crespo, *Uber v. Regulation: "Ride-Sharing" Creates a Legal Gray Area*, 25 U. MIAMI BUS. L. REV. 79 (2016) (summarizing Uber's various legal challenges); Nestor Davidson & John Infranca, *The Sharing Economy as an Urban Phenomenon*, 34 YALE L. & POL'Y REV. 215, 222 (2016) (discussing how the sharing economy will "impact the broader regulatory

Pushing back against this flurry of excitement, we argue both that scholarship about the platform economy has been ahistorical and that this lack of perspective matters. Scholarship focusing on the immediacy and novelty of the platform economy has missed the bigger picture. In fact, in important ways, the platform economy's interaction with the legal system does *not* raise fundamentally new questions from a law and policy perspective. To be sure, the ascendance of the platform economy is both innovative and potentially disruptive to incumbents. But that's a well-worn story, and has been the case time and again in different markets for well over a century.

From a business or economic perspective, history is full of technological and management advances that fundamentally disrupted business models over a brief period of time.[4] Over the past century, commercial innovation, driven both by technological changes and innovation in how entrepreneurs choose to organize their firms, has arisen periodically in a kind of punctuated equilibrium with policy disruption. The platform economy is the latest chapter in an ongoing story. Consider the advent of the telephone over the telegraph, the rise of franchising over independent service providers, or the triumph of suburban mall and big-box stores over small Main Street vendors.

From a legal perspective, we argue that these bursts of business innovation—only some of which are "disruptive" from a business theory perspective[5]—pose a recurring question, one that is at the heart of how the regulatory state operates.[6] A regulatory program generally—even necessarily—presumes a certain kind of organizational form for the

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landscape of city life, necessitating a new, holistic approach to urban governance"); Lobel, *supra* note 1, at 91 ("[T]he platform economy is presenting not only a paradigmatic shift for business, but also for legal theory."); Stephen R. Miller, *First Principles for Regulating the Sharing Economy*, 54 HARV. J. ON LEGIS. 147, 149 (2016) (discussing how "many sharing economy businesses have violated state or local government laws" and how "the mass scale of the sharing economies' non-compliance with local government laws can be rectified"); Daniel E. Rauch & David Schleicher, *Like Uber, But for Local Governmental Policy: The Future of Local Regulation of the "Sharing Economy,"* 76 OHIO ST. L.J. 901 (2016) (arguing that local and state governments will neither shut down the platform economy nor let it evolve free of regulation, but rather will design "mixed regulatory strategies"); Brishen Rogers, *Employment Rights in the Platform Economy: Getting Back to Basics*, 10 HARV. L. & POL'Y REV. 479 (2016) (discussing the platform economy's impact on employment regulation using Uber as a case study); Kellen Zale, *When Everything is Small: The Regulatory Challenge of Scale in the Sharing Economy*, 53 SAN DIEGO L. REV. 949 (2016) (same).

4. Examples from business management literature are discussed *infra* Section I.A. For a discussion of other historical case studies, see *infra* Part II.

5. *See infra* Section I.A (discussing business theory of disruptive versus sustaining innovation).

6. The platform economy also presents challenges for private law regimes such as property, tort, and contract law, which are not our focus. *See* Chad G. Marzen, Darren A. Prum & Robert J. Aalberts, *The New Sharing Economy: The Role of Property, Tort and Contract Law for Managing the Airbnb Model*, 13 N.Y.U. J.L. & BUS. 295 (2017).

activities that it regulates. It has to determine the units of regulation that will be the subject of permitting, monitoring, standard setting, and compliance and enforcement efforts. Those units of regulation will usually be related to the business model of the regulated industry—either as a result of a conscious public policy choice, or as a result of an implicit choice that the regulatory structure most sensibly applies when its structure interfaces well with the industry's business model.[7] When business innovation upends that preexisting model, the result is a disjunction between the structure of the regulatory system and the industry that is being regulated: a *policy disruption.*

We contend that there are four primary types of policy disruption: *End-runs*, *Exemptions*, *Gaps*, and *Solutions*, each of which requires a different regulatory response. Policy disruption can result from conscious choices by entrepreneurs to exploit ambiguous laws (*End-runs*) or express legal loopholes (*Exemptions*). But it can just as easily result from business innovations to which the existing regulatory regime simply does not apply (*Gaps*).[8] For example, everyone might agree that all providers of rental rooms should ensure that the rooms provide an adequate egress for occupants in the event of a fire or earthquake. However, determining how to ensure compliance with that standard will pose fundamentally different questions when the presumption is that the regulated entity is a 500-room hotel with a full-time staff that can meet with the local fire chief to facilitate the necessary inspections, compared with when the provider of the room is a single-family homeowner who rents out her spare bedroom ten days a year through Airbnb, and has a full-time job that prevents her from making an appointment with a fire inspector during regular business hours.

Existing regulations can effectively bar entry to new business models that do not match the requirements or assumptions of the regulatory system. And some of these business innovations can solve problems that regulatory systems are designed to address (*Solutions*). If every homeowner seeking to use third-party financing to install solar

7. Analogous issues arise in the context of allocating regulatory power among federal, state, and local governments when the existing allocation of authority presumes certain forms of business organization or certain basic technologies. For discussion of how business and technological innovation can upend existing understandings of federalism, see Sarah E. Light, *Precautionary Federalism and the Sharing Economy*, 66 EMORY L.J. 333 (2017) [hereinafter Light, *Precautionary Federalism*] (discussing how the rise of Uber and Lyft require a precautionary approach to the allocation of regulatory authority). *Cf.* Sarah E. Light, *Advisory Nonpreemption*, 95 WASH. U. L. REV. 325 (2017) [hereinafter Light, *Advisory Nonpreemption*] (discussing how autonomous vehicles disrupt the allocation of regulatory authority for vehicle safety between the federal and state governments).

8. *See infra* Section I.B (offering a taxonomy of ways in which policy disruption can occur).

panels on her roof must obtain contract preapproval from the state public utilities commission, this legal requirement will effectively prohibit the expansion of distributed solar generation. Such barriers to entry may reflect efforts by entrenched industry incumbents to protect themselves against competition. But clearly not all regulatory barriers to entry reflect conscious public policy or rent-seeking choices—they may instead result from implicit assumptions about how the world worked when the regulation was written. And there may have been valid public policy reasons to prefer one type of firm as a provider of goods or services over other types. But business innovation should force us to question these assumptions.

In our view, the question of whether Uber's avoidance of existing taxi regulations is a free-market blow against entrenched incumbents, or instead is an effort by greedy Silicon Valley investors to undermine essential consumer and worker protection, is to a certain extent beside the point. Even if we wanted to keep the exact same regulatory standards for Uber as for the existing taxi industry, we would still have to wrestle with difficult questions about how to structure our regulatory system to incorporate the new business model.

At that point, a regulator necessarily has to make a choice about how (or even whether) to regulate the innovative business. The regulator may choose to prevent the innovator from entering the market, preserve the existing regulatory structure, develop new regulatory structures that match the new business structure, or allow the innovation to proceed without updating the regulatory structure (and thereby likely doom the existing regulatory structure to extinction). In each case, the regulator must likewise decide whether reliance interests in the existing system require some kind of compensation for incumbents threatened by the new market entrants.

How the regulator ought to respond, we contend, depends fundamentally on the values that we want our regulatory structure to promote, including efficiency, innovation, and protection of the public interest. In our view, to effectuate these normative values, existing legal rules (and any new rules drafted) should be interpreted as a default not to be tied too closely to a specific form of business organization. Instead, the law should strive for "organizational neutrality," not privileging one form of business organization over another.[9] The organizational neutrality principle offers the best way to

9. A scholar of corporate law first used the term "organizational neutrality" in offering a positive account of the Supreme Court's muddled jurisprudence on corporate constitutional rights. Vincent S.J. Buccola, *Corporate Rights and Organizational Neutrality*, 101 IOWA L. REV. 499, 502–03 (2016). The general principle requires that "the burden of actual or potential regulation should

balance the competing concerns of (1) preserving incentives for business innovation that do not penalize newcomers or new forms of organization while (2) reducing incentives for regulatory arbitrage that would do the opposite—privilege new forms of business over incumbents. Finally, a default principle of neutrality has the potential to render legal rules more durable as new forms of business organization arise, because the law's application would not depend upon the particular form of organization selected by entrepreneurs and would allow regulators to determine that the public interest can outweigh the norm of neutrality in some cases.

Seen in this light, the debates over whether and how the regulatory system should adjust to the rise of platforms such as Uber are not fundamentally new at all. The basic question is whether the regulatory structure that assumed the existence of centrally owned, dispatched taxi fleets with dedicated vehicles and drivers can be interpreted flexibly to apply to ride-sharing platforms that "rent" vehicles from driver-partners but for which (arguably) there is no central owner or operator, versus whether that regulatory system should be supplemented or replaced with an entirely new structure. The answer should be informed by concerns about promoting business innovation, protecting the public interest, and asking whether reliance interests should be compensated.

In the pages that follow, we show how the administrative state's responses to past business innovations shed light on its current responses to the platform economy. Managing the next disruptive innovation, wherever it may appear, is even more important.

The Article proceeds in four parts. Part I provides a primer on business innovation theory and relates it to policy design. We disaggregate the concepts of disruptive business innovation and policy disruption to make clear that one does not always follow from the other. We offer a taxonomy of pathways through which business innovation leads to policy disruption that ultimately informs the solutions we will propose to these recurrent problems. Part II moves from theory to practice, grounding our analysis in historic case studies about the

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not affect the mode of organization through which entrepreneurs choose to coordinate group activity." *Id.* at 503. While we take no position on whether this principle explains the Court's corporate constitutional rights jurisprudence, we argue that the general concept of neutrality among business forms offers a meaningful normative principle to guide regulators in addressing the problem of regulatory disruption and extend it to this new context. *See infra* Part III. Although Buccola's article focuses on neutrality among legal corporate forms (e.g., corporation versus partnership), our analysis argues for neutrality across the range of business organizational forms or models, regardless of the specific legal corporate form. Accordingly, when we refer to "form" in this Article, our reference is to the broader concept.

regulation of franchising and energy production. Each case reveals basic lessons about when and how business innovation has led to policy disruption, demonstrating the recurring nature of this problem.

Building on these insights, Part III develops a theoretical framework and decisions flow chart for the regulation of innovative business models. In the face of any innovative business model that creates policy disruption, regulators have four primary regulatory options. They need to consider whether to *Block* the new business model from entering the market; to give the new business model a *Free Pass*, such that existing rules would not apply; to apply the existing regulatory structure, however imperfectly—a method we call *OldReg*; or to develop a new regulatory structure entirely—what we call *NewReg*. These questions, and the choices regulators face, were as relevant in 1917 as they are in 2017. Part IV then applies this framework to the challenges posed by the rise of distributed generation and Tesla's efforts to sell its electric vehicles directly to customers. The conclusion sets out specific policy instruments that regulators can use to draft laws more neutrally to avoid or limit policy disruptions in the future.

## I. DISRUPTION THEORY IN BUSINESS AND POLICY

Disruption is the talk of the town thanks to the likes of Uber, Lyft, TaskRabbit, Airbnb, and other upstarts of the platform economy. Clearly, the platform economy is destabilizing the industries in which it is gaining traction, but so what? Why should we care if Uber takes rides away from taxis and Airbnb puts some hotels out of business? Competition is good, and the fact that these innovative businesses are wildly popular with consumers[10] must mean that shaking up the incumbent industry players is good, too. No one today mourns over the demise of the buggy whip industry.

To be sure, by no means would we suggest that the economic impacts often associated with an industry undergoing this kind of "attack" from innovators are a trivial policy concern. Jobs may be lost, incumbent businesses run into the ground, and investments shattered. Entrenched interests will push back at every turn, lobbying regulators for protectionist policies and suing the innovators on whatever basis they can. In short, business "disruption" is called that precisely because

10. Emily Fetsch, *Millennials and the Platform Economy*, KAUFFMAN FOUND. (Aug. 16, 2016) http://www.kauffman.org/blogs/growthology/2016/08/millennials-and-the-platform-economy [https://perma.cc/23XU-ZGCV].

it is disruptive. The incumbents are not about to roll over without a fight, and they may take the fight to legislatures, agencies, and courts.

The difference, of course, is that besides causing industry upheaval, Uber, Airbnb, and other applications of the platform economy often are also arguably illegal, if not patently illegal, in many jurisdictions. They are routinely skirting and flouting existing federal, state, and local laws. For example, many Airbnb "hosts" are violating public zoning regulations and private covenant and lease agreements. Uber and Lyft are embroiled in litigation and public investigations regarding the legality of their treating "drivers" as independent contractors. And until a number of jurisdictions began to adopt new laws to govern "transportation network companies," Uber and Lyft were arguably violating local regulations governing accepting rides for hire.[11] There are also concerns that, while not technically illegal, some effects of the platform economy are offensive to settled norms. For example, some studies have suggested that many Airbnb "hosts" engage in discriminatory practices that would be illegal under federal housing discrimination laws but for exemptions covering room rentals by

11. Stories regarding specific examples of platform economy illegality abound. *See, e.g.*, *Contractor or Employee? Uber Drivers and the Future of Ridesharing*, BERKELEY TECH. L.J.: BTLJ BLOG (Apr. 13, 2016), http://btlj.org/2016/04/contractor-or-employee-uber-drivers-and-the-future-of-ridesharing/ [https://perma.cc/CU6S-6K4K]; Braden Dupuis, *WHA Tenant Caught Listing Home on Airbnb*, PIQUE (Jan. 7, 2016), http://www.piquenewsmagazine.com/whistler/wha-tenant-caught-listing-home-on-airbnb/Content?oid=2745251 [https://perma.cc/3SLA-VKJN]; Mike Isaac, *Justice Department Expands Its Inquiry into Uber's Greyball Tool*, N.Y. TIMES (May 5, 2017), https://www.nytimes.com/2017/05/05/technology/uber-greyball-investigation-expands.html [https://perma.cc/AZ7W-R5SJ] (noting existing criminal investigation into whether Uber used a technological tool to evade local law enforcement in several cities in which it was operating without authorization); Elyce Kirchner & David Paredas, *Uber and Lyft Drivers Told to Ignore Regulations: Companies Pay Airport Citations for Drivers*, NBC (Oct. 6, 2014, 4:37 PM), http://www.nbcbayarea.com/investigations/Rideshare-Drivers-Told-to-Ignore-Regulations-Uber-Lyft-will-pay-citations-at-Bay-Area-Airports-278283631.html [https://perma.cc/PR29-Z4ST]; Rob Lieber, *A Warning for Hosts of Airbnb Travelers*, N.Y. TIMES (Nov. 30, 2012), http://www.nytimes.com/2012/12/01/your-money/a-warning-for-airbnb-hosts-who-may-be-breaking-the-law.html [https://perma.cc/R5ZW-MBTS]; Matt Lynley, *Uber Was Just Busted for Violating Taxi Regulations in Washington D.C.*, BUS. INSIDER (Jan. 13, 2012, 5:44 PM), http://www.businessinsider.com/uber-was-just-busted-for-violating-taxi-regulations-in-washington-dc-2012-1 [https://perma.cc/4MD3-UV6Z]. For an entertaining history of these and other legal battles platform economy enterprises have been fighting, see STONE, *supra* note 1, chs. 9–11. For accounts in legal scholarship of the various legal transgressions of platform economy enterprises, see *supra* note 3. One recent paper argues that forcing changes in the law is a core part of the business model of many firms in the platform economy, and refers to such efforts as "regulatory entrepreneurship." Elizabeth Pollman & Jordan M. Barry, *Regulatory Entrepreneurship*, 90 S. CAL. L. REV. 383 (2017). For a discussion of how various states and some local jurisdictions have begun to regulate Uber, Lyft, and other for-hire transportation platforms in response to these efforts, see Light, *Precautionary Federalism*, *supra* note 7, at 376–82.

homeowners.[12] Yet, consumers, investors, and the media are intoxicated with the platform economy, so jurisdictions around the nation—indeed, around the world—are grappling to find the right way to manage these innovative businesses. In other words, they are not merely *business* upheavals; they are also *policy* upheavals.

To be clear, not all business upheavals result in policy upheavals. For example, contrast the policy controversies plaguing the platform economy to what is held out as a classic example of a business innovation with radical impacts on its industry—Netflix.[13] Leveraging the technological progression from VCRs to DVDs to streaming video, Netflix created a new business model that eventually destroyed what had been a booming incumbent brick-and-mortar movie rental industry, exemplified by Blockbuster.[14] Netflix's mailed DVD business not only initially served customers Blockbuster did not, such as those who could not drive to a rental outlet, but also quickly made life easier for those who preferred ordering movies online to driving to the video store. Its later streaming service spelled the end of the brick-and-mortar rentals, save for the Redbox kiosks at your local grocery store. At no point in the history of this industry disruption, however, did any serious effort mount to regulate the business innovation. No cities or states banned Netflix from mailing DVDs to customers or, later, from streaming media into homes. No employee or other interests of the brick-and-mortar rental industry litigated to contest the entry of mailed DVDs or streaming into the market. Even Blockbuster did not lobby regulators or litigate to stop Netflix. Netflix transformed an industry, but this business innovation did not create a policy upheaval.[15] Nor, of course,

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12. *See* Benjamin G. Edelman et al., *Racial Discrimination in the Sharing Economy: Evidence from a Field Experiment*, AM. ECON. J.: APPLIED ECON., April 2017, at 1, 16–18; Zale, *supra* note 3, at 955.

13. Clayton M. Christensen et al., *What Is Disruptive Innovation?*, HARV. BUS. REV., Dec. 2015, at 44, 48–49, https://hbr.org/2015/12/what-is-disruptive-innovation [https://perma.cc/9TVT-KJS3] (describing Netflix in these terms).

14. For entertaining histories, see Michael Antonoff, *How a Struggling Netflix Became the New Blockbuster*, USA TODAY (Jan. 23, 2015, 3:24 PM), http://www.usatoday.com/story/money/2015/01/23/antonoff-column-video-streaming-netflix-blockbuster/22209273/ [https://perma.cc/9GDF-QALK]; Rick Newman, *How Netflix (and Blockbuster) Killed Blockbuster*, U.S. NEWS (Sept. 23, 2010, 2:06 PM), http://money.usnews.com/money/blogs/flowchart/2010/09/23/how-netflix-and-blockbuster-killed-blockbuster [https://perma.cc/PYG4-JSW2].

15. This is not to say Netflix has faced no policy issues at all. For example, its practice of penalizing subscribers who ordered more mailed DVDs with slower deliveries, known as throttling, led to litigation. *See* Michael Liedtke, *"Throttling" Angers Netflix Heavy Renters*, BUS. WEEK ONLINE (Feb. 10, 2005), https://web.archive.org/web/20060215072830/http://www.businessweek.com/ap/financialnews/D8FMEGTO0.htm? [https://perma.cc/QG3H-X9SS]. More recently, some jurisdictions have considered taxing internet-based video streaming services such as Netflix to compensate for falling utility tax revenues from cable television as people increasingly move from cable to internet. *See* Mike McPhate, *California Today: Fretting*

are most policy upheavals—such as major regulatory changes in the protection of the environment, civil rights, or people in the lesbian, gay, bisexual, and transgender communities—the result of business upheavals.

In the siloed worlds of scholarship, business upheavals are of great interest to business theorists, and policy upheavals are of great interest to policy theorists. Our interest is in sorting out what to do when they occur together in a causal relationship—when radical transformation of an industry by a business innovation demands clear thinking about whether a substantial policy response is appropriate and, if so, in what form. We therefore need to lay a theoretical foundation for understanding both components of the potent combination—business and policy—and to establish some precision in the language we employ. In that regard, we have been careful with how we have used the term "disruption" thus far in connection with business innovation, as it has a technical meaning in business theory that has largely been ignored in the policy debate over the platform economy. Equally so, however, the business theory of innovation has paid little attention to the role of policy in constraining or facilitating the innovative business agent of disruption. The two theory domains have largely ignored each other. To bridge that gap, below we briefly trace the development of *business disruption* theory, including its failure to incorporate a policy dimension, and couple that with our own theory of *policy disruption.*

### *A. What Is Business Disruption?*

All business disruptions begin with business innovations. We envision three business innovation scenarios that could lead to policy concerns. First, an existing business could leverage a new technology to produce a good or service, or deliver it to customers in a novel way. This may happen if residential package delivery services start using drones, and it did happen when Netflix started delivering videos to customers through the mail and later through internet streaming. Second, a business firm might organize itself in a new way to produce a good or service. Examples include Uber "renting" vehicles from thousands of private car owners rather than using central taxi fleets and distributed

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*over the "Netflix Tax,"* N.Y. TIMES (Nov. 28, 2016), http://www.nytimes.com/2016/11/28/us/california-today-netflix-tax-video-streaming.html?_r=0 [https://perma.cc/4KDX-4PKB]. Ironically, Netflix sued Blockbuster for infringing upon its business method patents when Blockbuster began to adapt its own practices to compete with Netflix. Reuters, *Blockbuster Settles Fight with Netflix*, N.Y. TIMES (June 28, 2007), http://www.nytimes.com/2007/06/28/technology/28video.html?mcubz=1.

generation firms relying on thousands of individual homeowners to install solar panels that generate electricity rather than centralized utilities to perform the same function. Third, a new technology might create the space for an entirely new kind of business producing an entirely new good or service, such as the advent of the telegraph. In short, business innovation involves a new technology, a new form of business organization, or both.

Indeed, new technologies and new forms of business organization often go hand-in-hand, for good reason. Regarding the form of business organization, an entrepreneur has many choices about how to organize a business enterprise.[16] At one end of the spectrum, she may choose to incorporate her enterprise into a hierarchical or centralized firm, in which the corporation both owns the necessary capital equipment and employs individuals to carry out the functions of the firm. At the other end of the spectrum, an entrepreneur can enter into a series of contracts within the market, use independent contractors rather than hire employees, and rent, rather than own, capital equipment.[17] Ronald Coase recognized that transaction costs—including not only the relative costs of renting versus owning, contracting versus employing, and search costs, but also *regulatory* costs—affect whether entrepreneurs choose to incorporate into firms, utilize markets, or choose some intermediate form of organization.[18] Entrepreneurs seek to minimize

16. R.H. Coase, *The Nature of the Firm*, 4 ECONOMICA 387 (1937) (contrasting hierarchical firms with disaggregated markets and contracts, and arguing that firms organize hierarchically when doing so reduces the transaction costs that would be expended in markets); Oliver E. Williamson, *The Modern Corporation: Origins, Evolution, Attributes*, 19 J. ECON. LITERATURE 1537, 1537–39 (1981) (arguing that a firm is not merely a "production function," but rather a "governance structure" that strives to minimize "transaction costs"); *cf.* Yochai Benkler, *Coase's Penguin, or, Linux and the Nature of the Firm*, 112 YALE L.J. 369 (2002) (discussing "commons-based peer production," including of software, and its transformation of traditional understandings of the firm); Yochai Benkler, *Sharing Nicely: On Shareable Goods and the Emergence of Sharing as a Modality of Economic Production*, 114 YALE L.J. 273, 275 n.2 (2004) (discussing voluntary, not-for-profit peer production of software such as Linux as a new, third form of economic organization distinct from firms and markets); Rashmi Dyal-Chand, *Regulating Sharing: The Sharing Economy as an Alternative Capitalist System*, 90 TUL. L. REV. 241, 245 (2015) ("[T]he dissonance between participants in sharing markets and regulators goes to the very heart of Americans' understanding of basic concepts such as 'markets,' 'business,' 'entrepreneurship,' and 'capitalism.' "). We note that our analysis here focuses primarily on for-profit business enterprise, which is more likely to trigger regulatory responses than voluntary sharing agreements among peers or neighbors.

17. Again, whether a firm is *actually* using independent contractors or merely *asserting* that it is using independent contractors remains a question to be resolved by courts or regulators.

18. Coase, *supra* note 16, at 390 ("The main reason why it is profitable to establish a firm would seem to be that there is a cost of using the price mechanism."). Transaction costs include "discovering what the relevant prices are," negotiation costs, and regulatory costs, among others. *Id.* at 390–93 ("[E]xchange transactions on a market and the same transactions organized within a firm are often treated differently by Governments and other bodies with regulatory powers."); *see also* Oliver E. Williamson, *Markets and Hierarchies: Some Elementary Considerations*, 63 AM.

their transaction costs and production costs by selecting the most efficient size and type of business organization.[19]

Notably, Coase also anticipated that technological innovation could affect the relative costs of managers' choices:

> [M]ost inventions will change both the costs of organizing and the costs of using the price mechanism. In such cases, whether the invention tends to make firms larger or smaller will depend on the relative effect on these two sets of costs. For instance, if the telephone reduces the costs of using the price mechanism more than it reduces the costs of organising, then it will have the effect of reducing the size of the firm.[20]

This insight anticipates how the rise of smartphone technology has eliminated certain transaction costs associated with matching supply and demand in the transportation industry. It is now virtually costless to match willing drivers with people needing rides.[21] This decrease in costs associated with markets has made it possible for Uber and Lyft to avoid ownership of vehicles and instead to "rent" vehicles through the market on a short-term basis from driver-partners based solely on actual demand. The same can be said of Airbnb. Before the advent of smartphones and platform technology, matching a person seeking a couch to sleep on with willing couch providers was a daunting and expensive task. Hotels had an advantage because of their constant capacity to meet potential demand. Now, transaction costs of matching supply and demand are minimal. In the context of electric power generation, too, what once required large power plants with hundreds or thousands of employees, and expensive, hazardous inputs like coal to

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ECON. REV. 316, 316 (1973) (noting that nonmarket forms of business organization arise "whenever the market, if used to complete a set of transactions, experiences 'frictions' " including institutional and market failures such as opportunism, uncertainty, and administrative expenses); Williamson, *supra* note 16, at 1357 ("[T]he modern corporation is mainly to be understood as the product of a series of organizational innovations that have had the purpose and effect of economizing on transaction costs."). The choice about where to locate on the continuum between hierarchies and markets is not a binary one. Indeed, while Coase argued that "integration" involves the "suppression of the price mechanism," firms can nonetheless employ internal "price"-based mechanisms, such as internal carbon fees, to shape behavior within the hierarchy. Sarah E. Light, *The New Insider Trading: Environmental Markets Within the Firm*, 34 STAN. ENVTL. L.J. 1 (2015) (discussing Microsoft's use of an internal carbon pricing mechanism to drive down emissions within the firm).

19. Coase, *supra* note 16, at 397; Michael C. Jensen & William H. Meckling, *Theory of the Firm: Managerial Behavior, Agency Costs and Ownership Structure*, 3 J. FIN. ECON. 305, 310–11 (1976) (complicating this analysis by arguing that firms are not to be understood as "hierarchies," but rather as a "nexus for a set of contracting relationships among individuals," and contending that it "makes little or no sense to try to distinguish those things which are 'inside' the firm . . . from those things that are 'outside' of it"); Williamson, *supra* note 18, at 316–18.

20. Coase, *supra* note 16, at 397 n.3.

21. *See* Lobel, *supra* note 1, at 14–19 (discussing ten efficiency-promoting features of the platform economy); *see also* Benjamin G. Edelman & Damien Geradin, *Efficiencies and Regulatory Shortcuts: How Should We Regulate Companies like Airbnb and Uber?*, 19 STAN. TECH. L. REV. 293 (2016) (pointing out that the platform economy enterprises "allow service providers and consumers to transact with each other without costly intermediaries").

generate electricity, can now be achieved (at a smaller scale) through the placement of inexpensive and safe solar panels on one's roof.

These technological innovations have changed the cost structure of how goods and services are provided in ways that affect entrepreneurs' choices about how to organize their business enterprises.[22] The same was true three centuries ago, however, when a similarly structured "putting-out economy" arose.[23] But Coase's insights on business organization and the role of technological innovation in how to organize a firm do not get at the question of when business innovation is *disruptive*, or even what that means. For one thing, technological innovation need not have profound effects on choices about business organization. Technological innovation could simply make an existing firm better at what it does without major changes in organizational form. For example, successive generations of the smartphone have not fundamentally altered the organizational form of Apple or Samsung. Likewise, an entrepreneur might devise a new form of business organization as a business innovation without relying on a new technology. Netflix, for example, initially relied on a very old technology—the U.S. mail—to deliver DVDs to customers. When is it, then, that business innovations that leverage a novel form of business organization, a technological innovation, or both, become disruptive—in the business theory sense—in the relevant industry?

Responding to that theme, today's dominant theory of business innovation traces its roots to the seminal 1995 paper by Joseph Bower and Clayton Christensen,[24] which Christensen later expanded and popularized in his influential book, *The Innovator's Dilemma*.[25]

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22. Coase, *supra* note 16, at 341 (noting that an equilibrium in firm size is reached when "the costs of organizing an extra transaction within the firm become equal to the costs of carrying out the same transaction by means of an exchange in the open market or the costs of organizing in another firm").

23. As political scientists Martin Kenney and John Zysman point out, in the putting-out economy

> that existed before factories . . . companies would ship materials to people to assemble items such as shoes, clothing, or firearms in their homes. In the current manifestation of putting out, the platform operator has unprecedented control over the compensation for and organization of work, while still claiming to be only an intermediary.

Martin Kenney & John Zysman, *The Rise of the Platform Economy*, 32 ISSUES SCI. & TECH., Spring 2016, at 61, 62, http://issues.org/32-3/the-rise-of-the-platform-economy/ [https://perma.cc/66E7-P5WD]. In other words, as a business model the platform economy is for the most part a teched-up version of a business model that dominated our economy three hundred years ago.

24. Joseph L. Bower & Clayton M. Christensen, *Disruptive Technologies: Catching the Wave*, HARV. BUS. REV., Jan.–Feb. 1995, at 43.

25. CLAYTON M. CHRISTENSEN, THE INNOVATOR'S DILEMMA: WHEN NEW TECHNOLOGIES CAUSE GREAT FIRMS TO FAIL (1997); *see also* Dan Yu & Chang Chieh Hang, *A Reflective Review of Disruptive Innovation Theory*, 12 INT'L J. MGMT. REVS. 435, 436 (2010) (offering a chronology of academic work).

Christensen's work on technological innovation builds on earlier works going as far back as Joseph Schumpeter's analysis of "creative destruction."[26] Much as did Coase, this early body of work introduced a series of key concepts regarding the relationship between technological innovation and business innovation, differentiating between two species in this respect. Under this framework, a *sustaining* business innovation takes place within the value network of the established firms and gives customers something more or better in the attributes they already value.[27] Sustaining innovation often is leveraged through an *incremental* technological innovation, which is a small step forward in technology that allows the sustaining improvement.[28] An example would be the iPhone's entry into the cell phone market with a better product.[29] By contrast, *disruptive* business innovation begins outside of the value network of the established firms and introduces a different package of attributes from the one that mainstream customers historically value, usually in the form of a lower-quality product or service than established firms are marketing.[30] Often a *breakthrough* innovation in technology fuels the disruptive business innovation.[31] An example would be the integration of internet access in hand-held cell phones that ultimately generated advanced "smartphones" and "tablets" that have displaced laptops as mainstream users' device of choice.[32] While these smartphones initially offered a lower-quality experience for surfing the internet than did laptop computers, the market quickly grew to appreciate their convenience and simplicity, and the product has improved over time.[33]

Christensen's theory has been enormously influential in business management practice and academic discourse,[34] but has by no

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26. JOSEPH A. SCHUMPETER, CAPITALISM, SOCIALISM, AND DEMOCRACY 83 (1942) (arguing that the "opening up of new markets . . . and the organizational development from the craft shop and factory to such concerns as U.S. Steel illustrate the same process of industrial mutation . . . that incessantly revolutionizes the economic structure *from within*, incessantly destroying the old one, incessantly creating a new one"; and calling this dynamic "Creative Destruction"); Yu & Hang, *supra* note 25, at 436 (noting this link).

27. Christensen et al., *supra* note 13, at 46–47.

28. *Id.* at 47–48.

29. *Id.* at 49.

30. *Id.* at 47.

31. *Id.* at 46.

32. *Id.* at 49–50.

33. Christensen recently complained that the two categories of innovation have been conflated and that "[m]any researchers, writers, and consultants use 'disruptive innovation' to describe *any* situation in which an industry is shaken up and previously successful incumbents stumble." *Id.* at 46.

34. One business scholar describes it as one of the rare instances when "[a] research project resonates with the business community so profoundly that key ideas from the project make it into

means been universally accepted among business theorists.[35] We do not aim to weigh in on the business theorists' debate over the precise contours of business disruption, much less its merit as a theory. Rather, for our purposes the takeaway message is this: from Coase to the present debate sparked by Christensen's criteria for disruptive innovation, the common thread in business theory is that meaningful business innovation—the kind with ample potential to rattle the incumbent firms in an industry—often involves the potent combination of a novel (to the industry) form of business organization leveraging a breakthrough (to the industry) technology, though one or the other can fuel business disruption on its own.

But what is the connection, if any, between business disruption theory and what we call policy disruption? As the contrast between Uber and Netflix reveals, our main point is that identifying a business innovation as disruptive or not, according to business theory, does not settle the question of what to do about it as a policy matter. Two of the classic case studies of truly disruptive innovation, for example, are the Swiffer mop, which has essentially replaced the traditional mop in many residential and commercial settings, and Kleenex tissues, which were introduced to remove cold cream and eventually displaced the cloth handkerchief.[36] Neither raised a policy battle. But how many other potential disruptive business innovations have failed because they *did* raise policy disruptions? Consider the demise of the digital music file-sharing site, Napster, which ran head first into copyright law, and the similar copyright law snarls a later permutation, Redigi, has run into.[37]

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the mainstream lexicon and business leaders from all over the world seek advice from the scholar." Michael R. Weeks, *Is Disruption Theory Wearing New Clothes or Just Naked? Analyzing Recent Critiques of Disruptive Innovation Theory*, 17 INNOVATION 417, 417 (2015).

35. Many of the business theorists' criticisms center on the vagueness and imprecision of the theory, including how to define disruption, whether the theory has predictive value, how to explain successes and failures, and how incumbents should respond. Nor is it evident when an innovation is really disruptive or how to predict its success or failure. Christensen's critics accuse him in this regard of cherry-picking examples of success to support the theory while ignoring potentially disruptive technologies that ultimately failed. Indeed, this was the central focus of Harvard history professor Jill Lepore's withering critique of Christensen in a 2014 article published in *The New Yorker*, in which she lambasted Christensen for using handpicked cases, never publishing in a peer-reviewed journal, and providing little predictive power though his theory. *See* Jill Lepore, *The Disruption Machine*, NEW YORKER, June 23, 2014, at 30, 30–36. Christensen and colleagues responded in Christensen et al., *supra* note 13; *see also* Andrew A. King & Baljir Baatartogtokh, *How Useful Is the Theory of Disruptive Innovation*, MIT SLOAN MGMT. REV., Fall 2015, http://sloanreview.mit.edu/article/how-useful-is-the-theory-of-disruptive-innovation/ [https://perma.cc/G6H8-Y6ED] (analyzing and critiquing case studies). For a thorough review of the debate, see Weeks, *supra* note 34, *passim*.

36. Jon M. Garon, *Mortgaging the Meme: Financing and Managing Disruptive Innovation*, 10 NW. J. TECH. & INTELL. PROP. 441, 443–45 (2012).

37. *See* A&M Records, Inc. v. Napster, Inc., 239 F.3d 1004 (9th Cir. 2001); Capitol Records, LLC v. ReDigi Inc., 934 F. Supp. 2d 640 (S.D.N.Y. 2013).

Or consider Aereo, a television streaming service, whose business model broadcast networks was successfully challenged in the Supreme Court, and which subsequently filed for bankruptcy.[38]

Indeed, disruptive innovation theory advocates and critics alike fail in any meaningful way to incorporate *policy* either as an explanation for why a business innovation becomes disruptive in its relevant industry or, more fundamentally, for when a business innovation creates policy challenges. We identified no business scholarship engaging in robust policy analysis to explain and sort through the contours and merits of how disruptive innovation theory interacts with policy questions.

Legal scholarship in this space has done little more to bridge the two domains in any meaningful way. Only a few legal scholars have attempted to link the platform economy with the business theory of disruptive innovation.[39] More attention in legal scholarship has been devoted to disruptive innovation theory generally.[40] In both cases, however, the analysis for the most part moves directly from a discussion of disruptive innovation theory to suggested policy responses, omitting the key middle step of examining the policy implications of disruptive innovation from a theoretical perspective.[41] Then there is the burgeoning body of legal scholarship on the platform economy, which largely describes the phenomenon as "disruptive" or "innovative"

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38. Am. Broad. Cos. v. Aereo, 134 S. Ct. 2498 (2014); Emily Steel, *Aereo Concedes Defeat and Files for Bankruptcy*, N.Y. TIMES (Nov. 21, 2014), https://www.nytimes.com/2014/11/22/business/aereo-files-for-bankruptcy.html [https://perma.cc/Z8K3-6MYT].

39. Sofia Ranchordas, *Innovation Experimentalism in the Age of the Sharing Economy*, 19 LEWIS & CLARK L. REV. 871, 883–88 (2016).

40. Nathan Cortez, *Regulating Disruptive Innovation*, 29 BERKELEY TECH. L.J. 175 (2014); Garon, *supra* note 36; Randolph Kahn, *Law's Great Leap Forward: How Law Found a Way to Keep Pace with Disruptive Technological Change*, ABA: BUS. L. TODAY, Nov. 2016, https://www.americanbar.org/publications/blt/2016/11/03_kahn.html [https://perma.cc/ZF9A-F3UQ].

41. For example, while providing the most thoughtful analysis to date of policy design options for managing disruptive innovation, Cortez moves from discussing the theory and examples of disruptive innovation directly to outlining a "regulatory toolkit," linking the two with only the observation that "certain innovations do not square well with existing regulatory frameworks." Cortez, *supra* note 40, at 187, 199–226. Similarly, Edelman and Geradin's study of market failures leading to the platform economy and policy approaches simply observes that "these platforms tend to be in tension with existing regulatory frameworks." Edelman & Geradin, *supra* note 21, at 293; *see also* JACOB HASSELBALCH, REGULATING DISRUPTIVE INNOVATIONS: THE POLICY DISRUPTION OF ELECTRONIC CIGARETTES 22–23 (2014) (briefly noting that "regulators are unable to adjust regulatory dynamics to the new market realities, creating a swiftly growing regulatory deficit or policy disruption"); K. Sabeel Rahman, *The Shape of Things to Come: The On-Demand Economy and the Normative Stakes of Regulating 21st-Century Capitalism*, 7 EUR. J. RISK REG. 652, 652, 655 (2016) (characterizing the platform economy as a "wave of 'disruptive' business models" that is "difficult from a regulatory perspective").

without connecting that claim to business theory, and moves quickly on from there to spelling out policy prescriptions.[42]

Our aim is not to discount the value of these bodies of business and legal scholarship but, rather, to fuse them. Our thesis is that doing so requires a theory of what we call *policy disruption.* By this we mean a more disciplined framework for analyzing how different forms of business innovation present distinct types of policy challenges. In short, the question that has been omitted from both the business and legal theory of business innovation, and the platform economy in particular, is *why* certain innovations do not square well with existing regulatory frameworks. This question has come up repeatedly in different contexts over time. The next Section offers a framework for understanding the different forms of business innovation and policy disruption that can occur.

### *B. What Is Policy Disruption?*

So, what determines whether a business innovation, however its business disruptiveness is defined and measured, leads to a *policy disruption*? At the most basic level, the new technology or business model (or both) driving the innovation must present concerns relevant to the existing regulatory structure governing the incumbent industry. In other words, the innovation must not square well with, or must be in tension with, existing regulatory frameworks. This is the difference between Uber and Netflix. In the case of Netflix, the rise of a new competitor to Blockbuster did not pose any significant impacts for the major regulatory systems governing Blockbuster—local land-use regulation and intellectual property. Once Netflix assured copyright holders that its mail delivery model complied with copyright law, which presented the same legal questions as Blockbuster's business model, a distinct advantage was that it faced no land-use law concerns. After all, the whole point of Netflix is that it did not require brick-and-mortar stores, and therefore it did not raise questions about traffic, development, noise, or other impacts that would be considered relevant for land-use regulators. On the other hand, the rise of Uber creates impacts that are relevant for the regulatory system that covers taxis. Uber cars use the same city streets as taxis and therefore might contribute to traffic congestion or emissions; Uber drivers carry passengers in the same way that taxi drivers do, raising possible concerns about safety for passengers, other drivers, pedestrians, and

42. *See supra* note 3.

bicyclists; Uber claims that its drivers are independent contractors, not employees, thus raising employment law issues; and so on. Similarly, Airbnb "hosts" can impose the very impacts that have led to restrictions on residential rentals found in many zoning regimes and private covenants, and the same concerns about discrimination in the provision of short-term rental housing that motivated the passage of the Civil Rights Act.[43]

But even if the business innovation does raise issues for the relevant regulatory structures, there is still the question of whether there is a mismatch between the innovation and the existing regulatory scheme. Some significant business innovations have not produced dramatic conflicts with regulatory schemes because they have not fundamentally altered the way in which the innovator interacts with the regulatory scheme as compared to incumbent firms. For instance, the rise of national chain warehouse and big-box retail posed major challenges for existing independent retail businesses, putting many of them out of business.[44] The business innovation leveraged a vastly increased scale of operation—bigger stores and more of them, operated through a centralized network—to increase control of supply chains, warehousing, employment pools, and other logistics.[45] However, warehouse and big-box retail stores nonetheless fit comfortably within the standard land-use planning system that most local governments use: they require a building permit for construction, just like a small retail store; the development and use of the property by a big-box retail would be covered by zoning regulations, just like a small retail store; and enforcement for violations could be imposed against the developer or owner of the property, just like a small retail store. Of course, the rise of big-box retail might pose a range of challenges to the substantive standards that land-use law applies to development. For instance, local governments began creating special regulatory standards for big-box retail because of concerns over traffic, sprawl, and impacts on small retail operations in urban core areas.[46] But those standards could easily

43. *See* Zale, *supra* note 3, at 993–94.

44. *See e.g.*, David Merriman et al., *The Impact of an Urban WalMart Store on Area Businesses: The Chicago Case*, 26 ECON. DEV. Q. 321 (2012).

45. *See* Emek Basker, *The Causes and Consequences of Wal-Mart's Growth*, 21 J. ECON. PERSP. 177 (2007). Alas, a new business model armed with a new technology—online shopping—has challenged the brick-and-mortar big-box model in many sectors. *See* Bourree Lam, *Why the Biggest Big-Box Stores Survive*, ATLANTIC (May 11, 2016), https://www.theatlantic.com/business/archive/2016/05/big-box-future/482211/ [https://perma.cc/TN4Y-L27N].

46. *See generally* Patricia E. Salkin, *Municipal Regulation of Formula Businesses: Creating and Protecting Communities*, 58 CASE W. RES. L. REV. 1251 (2008).

be applied to big-box retail stores through the existing land-use regulatory system.[47]

In contrast, compare the disconnect Uber creates between its claimed innovation and the taxi regulatory systems that exist in many local jurisdictions. The existing systems generally presume that the operator of a taxi works (more or less) full-time on the job, owns or has a long-term contractual relationship to use the relevant vehicle, primarily uses the vehicle for taxi use rather than personal use, is part of a larger taxi company that dispatches taxis and can ensure compliance with a range of regulatory standards, and so forth. In contrast, an Uber driver might only drive for a few hours a week, can switch from one platform to another or operate for multiple platforms simultaneously (e.g., flip to Lyft), uses her personal car for the ride-sharing work, and may have a fairly tenuous or contingent relationship with the ride-sharing platform. All of these fundamental differences in business model make the application of taxi regulations to individual Uber operators or to the Uber platform itself much more difficult or even impossible (at least without making Uber driving much less economically attractive).[48]

What can be drawn from these and similar examples to identify the features distinguishing between business innovation-policy mismatches and other kinds of policy disruptions? We are not concerned here, for example, with policy disruptions resulting from changing social norms, such as acceptance of same-sex marriage, or from general technological advancements, such as 3-D printing. Rather, the policy disruptions of interest in our model must involve a *business innovation* threatening an *incumbent industry* in such a way as to create a *policy problem* that the *existing regulatory regime* does not effectively manage. In other words, the policy problem must stem from a disconnect between the existing regulatory structure and the business innovation threatening the incumbent industry firms. Moreover, the relevant regulatory structure need not be confined to the regime governing the incumbent industry, as the business innovation might be so novel

47. It is worth noting that local zoning laws often employ individualized permit determinations by an administrative body, and expressly incorporate provisions for waiver of default rules. For a discussion of the role of permits as a potentially flexible public policy instrument to address policy disruption, see *infra* notes 145–148 and accompanying text.

48. This, of course, is the fundamental issue facing Uber and policymakers: Should existing taxi regulation regimes apply, in which case Uber will face substantial constraints, or should some less restrictive regime be designed so as to allow Uber's model some space? *See generally* Katrina M. Wyman, *Taxi Regulation in the Age of Uber*, 20 N.Y.U. J. LEGIS. & PUB. POL'Y 1 (2017) (offering an analysis of how taxi regulation should change in light of ride-hailing apps).

compared to industry incumbents that it raises policy concerns that the incumbents do not.

One can meaningfully identify four distinct species of such policy disruptions fueled by business innovation. The first category involves what we call policy *End-runs*, which occur when the business innovation, notwithstanding similarities to the incumbent industry, argues that the features of its technology or business model innovation make it sufficiently distinct so as to not be subject to costly regulation, tax, or other instruments of the policy regime governing the incumbent industry.[49] Current examples playing out in the platform economy include Uber's nearly world-wide battles with jurisdictions over whether it is subject to the regimes governing taxis, and concerns regarding whether Airbnb hosts are subject to public and private restrictions on short-term accommodations rentals.[50]

In some cases, the *End-run* may involve very little in the way of meaningful technological or business model innovation, relying more on the innovator's bald declaration that the existing legal regime does not apply to it. Consider Uber versus traditional taxi companies. If a taxi company one day simply declared: "We are no longer a taxi company. We will henceforth use an app for dispatching. We have let go our former driver employees and sold our taxis to them. We will consider allowing them and anyone else with a car to find passengers with our app if they pay us a cut of the fare. We will dictate both the fare and our cut, both of which will vary as we see fit, and will evaluate each driver to determine whether to allow them to continue using our app. With these radical innovations in place, we can no longer be regulated as a taxi company." That would be Uber. Uber's business model innovations—including its functional renting of vehicles from private driver-partners on a short-term basis and its convenience for users in how they "hail" and pay for rides—are facilitated by advances in smartphone technology. Uber's real distinction, some would argue, is that the platform is expressly and intentionally challenging the existing regulatory schemes that protect incumbents, including supply caps through medallions, fare controls, and other economic regulation in different jurisdictions—in the name of promoting "free" markets.[51]

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49. Indeed, efforts by businesses to argue that they are not covered by the law, or even to flout the law, may be part of a calculated business strategy to create facts on the ground that will force changes in the relevant regulations to enable the business to continue to operate. *See* Pollman & Barry, *supra* note 11.

50. *See* STONE, *supra* note 1, at 211–324.

51. Similarly, some commentators defend Airbnb, notwithstanding the fact that many of its "hosts" are violating leases, private covenants, and public regulations, as facilitating "the fundamental right to earn income from one's property" and thereby promoting free markets. *See*

A threshold question in an *End-run* scenario, therefore, is how truly innovative, whether technologically or through its business model, the claimed innovation is compared to the incumbent industry. That is the fight Uber is facing.[52] The less similarity between the two, the more legitimate the claim that the existing regulatory regime does not apply and the *End-run* is not merely an evasion strategy.[53] But that does not end the policy disruption analysis, as the innovation may still present the same policy concerns as the incumbent industry, perhaps to a greater or lesser degree, or raise entirely new ones.[54] The question remains whether the existing regulatory regime, or some other form of regulation, should apply.

The second variety of policy disruption category is what we call policy *Exemptions*. *Exemptions* occur when it is clear that the business innovation fits an explicit exception in the existing policy regime and is not subject to the regulation, tax, or other constraint, but it is creating or exacerbating a condition the policy regime was intended to control or mitigate. A current example comes from evidence that many Airbnb

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Christina Sandefur, *Life, Liberty, and the Pursuit of Home-Sharing*, REGULATION, Fall 2016, at 12. One business scholar's scathing critique of Uber (and the platform economy in general) builds on the *End-run* theme, arguing that platforms used "sharing economy" rhetoric to avoid or minimize regulation in the start-up stage, grew strong fast, and, when faced eventually with regulatory pushback, began to fight hard to write the rules that govern them. *See* Abbey Stemler, *The Myth of the Sharing Economy and Its Implications for Regulating Innovation*, EMORY L.J. (forthcoming 2017) http://ssrn.com/abstract=2828308 [https://perma.cc/PH76-GCJ7]. Indeed, as local jurisdictions in Tennessee began enforcing existing room-rental regulations against Airbnb, HomeAway, and similar platforms, and in some cases relaxing existing regulations but not eliminating them entirely, Airbnb succeeded in lobbying to have a bill introduced in the state legislature to preempt such local regulations, on the ground of promoting a free market approach. *See* Joey Garrison, *Bill Would Block Renting Ban*, TENNESSEAN, Feb. 10, 2017, at 3A.

52. Two business consultants have argued that platform economy firms like Uber and Airbnb are not sufficiently dissimilar from the incumbent firms, which had already been moving in the direction of using similar technology and business models, to justify different regulatory treatment. Robert Haslehurst & Alan Lewis, *We Don't Need a Whole New Regulatory Regime for Platforms Like Uber and Airbnb*, HARV. BUS. REV., Apr. 4, 2016, https://hbr.org/2016/04/we-dont-need-a-whole-new-regulatory-regime-for-platforms-like-uber-and-airbnb [https://perma.cc/YM7F-6JW6]. Following outcry from community advocates and the hotel industry, the legislation died.

53. Speaking of evasion, in 2017 it was revealed that Uber had for several years been using a tool known as Greyball to engage in a worldwide "violation of terms of service" program that included evading authorities by sending phantom rides to persons hailing a ride who were known by Uber to be local regulatory authorities. *See* Mike Isaac, *How Uber Deceives the Authorities Worldwide*, N.Y. TIMES (Mar. 3, 2017), https://nyti.ms/2lnl5b8 [https://perma.cc/67D3-JTGC].

54. For example, taxis compete with public transit and thus could undermine transit policy, but local taxi regulation authorities can control the number and fees of taxis to strike a balance. There is growing concern that Uber and its competitors have upset the balance in some cities by releasing an uncontrolled number of variable-pricing rides for hire onto the streets. *See* Light, *Precautionary Federalism*, *supra* note 7, at 367–70 (noting dearth of empirical research on the interaction between Uber/Lyft and public transportation); Emma G. Fitzsimmons, *Subway Ridership Declines in New York. Is Uber to Blame?*, N.Y. TIMES (Mar. 29, 2017), https://nyti.ms/2lBpZOB [https://perma.cc/PBL3-NLRK].

"hosts" engage in discriminatory "guest" selection practices.[55] Such practices would be illegal under federal housing laws but for specific exemptions covering rentals by homeowners that fit the Airbnb model in many cases. Renting out a room or unit in a dwelling where one continues to live and renting a home one owns are, under certain conditions, exempt from antidiscrimination rules under the Fair Housing Act.[56] The exemptions, regarded as a compromise critical to passing the housing discrimination laws, were intentional and likely regarded as small scale in use and impact during the era of homeowners finding renters through newspaper classified ads. Airbnb has both scaled up the homeowner room rental market to vast proportions[57] and made overt discrimination as easy and impersonal as a smartphone swipe to the left. Yet evidence of rampant discrimination does not change its legal status under the existing regime. *Exemptions* thus raise the question of whether to revisit the scope and terms of the regulatory exemption or address the problem through other regulatory strategies (e.g., strictly enforce zoning and other restrictions against rentals or impose liability on Airbnb as the platform).

Distinct from *End-runs* and *Exemptions*, policy *Gaps* occur when the business innovation threatening incumbent businesses creates a new policy problem for which no policy regime exists or for which applying an existing regime would require a novel and tenuous application of the regime's statutory and regulatory authorities. An example is the rise of internet advertising targeted by algorithms tracking a user's search habits.[58] The rapid spread of such innovative advertising methods has unquestionably disrupted the advertising industry, thrusting firms like Google and Amazon into its forefront. Yet there is no existing advertising regulatory regime that Google and

55. *See* Edelman et al., *supra* note 12; Zale, *supra* note 3, at 992–93; *see also* Selden v. Airbnb, Inc., No. 1:16-cv-00933, 2016 WL 6476934 (D.D.C. Nov. 1, 2016) (order dismissing class action lawsuit against Airbnb alleging discrimination, on ground that Airbnb "guests" agree to arbitration when using the platform).

56. Fair Housing Act ("FHA"), 42 U.S.C. § 3603(b) (2012) (providing exemptions from the prohibition of discrimination in the sale and leasing of dwellings); *see also* Fair Hous. Council v. Roommate.com, LLC, 666 F.3d 1216 (9th Cir. 2012) (holding that a bedroom in a home is not a "dwelling" and thus the FHA does not apply to advertisements for leasing the bedroom that discriminate based on protected classes).

57. Kellen Zale has argued that scale—the aggregate effect of many small transactions in the space—is the platform economy's "defining feature and fundamental challenge," observing that "small may be beautiful, but when everything is small, the regulatory challenge is immense." Zale, *supra* note 3, at 950.

58. *See* Alistair Barr & Jennifer Saba, *Amazon Finally Gets Serious About Ads, on Track to Become Its Next $1 Billion Business*, HUFFINGTON POST (Apr. 24, 2013, 1:09 AM), http://www.huffingtonpost.com/2013/04/24/amazon-ads_n_3143870.html [https://perma.cc/BR5N-GTZ2].

Amazon could be accused of evading and no explicit exemption in any such regime into which they fit. Put simply, the practice does not exist as far as advertising regulation goes, and no other existing regime specifically contemplates it, yet the innovation raises profound policy questions regarding privacy and data security.[59] *Gaps* thus raise the question of whether to create a new regulatory regime or extend an existing one to manage the new policy concerns.

*End-runs*, *Exemptions*, and *Gaps* share in common the attribute of presenting cases of potential regulatory *under*inclusion. In each scenario, the policy disruption arises because the innovation is arguably or clearly subject to less restrictive regulation than the incumbent industry. But the orientation of the problem differs given the distinct aspect of each type of policy disruption. *End-runs* require regulators to decide whether to argue that the existing regime actually does apply to the business innovation, whereas *Exemptions* require regulators to decide whether amend the law to remove the exemption into which the innovation fits. *Gaps* require regulators to decide whether to create a new regime, or a wholly new interpretation of an existing regime, to protect the public from the business innovation. All three of these policy disruption scenarios require policymakers to decide whether to eliminate some or all of the regulatory differential between the innovation and the incumbent industry. How to accomplish the "fix" differs not only technically, but also likely in terms of the political and administrative dynamics.

By contrast, our fourth category of policy disruption, which we call *Solutions*, involves potential regulatory *over*inclusion. *Solutions* arise when the business innovation, which is arguably or clearly covered by existing regulations, solves a problem that led to regulation of the incumbent industry in the first place or presents superior public welfare outcomes looking forward compared to the incumbent industry operating under the regulatory status quo.[60] The innovation, in other

59. *See* Kate Kaye, *Cross-Device Tracking Creates New Level of Privacy Concerns, FTC Says*, ADVERTISINGAGE (Nov. 16, 2015), http://adage.com/article/datadriven-marketing/cross-device-tracking-creates-new-privacy-concerns-ftc/301383/ [https://perma.cc/7QKG-8TT8]. *See generally* FED. TRADE COMM., PROTECTING CONSUMER PRIVACY IN AN ERA OF RAPID CHANGE (2012), https://www.ftc.gov/sites/default/files/documents/reports/federal-trade-commission-report-protecting-consumer-privacy-era-rapid-change-recommendations/120326privacyreport.pdf [https://perma.cc/9SHB-VNZU].

60. *Solutions* differ from *End-runs* in that the business innovation that provides a *Solution* often is clearly covered by the existing regulatory regime, and the business innovation at least purports to solve an important public policy problem that is the basis for the existing regulatory system. On the other hand, an *End-run* is arguably not covered by the existing regulatory regime, and does not necessarily purport to solve an existing public policy problem. There may be substantial overlap between the two, or a business innovation might be classified within either of the two categories. For instance, if ride-sharing platforms such as Uber are understood to solve

words, is superior to the incumbent industry model in terms of a harm the existing legal regime was designed to manage or will likely have to manage in the future. The rise of distributed renewable energy, for example, threatens the conventional power generation and distribution industries but presents distinct advantages for consumer choice and climate change mitigation policies.[61] Likewise, Tesla's electric vehicles can address some of the climate consequences of fossil fuel-powered vehicles that current regulations address. Maintaining the regulatory status quo in cases of *Solutions* could overregulate the innovation and impede its penetration into the industry. *Solutions* thus may lead to new regulations covering the innovation or to revising the existing regulations covering the incumbent industry. Some jurisdictions, for example, now require utilities to purchase excess power generated from residential solar panels.[62]

As Table 1 below summarizes, these four kinds of policy disruptions capture essentially all of the underlying policy concerns involved in the legal and political battles plaguing the platform economy (Is Uber just a blatant *End-run* around taxi regulation? Should Airbnb hosts be punished for discriminating by closing an *Exemption*?). Importantly, they are not mutually exclusive for any new business innovation, and they present distinct policy problems and legal questions. For example, Airbnb has created an *Exemption* disruption through hosts legally discriminating and a set of *End-run* disruptions involving zoning, hotel tax, and other regulatory regimes. Deciding what to do about one form of policy disruption does not necessarily dictate what to do about the other. In addition, some business innovations may be alternatively classified as fitting within multiple categories, depending on differing understandings of the relevant legal systems and how the models relate to existing public policy problems.[63]

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important public policy problems and to be clearly covered by existing taxi regulations, then they are *Solutions*. However, if they are instead understood as purely efforts to provide profits to drivers and/or the platform owners, and are also understood as not covered by the existing regulatory system, then they would be *End-runs*. As a result, Uber will portray its business model as a *Solution* while taxi companies portray it as an *End-run*. Moreover, as a practical matter some business models cannot be implemented as *End-runs* because enforcement by the current regulatory system is simply too effective—for instance, a homeowner seeking to connect their distributed solar generation system to the grid has to get approval from the grid operator, and thus an *End-run* will not be effective.

61. *See infra* Section II.A.

62. *See infra* note 83.

63. *See supra* note 60.

TABLE 1: THE TYPOLOGY OF POLICY DISRUPTIONS CAUSED BY BUSINESS INNOVATION

| Policy Disruption | Conditions | Policy Mismatch | Legal Questions |
|---|---|---|---|
| **End-run** | The innovator challenges application of the existing regulatory regime by pointing to business model distinctions between it and incumbent firms. | The innovator presents many of the same social harms that led to regulation of the incumbent industry. | How plausible is it that the existing regulatory regime does not apply? If it is plausible that it does apply, how should regulators react? |
| **Exemption** | The innovator clearly fits an Exemption, waiver, or other form of relief from the existing regulatory regime not available to incumbent firms. | The scale of the innovator's use of the Exemption presents social harms not anticipated when the exemption was included in the existing regulatory regime. | Should the Exemption be closed, and if so, how? How would the actions and actors originally deemed eligible for the relief be differentiated? Should they be? |
| **Gap** | The innovator threatens incumbent firms but no existing regulatory regime covers its technology or business model. | Neither the effects on the incumbent firms nor the possible social harms of the unregulated innovator activity are being managed. | Is a new regulatory regime needed? How would it be designed? Would it be engrafted onto the existing regulatory regime or a separate regulatory action? |
| **Solution** | The innovator faces barriers under the existing regulatory regime but presents superior social welfare outcomes compared to incumbent firms. | The existing regulatory regime is impeding a business model or technology leading to superior social welfare outcomes. | Should the regime be reformed to regulate incumbent firms more aggressively, or to open the way to the innovation, and if so, how? |

As we show below, the framework also extends well beyond the platform economy. Business innovations with meaningful impacts on a wide range of incumbent industries will generally present challenges of *End-runs*, *Exemptions*, *Gaps*, and *Solutions,* and this has long been the case. Put simply, this is not the first time the business world has seen a phenomenon like Uber, nor the first (or last) time the policy world will, either. This is a fundamental point, and Part II demonstrates this

with two case studies unrelated to the platform economy—electricity generation and franchising—to highlight how challenges that regulators have faced in the past can inform how regulators should respond to such challenges in the present and the future.

## II. THE PAST AND FUTURE OF BUSINESS INNOVATION AND POLICY DISRUPTION

The rise of new business models that create mismatches with regulatory structures is not a new problem. Indeed, it is one that has recurred repeatedly over time. Even more important, this problem will recur in the future because incumbent business models will continue to adapt themselves to the relevant regulatory structures, and vice versa. As a result, regulatory structures will be susceptible to significant disruption when the (inevitable) new business model emerges.

To ground these points and make clear that concerns regarding business disruption go well beyond the platform economy, we present below two case studies of electricity and franchising innovation and regulation. Both sectors present rich histories of business innovations challenging existing regulatory frameworks, as well as the ways in which regulatory frameworks respond. They also both demonstrate the endogenous nature of the interaction between regulatory systems and adaptive business models. Because we have offered Uber and Airbnb as classic cases of *End-runs* and *Exemptions*, here we offer examples of a *Solution* and a *Gap*.

### *A. Electricity*

The history of the electricity industry provides ample evidence of how business models have come and gone over time, intersecting with regulatory systems that likewise have arisen and been displaced. This history also shows how regulatory structures and business models can mutually reinforce each other—the business model can be the basis for a new regulatory structure and in turn can be reinforced and shaped by that regulatory structure. Yet, even as the business model and regulatory structure reinforce each other, even the most apparently stable systems of business models and interlocking regulatory structures eventually become subject to stress and strain as a result of technological and economic changes.

In the early days of the electricity industry, around the turn of the twentieth century, the industry was either unregulated or, if it was

regulated at all, it was regulated at the municipal level.[64] Municipalities had regulatory authority because electric companies had to use public streets and rights-of-way to string their distribution wires. Municipalities generally granted nonexclusive franchises to multiple companies to generate electricity. Some of these municipal decisions to issue franchises were tainted by corruption. Some municipalities also entered into the electricity business themselves, taking over electricity production, distribution, and retailing. Initially, therefore, the electricity industry was highly localized, with lots of competition among different utility providers within an individual city. Technology limited the ability of electricity generators to distribute electricity across long distances. The result of the frequent competition, and easy entry because of liberal grants of nonexclusive franchises by municipalities, was a lot of bankruptcies and consolidation in the electricity industry.

However, technological changes soon altered the dynamic substantially, creating a very different dominant business model. The invention of alternating current power and large-scale generators allowed for the creation of large, centralized utilities. Samuel Insull, who took over the Chicago Edison Company, was a pioneer in developing and installing these new generation and distribution technologies. He combined the technological innovation with aggressive takeovers of competing providers in the Chicago area and effectively created a monopoly over electricity production in the city. Other cities soon followed suit.

The rise of the consolidated, large-scale electricity corporation led to pressure for a public response by revising the relevant regulatory structures. This pressure coincided with the dominance of the Progressive movement at the local and state level in many parts of the United States. A key component of this movement's ideology was the replacement of corrupt political machines with expert, nonpartisan administration. Regulation of large corporations providing essential services, such as railroads and grain elevators, was part of that movement and extended to support for municipal ownership of electricity systems.

64. The history that follows is drawn from RICHARD F. HIRSH, POWER LOSS: THE ORIGINS OF DEREGULATION AND RESTRUCTURING IN THE AMERICAN ELECTRIC UTILITY SYSTEM 13–14 (1999); William J. Hausman & John L. Neufeld, *The Market for Capital and the Origins of State Regulation of Electric Utilities in the United States*, 62 J. ECON. HIST. 1050, 1054–56 (2002); George L. Priest, *The Origins of Utility Regulation and the "Theories of Regulation" Debate*, 36 J.L. & ECON. 289, 301–06 (1993).

The electricity industry, faced with the possibility of municipal takeovers, chose regulation as the better alternative.[65] Indeed, there were strong benefits for the electricity industry from regulation. In return for regulation of rates by government agencies and a promise by utilities to provide nondiscriminatory, universal service (or close to universal service) to all customers who could pay, the utilities received exclusive rights to generate, distribute, and sell electricity—a guaranteed legal monopoly.[66] The relevant statutes were broad, requiring that the state regulator ensure that utility rates were "just, reasonable, and nondiscriminatory."[67]

This regulatory bargain was justified on the grounds that there were increasing returns to scale in the electricity industry, such that it was a natural monopoly.[68] Because larger entities would have lower costs as a result of economies of scale, smaller entities would either be absorbed or driven out of business, and entry by new providers would be extremely difficult. Accordingly, excluding new entrants legally would have minimal long-run economic impacts, and instead the problem to be solved was to eliminate the potential for abuse of monopoly position. In exchange for the monopoly position of the incumbent provider, rates were set to ensure that utilities would make a minimum level of return on their investments in their facilities.[69]

This regulatory system, which was fully developed in all states by the 1920s, established the basic structure of the electricity industry in the United States for the next fifty years. It encouraged the

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65. HIRSH, *supra* note 64, at 23–24, 27–28; *see also id.* at 30 (noting how Insull encouraged fellow industry leaders to endorse state regulation); William Boyd, *Public Utility and the Low-Carbon Future*, 61 UCLA L. REV. 1614, 1642 (2014); Hausman & Neufeld, *supra* note 64, at 1058–61; Jim Rossi, *Public Choice, Energy Regulation and Deregulation*, *in* RESEARCH HANDBOOK ON PUBLIC CHOICE AND PUBLIC LAW 419, 420 (Daniel A Farber & Anne Joseph O'Connell eds., 2010) (noting that the National Electric Light Association "played a key role in proposing and lobbying for state regulation of electric utilities throughout the United States" and "viewed municipal ownership of utilities as the main alternative to price regulation, but opposed public ownership").

66. HIRSH, *supra* note 64, at 26–28; *see also* Jim Rossi, *The Common Law "Duty to Serve" and Protection of Consumers in an Age of Competitive Retail Public Utility Restructuring*, 51 VAND. L. REV. 1233, 1248–60, 1263–66 (1998) (describing the legal connection between utility regulation, exclusive monopoly, and universal service requirements); Rossi, *supra* note 65, at 423. Utilities were also often given eminent domain power to obtain land for facilities or distribution networks. HIRSH, *supra* note 64, *passim*.

67. Boyd, *supra* note 65, at 1640.

68. HIRSH, *supra* note 64, *passim*; Boyd, *supra* note 65, at 1638–39.

69. *See* Rossi, *supra* note 66, at 1268 (noting the need for "price regulation to control monopoly abuses"). Also, because of the monopoly status of the electricity utility, a duty to serve all customers was an important regulatory mandate, since customers would have no choice as to which company would provide them with electricity service. *Id.* at 1269. The first Wisconsin law set rates based on capital investments "actually used and useful," in order to prevent utilities from simply investing in unnecessary facilities in order to receive guaranteed returns on their investments. HIRSH, *supra* note 64, at 22.

development of vertically integrated investor-owned utilities ("IOUs"). By discouraging entry and guaranteeing investments, it made IOUs extremely appealing investments for investors; and through the regulatory review and approval process, it locked in an economic and technical model of centralized generation and large-scale distribution systems. IOUs benefitted greatly from this regulatory system until the 1970s, particularly as technological advances made large-scale generation of electricity from fossil fuels cheaper and cheaper.

Thus, while the regulatory system was justified on the grounds that electricity generation, distribution, and sales were a "natural monopoly," it is perhaps an unanswerable question whether, if the regulatory system had been structured somewhat differently, the electricity industry in the United States might have developed differently. If the regulatory system had not been designed around setting guaranteed rates of return for large, vertically integrated IOUs and restricting competitive entry (even for areas such as generation), it is possible that alternative economic and technological forms might have developed that challenged this model.

Between the 1920s and the 1970s, the industry's "grow and build" strategy resulted in more and more generation capacity using larger and larger power plants, in part because larger facilities and technological innovation meant that the unit cost of electricity fell.[70] The falling costs of electricity and increased supply drove dramatic increases in consumer demand for electricity in the same timeframe. At times, utilities would even charge consumers who used more electricity less.

In the 1960s and 1970s, this system began to break down. Technological improvements had reached a limit in terms of increasing the size and reducing the costs of large-scale fossil fuel-burning units. The massive increases in the costs of fuel due to the energy crisis put further pressure on IOUs. As a result, increased growth in capacity no longer automatically translated into increased profits. In addition, consumers began responding to increased costs with changes in consumption that reduced consumption growth rates for the first time.[71]

One of the congressional responses to the energy crisis in the 1970s was the enactment of the Public Utility Regulatory Policies Act

70. HIRSH, *supra* note 64, at 46–50. The guaranteed rate of return on investments might have created an incentive for utilities to overinvest in capital plant facilities. Rossi, *supra* note 65, at 427 (describing the "Averch-Johnson effect" identified by economists in which guaranteed returns on capital investments for regulated utilities might produce overinvestment, but noting limited empirical support for this effect).

71. HIRSH, *supra* note 64, at 59–63; Rossi, *supra* note 65, at 427.

("PURPA") in 1979.[72] Section 210 of PURPA required state regulators to allow entry by independent power producers into electricity generation. Even more significantly, it set standards for the tariffs that the IOUs would pay to these independent power producers—tariffs that in many states made electricity generation an appealing prospect for new industry entrants. IOUs had to purchase power from these producers at the set tariffs, ending their decades-long monopoly.[73]

PURPA spurred innovation in the development of small-scale, low-cost generation facilities, including some renewable and some combined-cycle natural gas plants that could operate at relatively low costs.[74] This represented a sharp contrast with the earlier reliance on large-scale central generation facilities.[75] This rise of independent generation under PURPA undermined arguments that electricity generation was a natural monopoly that required exclusive service by a vertically integrated IOU[76]—a classic potential business disruption.

Power generation from gas turbines operated by independent power producers began to be substantially cheaper than that provided by the IOUs, especially as IOUs continued to bear the burden of substantial costs invested in failed or extremely costly nuclear facilities in the 1970s and the costs of encouraging energy conservation.[77] Large industrial users saw low costs from independent generators and wanted to avoid having to pay higher rates from integrated utilities.[78] They began pushing for deregulation of electricity sales as well as generation in the 1980s and 1990s, with academic and political allies.[79] These users

72. HIRSH, *supra* note 64, ch. 4.

73. *Id.* at 81–88.

74. *Id.* at 114–17.

75. *Id.* at 52.

76. *Id.* at 119, 123–24; Rossi, *supra* note 66, at 1277–78.

77. HIRSH, *supra* note 64, at 235–38, 247–48.

78. *Id.* at 235–39, 247–48; Rossi, *supra* note 65, at 434–35 (noting that wide variation in electricity generation costs across states and across different generation facilities created a strong incentive for large users to seek to purchase directly from low cost generators).

79. HIRSH, *supra* note 64, chs. 13–14; Rossi, *supra* note 66, at 1275 ("[T]he introduction of competition to the electric utility industry has been motivated in large part by large consumer interests, particularly the interests of high-load industrial customers . . . ."); Rossi, *supra* note 65, at 435 ("Together, new entrants without service obligations (such as independent power plants and merchant facilities), large industrial customers demanding lower cost power, and utilities possessing excess transmission capacity forged an informal alliance favoring reforms to the industry."). For an overview of the academic critiques, see Boyd, *supra* note 65, at 1651–58. For a seminal article critiquing the natural monopoly justification for electric utility regulation, see Harold Demsetz, *Why Regulate Utilities?*, 11 J.L. & ECON. 55 (1968) (arguing that the risk of entry into electricity or other supposed natural monopolies can reduce or eliminate the ability of the incumbent provider to charge monopoly prices even if there is no actual competition); see also Richard A. Posner, *Natural Monopoly and Its Regulation*, 21 STAN. L. REV. 548 (1969) (making similar arguments).

argued that generation was not, in fact, a natural monopoly and so there was no need to prohibit entry by new generators.

As a result, Congress authorized the Federal Energy Regulatory Commission ("FERC") in 1992 to open wholesale electricity transmission to competition,[80] an invitation the Commission accepted.[81] Many states (especially Texas) began moving towards deregulating retail electricity transactions and opening up competition at the retail level.[82] Potential business disruption became reality largely because of this regulatory opening. To put this in the context of our taxonomy, independent generation was arguably a *Solution*, because it could increase generation capacity—and therefore the reliable provision of electricity that was the goal of the original regulatory system—but was potentially blocked by existing, overinclusive legal rules. In response, both Congress and state legislatures responded by creating new legal rules to permit this business innovation to enter the regulated market.

Electricity deregulation raised difficult transition questions—particularly how to compensate utilities for "stranded assets" in generation, transmission, or distribution infrastructure. These assets were no longer cost competitive, but had been the object of substantial investment by utilities under the prior rate-based regulatory regime when rates of return on those investments were supposed to be guaranteed. This presented a difficult question: If consumers could abandon the IOUs and their stranded assets, who should pay for them?[83] Questions of stranded assets and affected reliance interests are thus not unique to the rise of the platform economy.

Since 2010, a major challenge for the traditional utility business model has been the rise of distributed generation, in particular the growth of rooftop solar electricity production on residential and commercial buildings.[84] Like independent generation before it,

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80. *See* Energy Policy Act of 1992 §§ 721–22, 16 U.S.C. § 824 (1994).

81. This is the famous FERC Order No. 888. *See* Promoting Wholesale Competition Through Open Access Non-Discriminatory Transmission Services by Public Utilities, 61 Fed. Reg. 21,540 (May 10, 1996) (to be codified at 18 C.F.R. pts. 35–385).

82. HIRSH, *supra* note 64, ch. 14; Rossi, *supra* note 66, at 1282.

83. For a sample of the discussion at the time, see, e.g., James Boyd, *The "Regulatory Compact" and Implicit Contracts: Should Stranded Costs be Recoverable?*, 19 ENERGY J. 69, 69 (1998). Some scholars argued that there had been an implicit regulatory contract between utilities and the government in which utilities could expect to receive reasonable returns on approved investments, and failure to allow those investments to continue to receive returns after deregulation would constitute an unconstitutional taking or a breach of contract for which compensation is owed. *See id.* (summarizing these arguments).

84. Boyd, *supra* note 65, at 1675 ("Today, the biggest threats [to the traditional business utility model] are coming from the customer side in the form of increased demand response, efficiency, and distributed generation . . . which are reducing load for utilities . . . ."). Distributed generation can be defined as a "small customer-owned generator[ ] . . . sited at or near the locations

distributed solar generation is creating a set of similar policy disruptions. While distributed generation represents about one percent of installed generation in the United States, the expected trend is for substantial and ongoing growth, particularly through solar photovoltaic ("PV") roof panels.[85] Distributed generators can substantially reduce the amount of electricity they take from the grid; moreover, with subsidies such as net metering, they can be paid at higher retail rates for the electricity they sell back to the grid, as compared to large-scale generators that are paid at wholesale rates.[86] The result is that distributed generators can substantially reduce the income utilities receive and reduce electricity consumption.[87]

Both of these changes are potentially threatening to utilities and many of their customers for two reasons. First, many of the fixed costs of maintaining the transmission and distribution grid are currently covered by usage charges for customers. If customers use less electricity, or there are fewer customers, then those fixed costs must be spread across fewer units of electricity or fewer customers, raising costs for those customers who remain to purchase power from traditional providers.[88] Second, the utility rate-setting structure generally involves substantial cross subsidization by one set of users for another. For instance, higher-income users often subsidize lower-income users—either with programs that directly reduce costs based on the income of the consumer or through rates that impose minimal costs for consumers who use very little electricity.[89] However, if distributed generators start

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where the electricity is used." Sharon B. Jacobs, *The Energy Prosumer*, 43 ECOLOGY L.Q. 519, 528–29 (2016) (internal quotation marks omitted) (quoting CONG. BUDGET OFF., PROSPECTS FOR DISTRIBUTED ELECTRICITY GENERATION 1 (2003)). For discussion of the potential threat that distributed generation poses to incumbent utilities, see NAT'L RENEWABLE ENERGY LAB., NREL/TP-6A20-60613, REGULATORY CONSIDERATIONS ASSOCIATED WITH THE EXPANDED ADOPTION OF DISTRIBUTED SOLAR (2013) [hereinafter NREL Report]; Fereidoon P. Sioshansi, *Why the Time Has Arrived to Rethink the Electric Business Model*, ELECTRICITY J., Aug./Sept. 2012, at 65 (also noting that declining consumer demand and increasing energy efficiency may threaten industry business models); *The Economics of Grid Defection*, ROCKY MOUNTAIN INST. (2014), https://www.rmi.org/wp-content/uploads/2017/04/RMIGridDefectionFull_2014-05-1-1.pdf [https://perma.cc/AR4K-QDF4] [hereinafter *Grid Defection*].

85. Jacobs, *supra* note 84; *see also* NREL Report, *supra* note 84, at 3–5 (describing growth rates and decreased costs for solar distributed generation).

86. NREL Report, *supra* note 84, at 29–30 (noting that federal law encourages state public utilities commissions to require utilities to provide net metering and interconnection to all distributed generators, and that most states have some form of net metering policy).

87. Boyd, *supra* note 65, at 1676.

88. *See* NREL Report, *supra* note 84, at v, 1.

89. One form of cross subsidization is a regulatory requirement that prohibits or restricts the ability of an electric utility to cut off service to nonpaying (often low-income) customers. This essentially results in higher-income customers subsidizing service to these customers. Rossi, *supra* note 66, at 1272–73 (also noting that there can be cost efficiency benefits in not cutting off service

using less and less power from the grid, and pay less for the electricity that they do use,[90] that dynamic reduces the ability of rates to support cross subsidization—especially if distributed generators are disproportionately wealthier consumers.[91] The remaining users will then be stuck paying more and more for the fixed costs of transmission and distribution. This generates concerns about distributional fairness and creates incentives for these remaining users to move to distributed generation.[92] In addition, if energy storage becomes affordable and broadly available for distributed generators, that might allow consumers to completely drop service from the electricity utility—further exacerbating the increase in the burden of fixed costs and cross subsidization for the remaining customers.[93]

The disruptive potential—in the business theory sense—of distributed generation for traditional utilities has been substantially increased by the rise of firms acting as "middlemen" that facilitate the financing and installation of distributed generation by residential and

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by allowing the utility to spread fixed costs across a larger number of customers); Rossi, *supra* note 65, at 424 (same).

90. *See* Jacobs, *supra* note 84, at 540–45 (noting that distributed generation, taking into account tax credits and other subsidies, can allow some consumers to dramatically reduce the cost of electricity).

91. NREL Report, *supra* note 84, at 32 ("Because installing distributed PV can entail large upfront costs or financing, the concern is that wealthier customers may be more likely to be able to afford this switch in electricity provision.") (also noting that third-party-owned distributed generation programs, discussed below, can allow lower-income consumers to install distributed generation); *id.* ("[T]he concern is that if the reliance on cost recovery via traditional volumetric rates goes unchanged, the customers who can most afford to pay for energy could choose to install distributed PV and see their costs go down, while those who can least afford to pay for energy will see their costs go up.").

92. *See* Jacobs, *supra* note 84, at 540–42 (noting this dynamic); *see also* Boyd, *supra* note 65, at 1676 (same). Another factor is, to the extent that subsidies for solar users are borne by utility ratepayers in general, this can increase the cross subsidization of distributed generators, again potentially at the expense of other utility ratepayers, further increasing the incentives for other utility ratepayers to adopt distributed generation. See Jacobs, *supra* note 84, for an overview of the issue. At the extreme, the defection of utility customers to distributed generation might produce a "death spiral" as utility rates for the remaining customers continue to increase to cover fixed costs and distributed generation subsidies, pushing even more customers to defect. NREL Report, *supra* note 84, at 5–6; Boyd, *supra* note 65, at 1617, 1676 (noting these arguments). However, it seems unlikely that any such death spiral is imminent for any utilities in the United States. *See* Jacobs, *supra* note 84, at 541–42. In addition, distributed generation may reduce certain costs for utilities. NREL Report, *supra* note 84, at 8–12. The risk of customer defection was also at issue in retail electricity deregulation in the late 1990s—retail customers might abandon the incumbent IOU that is saddled with higher costs for stranded assets or for managing the transmission and distribution grid, increasing the fixed costs for the remaining incumbent customers, who would have a greater incentive to defect. Rossi, *supra* note 66, at 1289–90 (noting this risk).

93. *See Grid Defection*, *supra* note 84 (arguing that between solar power and battery energy storage, it will soon be economically feasible for consumers in many parts of the United States to terminate standard electric utility service); Jacobs, *supra* note 84.

commercial consumers.[94] One version of such firms includes solar services providers who own the solar panels that they install and run on a customer's property—companies such as Solar City and Sungevity. This business model allows for consumers to install solar panels with low or no initial payments, and long-term regular payments to the solar service provider in return for regular production and supply of electricity.[95] A second business model is simply the solo homeowner who decides to install solar panels, bearing all the costs but reaping all of the cost savings as well.

The history of the electricity industry and the regulatory structure that shaped it is a clear example of how regulatory structures and business models are mutually endogenous—how each shapes the other. Municipal or even state electricity utilities were a plausible option for the development of the electricity industry even after the rise of the Insull model of centralized generation and transmission described earlier.[96] Indeed, they remain an important component of the electricity industry in a number of major cities. The rise of the Insull model revealed a *Gap* in the prior regulatory structure, which assumed multiple competitive entities for electricity provision, not a presumed natural monopoly. Instead of embracing municipal ownership, however, almost all states chose a model of a vertically integrated, investor-owned utility industry that was heavily regulated. That regulatory structure in turn shaped the investment, research, and management decisions of the industry, further cementing that particular business structure. Explicit barriers to entry, plus regulatory structures that were designed to interface with large vertically integrated utilities, effectively excluded most alternative business models.

Over time this dominant business model and its associated regulatory structure came under strain with technological changes (the limits of the traditional steam turbine and the rise of small generators), changes in consumer preferences (a decline in the growth of electricity consumption), and the rise of environmental concerns about fossil fuels. The rise of independent generation was arguably a *Solution*. It solved a

94. NREL Report, *supra* note 84, at 2, 18–20; Boyd, *supra* note 65, at 1675–76.

95. In an arrangement in which the middleman company owns the generation equipment, the consumer has a power purchase agreement with the middleman company. A related arrangement is a solar lease, in which the consumer rents the equipment over an extended period of time from the company—again eliminating or reducing the need for large up-front payments. *See* NREL Report, *supra* note 84, at 18–19; Jacobs, *supra* note 84, at 526 n.19. For an analysis showing how important third-party ownership has been in expanding distributed solar generation in southern California, see Easan Drury et al., *The Transformation of Southern California's Residential Photovoltaics Market Through Third-party Ownership*, 42 ENERGY POL'Y 681 (2012).

96. *See supra* notes 64–69 and accompanying text.

problem that the original regulatory regime was designed to address—independent power generations made electricity cheaper and more widespread. But this business innovation created a policy disruption because it was incompatible with existing legal rules. Congress, by adopting PURPA, solved the policy disruption problem by adopting new legal rules, and creating an exception to the prior generation monopoly that allowed the rise of low-cost, smaller-scale, independent power producers. These regulatory changes in turn prompted technological innovations in low-cost, small-scale power production and business innovations in independent power production. These technological innovations thus drove the rise of electricity deregulation and the separation of generation, transmission, and distribution businesses.

Now the combination of deregulation, technological innovation (the rise of low-cost PV solar), and business innovation (third-party financing of distributed generation) is challenging basic assumptions about the industry structure that are at the heart of the current regulatory system.[97] For instance, regulatory restrictions on entry into electricity sales have prevented the deployment of third-party–owned distributed generation (the Solar City/Sungevity model) in Florida—which may substantially interfere with the growth of distributed generation.[98] However, other jurisdictions have allowed the rise of third-party–owned distributed generation, concluding that their regulatory structure does not cover that business model.[99] Thus, distributed generation presents an example of a *Solution*, where the existing regulatory system may preclude an innovative business strategy that solves an important policy problem.

### *B. Franchising*

The history of franchising offers a second example of how business innovation can lead to policy disruption. Franchising is a business relationship in which a company (the franchisor) provides the right to an independent agent (franchisee) to distribute its products or use its trade name and processes. The franchisee must pay for these rights, and the contract between franchisor and franchisee sets out the terms of the relationship. Unlike in a vertically integrated firm, where

97. Posner, *supra* note 79, at 612 (noting that legal limitations on entry "may perpetuate monopoly long after a market has ceased to be naturally monopolistic"); *id.* at 636 (arguing that "natural monopoly conditions are quite likely to be transient").

98. *See* PW Ventures, Inc. v. Nichols, 533 So. 2d 281 (Fla. 1988) (requiring a certificate of convenience and necessity from the state public utility commission for any electricity generation for retail sale, no matter how small).

99. *See* SZ Enters. LLC v. Iowa Utils. Bd., 850 N.W.2d 441 (Iowa 2014).

the producer owns the distribution channels, franchising relationships permit the franchisor and franchisees, who are often small business owners, to work together in a contractual relationship. McDonald's, Ford car dealerships, and Krispy Kreme Donuts are examples of classic franchises.

Franchising has produced two disruptive business models: product franchising and business-format franchising.[100] Product franchising arose in the middle of the nineteenth century out of the need for manufacturers to establish retail networks for their goods. This was particularly true for valuable and complex goods like farm equipment. Previously, manufacturers of relatively simple, handcrafted goods sold them to wholesalers, who distributed them to retailers, who in turn sold a wide range of goods. Wholesale goods suppliers had neither the expertise nor the capacity to showcase or repair these products for retail customers, so manufacturers increasingly came to rely on specialized independent agents to serve as retailers/dealers. As these independent agents' businesses grew, however, manufacturers sought new forms of business relationships that would reduce the growing expenses of distributing large orders of individual products to scores of individual retailers/dealers. Moreover, the high levels of investment in expensive equipment drove retailers towards exclusive relationships with individual manufacturers. Product franchises emerged as a structure that would both provide low-cost relationships with specialized independent retailers and ensure a unified system of distribution.

To take one example of product franchising, in the early 1900s the innovative carmaker, Ford, quickly established a unified system of distribution to sell its surging production of automobiles roughly contemporaneously with its development of mass production techniques. While it wanted to control the dealers that sold and repaired its cars, Ford was equally worried about the possibility that it might be held liable for dealer actions. A franchise relationship allowed Ford to work closely with its dealers while remaining legally independent; it also avoided the large expenses of Ford creating its own dealer systems. Over time, however, it became clear that there was a serious imbalance of power. Ford routinely made demands beyond the contractual terms and would then threaten to terminate dealer relationships within ninety days unless the dealers acquiesced. The primary legal remedies available for franchisees were under contract

100. This section is based on THOMAS S. DICKE, FRANCHISING IN AMERICA: THE DEVELOPMENT OF A BUSINESS METHOD, 1840–1980, at 3–7, 15–17, 67–70 (1992).

law.[101] Standard contracts often gave franchisors unequal power to terminate franchise agreements.[102] This placed franchisees at a serious disadvantage because they had made substantial investments in the franchise on the assumption that there would be an ongoing business relationship. Contract law, however, generally did not consider investment-based expectations or protect franchisees from these kinds of threats.[103] Other than common law, which was a highly imperfect fit to these new business relationships, no regulatory regime existed to address these public interest concerns. Arguably, this business innovation—the franchise model—created a *Gap*. Franchising posed a set of policy problems for which no regulatory regime existed.

Seeking to correct the balance of power, Congress passed the Automobile Dealers Franchise Act ("ADFA") in 1956.[104] The Act allowed dealers to sue automakers for damages when automakers terminated or failed to renew contracts without just cause or in bad faith. States also took action to protect franchisees from potentially coercive actions by manufacturers. For example, Georgia's Motor Vehicle Franchise Practices Act created a cause of action for an automobile franchisee to enjoin the establishment of a new dealership under the same franchisor within the existing franchisee's "relevant market area," unless the franchisor could show that the existing franchisee was inadequate.[105] Similarly, most states also restrict the direct sale of cars to consumers, requiring automakers to sell through franchised dealers.[106] These laws are intended to prevent carmakers from coercing their own dealers by threatening to compete by underselling them. As we shall see below, while originally intended to protect franchisees, this restriction is potentially overinclusive if applied to Tesla, whose business model relies exclusively on direct sales to consumers through its own showrooms.

Unlike product franchising, which generally involves valuable, durable, and complex goods, the product in business-format franchising is usually a low-value nondurable good or service. The parent company provides the business plan for the franchisee, including not only the

101. David Gurnick & Steve Vieux, *Case History of the American Business Franchise*, 24 OKLA. CITY U. L. REV. 37, 50–51 (1999).

102. DICKE, *supra* note 100, at 72–79 (describing how Ford used the power of cancellation to control dealers).

103. Gurnick & Vieux, *supra* note 101, at 50–51.

104. DICKE, *supra* note 100, at 82.

105. *See* GA. CODE ANN. § 10-1-664(b) (West 2017).

106. *See* Christopher Koopman, *Tesla: Free Market Antihero*, U.S. NEWS (June 30, 2014, 1:00 PM), http://www.usnews.com/opinion/economic-intelligence/2014/06/30/teslas-fight-against-regulations-makes-it-a-free-market-antihero [https://perma.cc/7BVK-4G4P].

product or service for sale but also the marketing and strategy—indeed, the "brand." Business-format franchisees may sell hamburgers, carpet cleaning, car repair, or donuts. Without the franchise branding, these products would be difficult to distinguish from others offered by businesses in the same industry. Gas stations provide a classic example. Their main product, gasoline, generates low profit margins and is indistinguishable from competitors' gas.[107] As a result, franchisors provide significant branding support, a package of services the franchisee relies on to operate the outlet. Consider why you buy gas at Shell instead of at Dave's Gas across the street.[108]

As with product franchising, business-format franchising quickly raised concerns over power imbalances. The franchise model allowed many entrepreneurs to create small businesses, but it soon became clear that they needed protections against fraud and unfair business practices by the franchisors permitted under standard franchise contracts. As one leading commentator notes:

> [M]any terms in the typical franchise contract are susceptible to franchisor manipulation throughout the life of the franchise relationship—relating to topics such as site selection, layout, training, territories, advertising, renewals, and operating procedures. For many of these types of clauses, the franchisee may reasonably believe—even be led by the franchisor to believe—that its interests and those of the franchisor coincide or at least are similar. The open-ended nature of these provisions, combined with the discretionary powers vested in the franchisor, render those assumptions naïve and often even harmful to the franchisor's long-term business success.[109]

A particularly problematic area for business-format franchisees is renewal. Franchise contracts often have specified term periods (e.g., ten years) with the option for renewal on the part of the franchisor, who has the power to alter the terms of the contract significantly when renewing.[110] As with the problem described above for auto dealer franchisees, business-format franchisees who have invested in a fast food restaurant might find themselves vulnerable to hardball negotiating tactics by the franchisor when renewal negotiations begin because of their significant sunk costs. Given these power dynamics, legislators began to recognize that the standard contract law

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107. DICKE, *supra* note 100, at 87–88.

108. *Id.* at 116.

109. Robert W. Emerson, *Franchise Contract Interpretation: A Two-Standard Approach*, 2013 MICH. ST. L. REV. 641, 657–58 [hereinafter Emerson, *Franchise Contract Interpretation*]; *see also* Robert W. Emerson, *Franchise Contract Clauses and the Franchisor's Duty of Care Toward Its Franchisees*, 72 N.C. L. REV. 905, 907 (1994) [hereinafter Emerson, *Franchise Contract Clauses*] (noting that courts in the event of a dispute, following contract law, would look to the terms of the contract, but that both parties "tend to have legitimate expectations about their franchise relationship that often go far beyond the terms" of the contract, and franchisees would often "expect[ ] far more than what the written document promises").

110. Emerson, *Franchise Contract Interpretation*, *supra* note 109, at 658.

assumption of relatively equal bargaining power among the parties afforded inadequate protection for franchisees.[111] Like product franchises, business-format franchises created a *Gap*—a policy problem for which no fitting regulatory response existed.

As a result, both federal and state governments have adopted laws requiring disclosure and good-faith practices by franchisors. Passed by Congress at the same time as the ADFA, the Petroleum Marketing Practices Act ("PMPA") regulated the ability of refiners to terminate contracts with gas stations without just cause or in bad faith.[112] Other state laws mandated disclosure of data on the financial solvency of the franchise, a statement of the terms and conditions of termination or refusal to renew the franchise relationship, disclosure of any requirement that the franchisee purchase goods or services from the franchisor's designee, and identification of any exclusive territory, among other requirements.[113] Other protections provided remedies to franchisees adversely affected by the encroachment of new franchisees under the same franchisor, including mandating good-faith performance by the franchisor and setting standards for termination and renewal of contracts.[114]

The franchising case study provides a second clear example of the relationship between business innovation and policy disruption over time. In the nineteenth century, the common law legal structure was designed to regulate relations between suppliers and the retailers with whom they contracted. That structure proved inadequate in the twentieth century to address the new business relationships created by franchising. Again, in our taxonomy, franchising created a *Gap*. The new franchise business model challenged the preexisting contractor relationship, where companies would hire third parties to provide services such as sales or distribution. Common law contract doctrines

111. Emerson, *Franchise Contract Clauses*, *supra* note 109, at 907 (noting that courts "generally hesitate to do anything more than quickly examine whether the parties acted in good faith and exercised fair dealing" even when considering "crucial franchisor decisions that affect the franchised business's continuing viability"); Emerson, *Franchise Contract Interpretation*, *supra* note 109, at 659–60 & 660 n.113 (identifying ways in which contract law is inadequate in protecting franchisees); Robert W. Emerson, *Franchise Terminations: Legal Rights and Practical Effects when Franchisees Claim the Franchisor Discriminates*, 35 AM. BUS. L.J. 559, 579–80 (1998) (noting how standard contract doctrine of unconscionability will generally not protect franchisees).

112. Robert W. Emerson & Uri Benoliel, *Are Franchisees Well-Informed? Revisiting the Debate Over Franchise Relationship Laws*, 76 ALB. L. REV. 193, 199 (2013).

113. *See* William L. Killion, *The History of Franchising*, *in* FRANCHISING: CASES, MATERIALS, & PROBLEMS 1, 19–21 (Alexander M. Meiklejohn ed., 2013); *see also* DICKE, *supra* note 100, at 158; Emerson & Benoliel, *supra* note 112, at 197.

114. *See* Emerson & Benoliel, *supra* note 112, at 197; Robert W. Emerson, *Franchising and the Collective Rights of Franchisees*, 43 VAND. L. REV. 1503, 1511 (1990).

proved inadequate to prevent widespread abuses of both product and business-format franchising by the franchisors. Either the franchisors held too much power in the relationship and laws were needed to protect franchisees from encroachment on their territory by new franchisees, underselling by the franchisor company, and threats to go beyond the contractual terms; or the franchisees were deemed to be at a bargaining disadvantage and needed assistance from mandatory disclosure and sourcing requirements. Because the traditional contract rules did not take into account the realities of the new franchise system, the mismatch was a *Gap*. As a result, new regulatory structures were needed. Congress and state legislatures responded with statutory reforms.

Business innovation in franchising, with the challenges it presents to regulatory systems, remains a live issue today. State laws intended to protect automobile dealer franchisees by banning direct sales of automobiles by manufacturers are now a barrier to the new business model developed by the electric car manufacturer Tesla. Tesla has earned the ire of the nation's automobile dealerships by attempting to sell its electric vehicles ("EVs") directly to consumers through its own showrooms instead of through franchise dealerships. This represents an effort to use a new form of business organization—forward integration—and to avoid traditional distribution channels through dealerships. Tesla CEO Elon Musk has claimed that traditional dealers lack incentives to sell EVs that compete with their gasoline-powered inventory and lack specialized knowledge about everything from battery service to tax breaks for EVs.[115] Yet in response to the push for reforms to move beyond the limits of contract law in the mid-twentieth century, all fifty states have laws in place that protect dealers from unequal bargaining power in the dealer–auto manufacturer relationship, some of which would actually block Tesla from engaging in direct consumer sales.[116] Several states currently have in place rules that would ban Tesla from selling its EVs through its showrooms.[117] In these states, Tesla may exhibit its vehicles in showrooms and discuss

115. Daniel A. Crane, *Tesla, Dealer Franchise Laws, and the Politics of Crony Capitalism*, 101 IOWA L. REV. 573, 580 (2015) (citing Elon Musk's concerns regarding dealers' lack of incentives to sell EVs, and a 2014 Consumer Reports Study demonstrating Musk's concerns to be reflected in actual dealer behavior); *see also* Cynthia Barmore, *Tesla Unplugged: Automobile Franchise Laws and the Threat to the Electric Vehicle Market*, 18 VA. J.L. & TECH. 185, 189 (2014) (discussing state laws that would ban Tesla's efforts to sell directly to consumers).

116. Crane, *supra* note 115, at 579.

117. Dana Hull & Margaret Cronin Fisk, *Tesla Cranks Up Pressure to End Ban on Direct Auto Sales*, BLOOMBERG (Sept. 22, 2016, 7:37 AM), https://www.bloomberg.com/news/articles/2016-09-22/tesla-lawsuit-claims-michigan-direct-sales-ban-unconstitutional [https://perma.cc/BNK9-P3NS] (listing Michigan, Texas, Connecticut, and Utah).

vehicle design and technology, but showroom employees may not quote prices. In contrast, other states allow Tesla to sell cars directly from its showrooms.[118] Existing car dealerships strongly support these restrictions not only because of their original purpose of protecting dealers from manipulation by manufacturers, but also because they cut off a potential source of market competition. The policy disruption question that arises in response to Tesla's business model innovation is whether the direct-sales bans, which were originally meant to resolve bargaining disparities between dealers and automakers, should exclude an automaker like Tesla, which engages *exclusively* in direct sales.

This new conflict over franchising demonstrates how a legal regime that arose in the past to protect a certain kind of business model—franchisees—can end up hindering the development of new business models, and thus how business innovation—in the form of forward integration—can create policy disruption. This bears strong similarities to the dynamics in the electricity case study. Existing law is often bound tightly to one vision of how goods are produced or sold—here, that a manufacturer sells goods (and services like repairs) through a franchisee with whom it contracts, and any effort by that manufacturer to integrate forward for direct sales would undercut that relationship because it would compete directly with the dealer/franchisee. But the rise of Tesla demonstrates that the existing law may now be overinclusive. Some manufacturers have no interest in using dealers at all and prefer instead to integrate forward to sell directly to consumers. Their business model of forward integration has created a possible *Solution* that is arguably overregulated under the current legal regime.

Having established in Part I that business disruption need not lead to policy disruption, and in Part II that business innovations have challenged existing legal rules long before the rise of the platform economy, Part III turns to the question of what this means for the regulators.

118. On its own website, Tesla contends that has vehicle showrooms in AZ, CA, CO, CT, DC, FL, GA, HI, IL, IN, MD, MA, MI, MN, MO, NV, NJ, NY, NC, OH, OR, PA, TN, TX, UT, VA, and WA. *US Tesla Stores and Galleries*, TESLA, https://www.tesla.com/findus/list/stores/United+States (last visited Sept. 19, 2017)_[https://perma.cc/YLC9-7HBS]; Katie Burke, *Tesla Cleared to Open Store in Virginia Capital*, AUTOMOTIVE NEWS (Dec. 1, 2016, 9:21 AM), http://www.autonews.com/article/20161130/RETAIL/161139980/tesla-cleared-to-open-store-in-virginia-capital [https://perma.cc/P5TJ-APV8].

## III. POLICY RESPONSES AND THE VALUE OF NEUTRALITY

Why should a mismatch between a business innovation and the regulatory structure matter for policymakers? What different options do policymakers have to respond to such a mismatch? And what should guide policymakers in choosing among different regulatory options?

This Section starts by presenting the regulatory toolkit available to address business innovations. It also explains the rationale for a default rule of business neutrality. It then sets out a three-step process for how regulators should choose to respond to policy disruptions and ends by pulling this all together in a decision matrix.

### *A. The Regulator's Toolkit for Business Innovation*

When a new business model leads to a policy disruption, regulators necessarily face a set of choices. They could *Block* the upstart from entering the market, either in light of public interest concerns or because of old-fashioned rent seeking. Alternatively, they could do nothing, giving the upstart a *Free Pass* and letting the old business model and regulatory structure decline, with the loss of the associated regulatory benefits from that regulatory structure. Or they could pursue a middle ground and take some affirmative steps to continue to promote the underlying policy goals while accommodating the new form of business within the existing regulatory regime—a strategy we call *OldReg*. If regulators determine that the existing regulatory structure cannot accommodate the new form of business, they may need to craft entirely new rules to replace the old—an approach we call *NewReg*. They then face yet another choice—whether to create a new regulatory structure that matches the new business model tightly or instead to anticipate the possibility that even the new business model will one day become obsolete, only to be replaced by an even newer model. All the while, regulators are likely to face political pressures to preserve the old business model and regulatory structure because the status quo supports important public policy goals, compelling reliance interests exist in the old system, or the threatened incumbents wield political power.

We distill these various responses into a toolkit of four policy strategies—*Block*, *Free Pass*, *OldReg*, and *NewReg*.[119] These are set out

119. Our four categories are inspired by Carol Rose's seminal article, *Rethinking Environmental Controls: Management Strategies for Common Resources*, 1991 DUKE L.J. 1, 9–10, in which she offers four choices for regulators managing common-pool resources, including "Do-Nothing," "Keepout," "Rightway," and "Prop." We note that Rose's focus was on what we might call

in Table 2 below using the example of Uber to show their relevance. These strategies are just as applicable outside of the platform economy, as we shall see in Part IV when we apply this framework to Tesla dealerships and rooftop solar generation.

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the second-order question of which specific policy instrument is best in light of increasing congestion on a resource. In contrast, we address the first-order question of whether and how to apply existing legal rules to business innovation, while remaining largely agnostic about whether existing rules are embodied in specific policy instruments like taxes, prescriptive rules, or other types, as such questions are deeply context specific. We also do not limit our analysis to management of common-pool resources.

TABLE 2: REGULATORY TOOLKIT FOR POLICY DISRUPTIONS CREATED BY BUSINESS INNOVATION

| Regulatory Tool | Strategy | Uber application |
|---|---|---|
| **Block** | Interpret legal rules to block the new form of business and preserve existing regulatory and business structures. | Only licensed taxis with medallions can serve in this market; Uber is not permitted to operate at all. |
| **Free Pass** | Allow the business innovation to proceed without changing the regulatory structure, potentially consigning the previous business model and its associated regulatory structure to extinction. | Uber is permitted to serve this market, and existing legal rules for taxis only apply to taxis; Uber remains cheaper than taxis and crowds out taxis; the value of a taxi medallion plummets; the medallion system eventually disappears. |
| **OldReg** | Allow the new firm to enter the market, but apply existing legal rules. This approach will impose additional regulatory costs on the new business models but aims for a somewhat level playing field between incumbents and innovators. | Existing safety rules for taxi vehicles and taxi drivers are designed to protect customers' safety; Uber is like a taxi; existing safety rules for vehicles and drivers apply to Uber just as they do for taxis, increasing the cost of Uber but not blocking its entry into the market. |
| **NewReg** | Develop new regulatory structures and legal categories entirely. Like *OldReg*, *NewReg* can strive for neutrality between incumbents and innovators, but need not always be neutral. | Do away with medallions and the current legal regime governing taxi drivers and vehicles; adopt new legal rules that address the underlying concerns such as safety, privacy, or environmental harm. |

So how does the toolkit of regulatory strategies interact with our earlier typology of policy disruption? In brief, all four strategies are on the table for *End-runs*. *Block*, *Free Pass*, and *OldReg* may require some threshold determinations about how the existing regime applies. In the

case of Tennessee's approach to Airbnb discussed above, for example, the Tennessee Attorney General had to decide whether hosts fit the existing definition of hotel for purposes of hotel occupancy taxes. Ruling that they do placed them into the *OldReg* regime; a ruling that they do not would have given them a *Free Pass*. The same type of analysis applies to whether Uber vehicles require some form of medallion or license (*OldReg*) or not (*Free Pass*). *Exemptions* generally cannot be closed with a *Block* or *OldReg* strategy when the existing exemption clearly applies to the business innovation. Nor can a *Gap* disruption be prevented or contained with *Block* or *OldReg* strategies when there plainly is no law to apply in the existing legal landscape. And on the flip side, *Free Pass* may or may not be applicable to *Solutions*, depending upon how flexibly a regulator can apply existing rules. A *NewReg* approach may be required.

An important question raised by the strategies *Free Pass*, *OldReg*, and *NewReg*, each of which allows the business innovation to enter the market, is whether to take into account reliance interests in the existing system. For example, should taxi drivers be compensated for the drop in their medallion value? A classic strategy to address such interests would be through side payments, a strategy we call *Buy Out*. The case for a *Buy Out* is arguably strongest if the innovator gets a *Free Pass*, as this regulatory choice is likely to be most prejudicial to an incumbent. The case for a *Buy Out* is weaker if the regulator chooses *NewReg*, as this strategy can balance regulatory costs between incumbents and new business models. The case for a *Buy Out* is ambiguous when regulators choose simply to apply existing regulations (*OldReg*)—which may have been designed with incumbent business models in mind—to new business models. In cases of an *OldReg* strategy, incumbents may still have some advantage over new business models, though the opposite is also possible.

The choice among these strategies depends fundamentally on the legitimacy and continuing relevance of the substantive goals of the existing regulatory structure. If the prior regulatory structure did not improve social welfare—for example, if instead it promoted rent seeking on the part of the regulated entity to exclude competition—then policymakers should welcome the policy disruption created by the new business model. But if the original regime's goals are legitimate, policymakers should consider a response that preserves these fundamental interests. Moreover, the value of business innovation must be considered in its own right. If the disruptive business is successful enough to attract customers *and* lead to regulatory disruption, it is likely offering benefits to the public that the current

business and regulatory environment lacks. Choosing among these strategies also implicates more mundane concerns about the administrative fit between existing legal rules and new business models. Whether existing law can be administered and enforced against new market entrants may likewise inform the choice between an *OldReg* or a *NewReg* strategy.

Simply listing the policy factors motivating the existing legal structure and trying to balance among them, however, is not a useful or coherent framework. It offers insufficient guidance to regulators beyond saying, "Here's the toolkit, now you choose."[120] In selecting the appropriate regulatory response to business innovation, there must be a larger normative goal at stake than what seems a fair balance in the moment. In cases of policy disruption, we therefore propose a default principle of organizational neutrality as the best way to balance promotion of business innovation with the need to protect the public interest and to avoid rent seeking.

### *B. Neutrality as a Default Principle*

Transaction costs, including regulatory costs, affect entrepreneurs' choices about how to organize their business.[121] And regulations can either facilitate or stifle business innovation. A legal regime that favors one form of business organization—such as taxi fleets owned by a central organization rather than platforms matching private vehicle owners with those in need of rides—may *Block* business innovation that could improve overall social welfare.[122] To counteract the potential distortions on business innovation, a principle of organizational neutrality would force regulators to focus not on the *form* of business, but on its *substance*, and how that substance interacts with important policy goals.[123]

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120. As noted previously, this is how most of the legal scholarship on the platform economy proceeds. *See supra* notes 39–41.

121. *See supra* notes 16–20 and accompanying text.

122. *Cf.* Buccola, *supra* note 9, at 505 (arguing that the Court's decisions regarding the constitutional rights of corporations seek to minimize these regulatory costs of integration into business firms, because "[l]egal rules privileging one form of organization over others threaten to induce entrepreneurs to choose relatively inefficient governance structures, a form of waste that ultimately impoverishes society at large").

123. *Id.* at 511 (noting that "positive law might direct otherwise" and thus designating the principle as a canon of interpretation). Here we take the position that neutrality should not only inform interpretation of existing law, but further that it should inform the drafting of new laws and regulations as well. We also note that the new market entrants may develop either new business models or new technologies that have broader applications or that may be beneficial in other industries.

The concept of organizational neutrality should guide policymakers when business innovation leads to regulatory disruption because it reduces the relative regulatory costs of innovation. In colloquial terms, the neutrality principle dictates that entrepreneurs should be neither penalized nor subsidized for their choices about how to organize their business in order to promote innovation and efficient use of resources.[124] In an ideal world, neutrality would offer a level playing field between incumbents, the innovators of today, and the innovators of the future.[125] This approach ensures that customers are not deprived of the potential benefits of innovation by regulatory systems that screen out or *Block* new business models. At the same time, the neutrality principle acknowledges that innovators should not be permitted simply to engage in regulatory arbitrage, or to exploit legal loopholes in ways that give the innovator a *Free Pass*—an unfair advantage over incumbents—especially if the substance of the innovator's business raises the same kinds of public interest concerns as the incumbent.

Yet our approach does not elevate neutrality or the promotion of innovation as the sole outcome-determinative factor. The need to protect the public interest through regulations—be it to promote safety, environmental considerations, antidiscrimination principles, or other factors—can sometimes outweigh the desire to promote innovation. As we discuss in depth below, there may be good reasons to *Block* the entry of certain types of firms, or to give other innovators a *Free Pass* because their benefits significantly outweigh any desire for a level playing field. Recognizing that neutrality is only a default—one that can be overcome by other factors—ensures that members of the public, including consumers and third parties, do not lose important regulatory benefits.

### *C. The Three-Step Process for Managing Policy Disruption*

With organizational neutrality as an explicit normative goal, we propose a three-step analysis for managing policy disruption:

At Step One, regulators should measure existing rules against the default principle of organizational neutrality to ask whether they privilege one form of business organization over another. If existing rules cannot be interpreted in a neutral way because they either favor

124. *Id.* (discussing how the Court's decisions about constitutional rights seek neither to "penalize" nor "subsidize" integration of business into a corporate form).

125. We acknowledge that *perfect* neutrality may be difficult to achieve; however, we contend that striving toward neutrality should be the guiding default principle.

existing business models over innovative business models or the reverse, it may be necessary to rethink the regulatory regime.

At Step Two, regulators should ask whether any relevant factors warrant deviation from a neutral default, such as the need to protect health, safety, the environment, privacy, or distributional considerations, or to prevent discrimination.

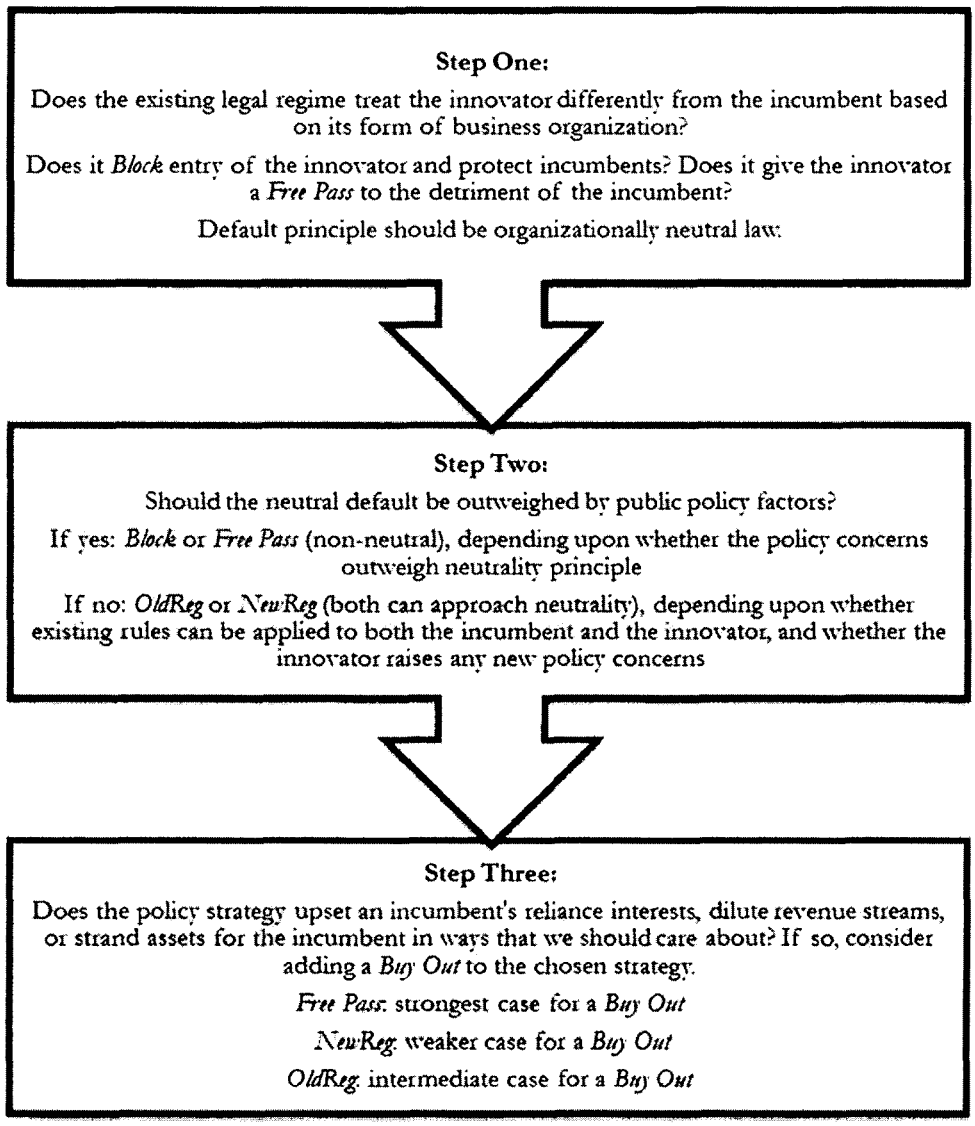
At Step Three, regulators should ask whether any reliance interests in the existing regime should be addressed, and if so, whether they could be addressed through alternative legal mechanisms designed to protect people from being unfairly harmed by legal transitions. By using alternative means to address reliance interests in the "old" rules, such as side payments or other transition supports, regulators can avoid distorting the regulatory playing field for future innovators.

This three-step process offers the best way to balance three competing concerns: (1) preserving incentives for business innovation that neither penalize newcomers or new forms of organization not contemplated by regulators of the past, nor subsidize them by permitting their exploitation of loopholes to the detriment of the public interest; (2) effectuating the purpose of laws designed to protect the public interest; and (3) reducing incentives for regulatory arbitrage and rent seeking, while preserving reasonable reliance interests.[126] Static legal categories—and the "demons" and "angels" they create[127]—often generate efforts to develop new corporate forms simply to avoid such rules. Finally, a neutral approach can render the law more durable as new forms of business organization will inevitably arise to replace the innovations of today.

The flow chart below integrates the regulatory toolkit of *Block*, *Free Pass*, *OldReg*, and *NewReg* with the three-step framework for regulators. The following section then explains the framework in more detail.

126. Indeed, we agree with Williamson's caveat that while firms can serve "affirmative economic purposes," they can sometimes "pursue antisocial objectives." Williamson, *supra* note 16, at 1538. These antisocial purposes are precisely the kinds of third-party effects that must be addressed by a system of law and regulation. In some cases, such laws and regulations can be applied regardless of the form of business organization; in other cases, neutrality may be outweighed by the need to address such negative or otherwise antisocial impacts.

127. *Cf.* Michael Gerrard, *Demons and Angels in Hazardous Waste Regulation: Are Justice, Efficiency, and Democracy Reconcilable?*, 92 NW. U. L. REV. 706 (1998) (arguing that environmental law regulating hazardous waste demonizes certain firms at the end of industrial processes and sanctifies future generations).




### 1. Step One: A Neutral Default

At Step One, the policymaker must determine whether the existing legal regime treats the innovator differently from the incumbent based on its form of business organization. The policy toolkit described above helps make this clear. For example, does the existing policy *Block* the entry of the business innovator through a licensing scheme or supply cap? Does existing law not apply to the newcomer,

giving it a subsidy over existing firms in the market (*Free Pass*)? Is the law capable of interpretation to include the business innovator (*OldReg*)? Or, is existing law incapable of accommodating the newcomer without amendment (*NewReg*)?[128]

In simple terms, if the current legal regime favors certain business models over others, this raises normative concerns both about stifling innovation and protecting the public interest. As a matter of neutrality, both *Block* and *Free Pass* are presumptively nonneutral and are therefore disfavored under our analytical framework. A *Block* strategy is potentially overinclusive—it would preclude new business models from entering the market regardless of whether they offer significant benefits to consumers and the public over existing forms of business. *Free Pass* is potentially underinclusive; it permits innovation but may not sufficiently protect public interest concerns and allows for regulatory arbitrage. In contrast, both *OldReg* and *NewReg* offer a potentially more neutral approach. The choice between them depends upon a number of factors, including whether existing rules can be interpreted broadly to apply to both the incumbent and the innovator, and whether the innovator raises the same or different policy concerns as the incumbent.

This can be shown using the categories of policy disruption described in Part I. *End-runs*, *Exemptions*, and *Gaps* raise the underinclusiveness problem—the business innovation arguably is not subject to regulation but should be because the substance of the business (if not its form) raises the same kinds of concerns as the incumbent. To give one example, if antidiscrimination rules under the Fair Housing Act specifically exempt individuals who rent out space to

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128. As an example of how a regulator might adopt an *OldReg* approach, the Tennessee Attorney General issued an opinion concluding that "hosts" using Airbnb and other room-rental platforms are no different from hotels for purposes of paying occupancy taxes. State of Tenn. Office of the Attorney Gen., Opinion No. 15-78: Tax on Short-Term Rentals of Homes, Apartments, and Rooms Arranged Through Websites (Dec. 1, 2015), https://www.tn.gov/assets/entities/attorneygeneral/opinions/op15-78.pdf [https://perma.cc/G3Z4-C7WH]:

> [T]he individuals who rent their homes on a short-term basis via the websites are the owners or lessees of the "hotels" and have control over the "hotels." The websites are not the owners or lessees of the "hotels" and do not have control over the "hotels." The individuals who rent their homes via the websites are therefore the "operators" of the "hotels" and are responsible for collecting and remitting the hotel occupancy privilege tax.

This regulatory response to a perceived *End-run*—where it was not clear whether the existing law applied to Airbnb—raised the possibility that Airbnb "hosts" might be treated differently from hotels with respect to taxes, or, in essence, that they would receive a *Free Pass*. The regulator's conclusion to adopt an *OldReg* strategy effectuated not only the underlying default principle of neutrality as between incumbent hotels and Airbnb "hosts," but also continued to protect the public interest by ensuring that taxes needed to fund state operations would be collected.

roommates, then some of Airbnb's hosts fit into a clear exception—an *Exemption*. Stepping into a regulator's shoes at Step One, a *Block* strategy cannot apply to an *Exemption,* because the innovator fits into a clear legal exception.[129] Therefore, the regulator must choose among the remaining options. To give Airbnb a *Free Pass* would likewise be nonneutral, and would subsidize this platform as compared to hotels, potentially facilitating discrimination in short-term housing rentals, and would risk underenforcing important national antidiscrimination norms. Therefore, at Step One, a neutral approach would suggest that an *OldReg* or *NewReg* strategy is preferable to a *Free Pass*.[130]

On the other hand, some forms of policy disruption are based on overinclusive regulations—the business innovation is subject to regulation but arguably should not be. This phenomenon is particularly evident in the case of a *Solution*. The rise of distributed generation mitigates climate change as compared to conventional power generation, which was regulated in order to address different public policy concerns. Similarly, Tesla's desire to sell electric vehicles directly to consumers does not raise the same public policy concerns about unequal bargaining power between franchisors and franchisees that motivated states to adopt franchising laws. For business innovations raising overinclusiveness problems, the biggest concern is if regulators apply a nonneutral *Block* strategy, as this would deprive consumers of the benefits of the business innovation. A *Free Pass* strategy would also be nonneutral, and might raise ancillary concerns about reliance interests at Step Three. So the next question in each case is whether policy considerations should outweigh the neutrality principle, which favors *OldReg* or *NewReg* at Step One. For example, some local jurisdictions in Tennessee imposed *OldReg* zoning and hotel regulations on room-rental platforms, some adopted *NewReg* approaches allowing room rentals to continue under conditions less restrictive than the existing hotel regime, and the state legislature introduced but later withdrew legislation preempting local regulation, which would have given the hosts *Free Pass* advantages.[131]

129. Of course, if the decisionmaker is the legislature rather than an agency, then the *Block* strategy can be applied to an *Exemption*, since the legislature can amend the law. Given the authority to change the law, the question for the legislature is the policy desirability of such a change.

130. If the decisionmaker is a regulatory agency, there may be statutory constraints on how creative it can be in developing *NewReg* options. Again, such limits do not apply to a legislature.

131. *See supra* note 51.

### 2. Step Two: When Should Neutrality Be Outweighed by Other Factors?

At Step Two, the primary question is whether a default preference for neutrality should be outweighed by other factors, most importantly concerns about protecting the public interest. While organizational neutrality should operate as a default rule, there may be compelling reasons in particular cases to override it and instead prefer certain types of business organization over others. Not all existing regulatory regimes that have an impact on the structure of business were intended solely to promote rent seeking. There may well have been sound, public-interest oriented reasons for those regimes and sound reasons to retain some of their underlying goals.

For example, health, safety, and land-use regulations that currently govern hotels assume that most provision of hospitality will occur through businesses that are hierarchical in nature, that employ at least one full-time employee, and in which the firm (which is the regulatory target) owns the property being rented for short-term stays. While the size of an existing hotel operation might range from a small bed-and-breakfast to a hotel with hundreds of rooms, it is a fundamentally different kind of business model than the one facilitated by services like Airbnb, which allow individual homeowners or renters to gain income from renting out spare rooms or apartments for short periods of time. The existing regulatory model presumes a level of investment and commitment by an owner that makes feasible important safety requirements like fire inspections, health inspections, and limitations on location to commercial zones to minimize costs to neighboring homeowners. Homeowners renting their home out for a few weeks a year when they are on vacation, or their spare upstairs bedroom, arguably do not have the time, expertise, or capacity to comply with these requirements. These legal requirements increase regulatory costs for regulated entities—and homeowners who need not comply with them can accordingly rent out their properties at lower rates.[132]

This example suggests that here, important public policy concerns about fire safety and antidiscrimination principles actually point in the same direction as the neutrality principle—against a *Free Pass*, and toward an *OldReg* or *NewReg* strategy. While an *OldReg*

132. This problem is even more acute when an entire apartment building is taken over by one owner and run essentially as a hotel—but free of regulation. Hugo Martin, *Airbnb and Other Home-Sharing Businesses Have Hotels Worried*, L.A. TIMES (Mar. 17, 2016), http://www.latimes.com/business/la-fi-hotels-airbnb-20160317-story.html [https://perma.cc/F4RK-WMPK].

strategy might be best to apply existing safety rules to individuals renting out their homes or rooms via Airbnb's platform, the new business structures may require a *NewReg* strategy so as to ensure that homeowners can plausibly comply with them and reduce the incentives for evasion of the regulatory system by homeowners. And if regulators determined that either safety, residential zoning restrictions, or antidiscrimination principles were so important and could not be enforced even through new rules effectively, then a *Block* strategy might even be warranted.

To give a second example, both the Resource Conservation and Recovery Act and the Surface Mining Reclamation Act contain provisions that have the effect of keeping small businesses out of certain markets—the transportation, storage, and disposal of hazardous waste, and coal mining, respectively.[133] Both statutes have this effect because they impose such severe financial assurance requirements that they privilege certain corporate forms with the capacity to raise large amounts of capital.[134] Such laws are arguably inconsistent with the default principle of organizational neutrality. Yet there may be countervailing reasons why we *want* to *Block* small businesses from entering these markets. For example, we might want to make sure that in the event of a spill of hazardous materials, the firm has the capacity and resources to clean it up and protect public safety, rather than file for bankruptcy protection. Protecting the public interest may justify ensuring that firms engaged in hazardous occupations are sufficiently capitalized to address releases of such hazardous materials. In such a case, a strategy of *Block* would be appropriate, not to promote rent-seeking behavior, but to address hazards specific to the industry that have not yet been solved by new forms of business organization. If, in the future, new forms of business organization can solve these problems, then an *OldReg* or *NewReg* strategy may become appropriate. Similarly, the entry of new firms into regulated electricity markets was restricted or prohibited on the grounds that the monopoly for the incumbent utility was a fair tradeoff for the guaranteed service that the utility provided to customers in its service areas.[135] Subsequent innovations in business—like the rise of independent generators—challenged this assumption. Other relevant policy goals may include

133. Surface Mining Control and Reclamation Act of 1977 ("SMCRA"), 30 U.S.C. § 25 (2012); Resource Conservation and Recovery Act, 42 U.S.C. §§ 6901–6992k (2012); 40 C.F.R. §§ 263–265 (2016).

134. 30 U.S.C. §§ 415 (c)(1)(B), 509; 40 C.F.R. §§ 258.70–258.75, 264.140–264.151. Thanks to David Spence on this point.

135. *See supra* Part II.

protecting public health, safety, the environment, or antidiscrimination principles.

### 3. Step Three: Addressing Reliance Interests

Reliance interests raise another important challenge for organizational neutrality. For instance, in the context of the electricity industry in the United States, restricting entry to the industry and entrenching a regulated incumbent with a guaranteed monopoly was tied to the important policy goals of ensuring universal service for all customers and cross subsidization of some customers by others. We might be concerned about the reliance interests of those parties who reasonably invested in the prior business model and regulatory regime. There are plausible arguments that major utilities undertook billions of dollars of investments based on promises of recouping those investments through consumer rate payments under the prior system. Dismantling the regulatory structure and the associated business model would strand these assets.[136] A similar argument could be made for taxi fleet owners who invested in medallions under existing legal rules. These significant investments have now diminished in value with the rise of Uber and may become altogether valueless if unrestricted entry into the transportation-for-hire sector is permitted.[137]

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136. Sini Matikainen, *What are Stranded Assets?*, LONDON SCH. ECON. (Aug. 23, 2016), http://www.lse.ac.uk/GranthamInstitute/faqs/what-are-stranded-assets/ [https://perma.cc/F73V-B93X]; *see* Jonas J. Monast, *Maximizing Utility in Electric Utility Regulation*, 43 FLA. ST. U. L. REV. 135, 163–64 (2015) (noting how costs associated with stranded assets "are typically borne by customers in accordance with rates approved by state regulatory commissions" (internal quotation marks omitted) (quoting Duke Energy, Comment Letter on Proposed Rule on Carbon Pollution Emission Guidelines for Existing Stationary Sources (Dec. 12, 2014), https://www.regulations.gov/document?D=EPA-HQ-OAR-2013-0602-23983 [https://perma.cc/C4F2-NDC4])); J. Gregory Sidak & Daniel F. Spulber, *Deregulatory Takings and Breach of Regulatory Contract*, 71 N.Y.U. L. REV. 851, 866–69 (1996) (discussing deregulation and its impacts on stranded investments and stranded costs).

137. Indeed, taxi medallion owners filed suit against the City of New York, arguing that the city has violated the Takings Clause by permitting Uber to enter that market, thus diminishing the value of their medallions. However, the district court dismissed their Takings claim as unripe because they had failed first to seek "just compensation" under state law for the alleged Taking. Melrose Credit Union v. City of New York, No. 15-cv-09042 (AJN), __ F.Supp.3d __, 2017 WL 1200902, at *12 (S.D.N.Y. Mar. 30, 2017). While incumbents may seek transition relief under the Takings Clause, it is not at all clear that they will be successful, especially if they are claiming that the government's "failure to regulate" (a strategy of *Free Pass*) led to a taking of their property. For a discussion of whether the government's failure to act can serve as the basis for a Takings claim, see Christopher Serkin, *Passive Takings: The State's Affirmative Duty to Protect Property*, 113 MICH. L. REV. 345, 345 (2014) (arguing that governments can violate the Takings Clause by "failing to act in the face of a changing world" as in the case of climate change). While we recognize that the Takings Clause may afford one avenue, in certain types of cases, for transition relief, we contend that it would be preferable to adopt alternative methods of transition relief, rather than to expand Takings Clause jurisprudence.

A neutral approach does not diminish these reliance interests, but instead would require asking at Step Three whether some of the protections against legal transitions could be addressed through alternative regulatory schemes, such as through side payments. Using alternative methods of compensation such as one-time side payments would avoid penalizing business innovation by virtue of baking soon-to-be anachronistic assumptions into the long-term regulatory structure.

We refer to such side payments as a *Buy Out* strategy that could potentially accompany the strategies of *Free Pass*, *OldReg*, or *NewReg*. An incumbent's claim for a *Buy Out* might be strongest in a *Free Pass* scenario—in which an upstart is simply permitted to do an *End-run* around the law, or exploit *Gaps* or *Exemptions*, and thus is essentially subsidized by failure to apply existing legal rules. A strategy of *NewReg*—which, in an ideal world would place different forms of business on equal footing—occupies a weaker ground on the *Buy Out* question. Under an *OldReg* scenario, an incumbent's claim for *Buy Out* is ambiguous. On the one hand, the incumbent's claim could be at its weakest, in that the existing regulatory regime is applied to the upstart, making for a more level playing field between the two forms of business, especially if the regulatory regime was designed with the incumbent in mind. Yet applying existing law could still favor innovators. Perfect neutrality is hard to achieve in practice, and a firm that once received a legal subsidy and now loses it will perceive this loss as a penalty.[138] In the end, interest group politics matters and *Buy Out* may turn as much on political economy as concerns over equity.

### *D. So What?*

In this Article, we have developed two distinct but complementary frameworks. The first identified the different ways business innovations create policy disruptions. Each type of innovation, whether *End-run*, *Exemption*, *Gap*, or *Solution*, raises specific policy questions. The second laid out the regulatory toolkit for addressing policy disruptions caused by business innovations—*Block*, *Free Pass*, *OldReg*, and *NewReg*. Knowing the type of disruption and the available tools, however, does not necessarily tell the regulator what to do without some additional information. For that, we proposed a three-

138. *See* Amos Tversky & Daniel Kahneman, *Advances in Prospect Theory: Cumulative Representation of Uncertainty*, 5 J. RISK & UNCERTAINTY 297 (1992) (discussing loss aversion in the context of cumulative prospect theory); Amos Tversky & Daniel Kahneman, *Loss Aversion in Riskless Choice: A Reference-Dependent Model*, 106 Q.J. ECON. 1039, 1047–48 (1991) ("The basic intuition concerning loss aversion is that losses . . . loom larger than corresponding gains . . . .").

step process based on a default rule of organizational neutrality for regulators to decide how and when to use their toolkit. Bringing this all together, Table 3 sets out a general framework for how regulators should manage business innovations that disrupt policy. By its very nature, any effort to encapsulate complexities in this way involves some degree of oversimplification, and other regulatory responses may be possible. As we explain below, however, we believe this kind of summary can be helpful.

TABLE 3: FRAMEWORK FOR REGULATING BUSINESS INNOVATION

| | Policy concerns significantly outweigh neutral default | Innovation benefits significantly outweigh neutral default | Neutral default outweighs policy concerns and innovation benefits |
|---|---|---|---|
| **End-run**<br>Innovator raises the same underlying policy concerns as the incumbent under existing legal rules, and existing rules could be applied | **Block**<br>Prohibit innovator from entering market<br>*or*<br>**OldReg**<br>Apply existing legal rules to innovator (if existing rules are nonneutral) | **NewReg**<br>Develop new regulatory structures<br>*or*<br>**Free Pass**<br>Allow innovator to enter market without applying existing rules | **OldReg**<br>Apply existing legal rules to innovator<br>*or*<br>**NewReg**<br>Develop new regulatory structures |
| **Exemption**<br>Innovator raises the same underlying policy concerns as the incumbent under existing legal rules, but existing legal rules do not neatly apply | **Block**<br>Prohibit innovator from entering market, which may require **NewReg** (new legal rules) | **Free Pass**<br>Allow innovator to enter market without applying existing rules<br>*or*<br>**NewReg**<br>Develop new regulatory structures | **NewReg**<br>Develop new regulatory structures |
| **Gap**<br>Innovator raises new policy concerns not contemplated by existing legal rules | **NewReg**<br>Develop new regulatory structures | **Free Pass**<br>Allow innovator to enter market without applying existing rules<br>*or*<br>**NewReg**<br>Develop new regulatory structures | **NewReg**<br>Develop new regulatory structures |
| **Solution**<br>Innovator substantially reduces policy concerns incumbents raise under existing legal rules and presents no significant new policy concerns | **N/A** | **Free Pass**<br>Allow innovator to enter market, which may require **NewReg** (new legal rules) | **NewReg**<br>Develop new regulatory structures |

Identifying policy disruptions, regulatory tools, and a process for how to apply the tools is all well and good, but is this useful? In other words, does this meaningfully contribute to the field? We argue that it does for four main reasons.

First, our framework complements public choice theory, which involves the application of economic concepts to the legislative or regulatory process in order to offer a positive theory of how policies develop.[139] Public choice provides a powerful explanation for the dynamic of rent seeking in the face of business innovation, where incumbents create private benefits by excluding entry. And aspects of this are certainly present in the Uber and electricity stories. But rent seeking is at best only a partial explanation for the policy conflicts. Nor, more importantly, does identifying an instance of rent seeking as a descriptive matter tell regulators what to do about it. Our framework goes beyond a positive account of how policy disruption occurs; we offer a normative default principle of neutrality and a structured analytical framework to balance a public interest perspective toward regulation with a more economically minded focus on the costs of regulation.

Second, our framework goes beyond the standard law and economics model, which argues that the purpose of the regulatory state is to promote efficiency and to increase overall social welfare.[140] While we offer neutrality as a default principle, neutrality is not merely about reducing costs and promoting economic efficiency. Nor is it about promoting innovation at any cost. Rather, it examines the relative regulatory costs faced by incumbents and innovators; neutrality seeks to level the playing field. And neutrality is a default principle, one that can be overcome by other public interest factors.

Third, we believe that this framework is helpful because it sets forth several "ideal types"—scenarios that have occurred repeatedly throughout the history of business innovation and policy disruption. Yet these types are not mutually exclusive. In some instances, an innovation, taking into account all its policy implications, will land entirely in one of the boxes in Table 3. But many cases will present hybrids implicating more than one box. A business innovation might create the same kind of policy problem as the incumbent in one area of the law, but may also create new policy problems not currently regulated by existing legal rules or solve other problems contemplated

139. *See, e.g.*, James M. Buchanan, The Domain of Constitutional Economics, 1 CONST. POL. ECON. 1 (1990).

140. *See* Louis Kaplow & Steven Shavell, *Fairness Versus Welfare*, 114 HARV. L. REV. 961 (2001) (arguing that maximizing social welfare should be the goal of legal policy).

by existing regulatory structures. This would necessitate a combination of policy responses.

Finally, while we have envisioned this framework as a guide for policymakers, there is another set of lessons embedded within it; lessons for another audience—firm managers and business innovators—that we can only briefly touch on here. For instance, consider the situation in which the innovator raises no significant new policy concerns at all. This is the Netflix example—when the firm began its business model by sending DVDs via the U.S. mail. This business innovation got a *Free Pass* in terms of the regulatory state—sending DVDs via the mail eliminated the policy concerns its brick-and-mortar competitors presented under land-use law and did not raise significant new policy concerns that regulators needed to address. The only significant harms were market-oriented—harms to its competitors, like Blockbuster. Just as this framework can provide guidance to policymakers, so too, business innovators should recognize its value. Innovators want to be in the world of *Free Passes,* where perhaps a *NewReg* regime is second best; they most definitely want to avoid a *Block*; and they likely will find *OldReg* an uncomfortable domain. This framework can and should guide them as they strategize about how best to organize their businesses to ensure that the regulatory state plays a positive role in innovation.

## IV. PRACTICAL APPLICATION OF THE THREE-STEP PROCESS

Part IV puts our framework to the test, applying the three-step analysis to current policy challenges described in the case studies of Part II—the rise of distributed energy generation and Tesla's efforts to sell its electric vehicles directly to consumers.

### *A. The Case of Distributed Generation*

As we explained in Part II, the dominant regulatory model for electric utilities had a legitimate public purpose—to guarantee universal, nondiscriminatory service for customers at reasonable rates. In order to achieve this goal, and relying on certain assumptions about economies of scale, the government gave utilities monopoly power to generate, distribute, and sell electricity. This regulatory structure created incentives for vertically integrated firms to invest in expensive infrastructure like generation capacity, transmission lines, and distribution systems. Rate regulation simultaneously addressed consumer concerns over the industry's monopoly power while ensuring

a reasonable rate of return and continued investment. Since the original electrification of America, there has been a long set of iterative interactions between business innovation and regulatory innovation. Sometimes business model innovations have provoked regulatory changes. In other cases, regulatory changes have provoked the development of new business models, and sometimes these business and regulatory disruptions have been mutually endogenous.

A combination of regulatory change in key statutes and FERC Orders, technological innovation in the development of rooftop solar, and market developments like the emergence of businesses like Solar City and Sungevity has led to the rise of distributed electricity generation. We would recognize at Step One of the organizational neutrality analysis that in some cases distributed generation is *Blocked* or penalized to the point of exclusion by existing legal rules.[141] The principle of organizational neutrality would say as a default that the upstart rooftop solar providers (whether organized as firms or individuals) should be neither penalized nor subsidized for innovating in their form of business organization. They should not be penalized by virtue of using new organizational forms and new technologies—they should be permitted to interconnect with the grid and to contribute power and receive compensation on equal terms with existing utilities that provide the same product (electricity). They should also, however, not be subsidized by virtue of their business innovation if they are using existing transmission or distribution lines. And third parties should likewise not be penalized by a law that prohibits new market entrants trying to deliver the same product. Yet the existing regulatory structure governing electricity generation is so intimately bound up with one form of business organization—the vertically integrated firm—that it likely cannot be interpreted in a neutral way. In other words, an *OldReg* strategy is likely not possible. Rather, new law is required (*NewReg*).

Step Two in the analysis would require asking whether any relevant factors would warrant deviation from the neutral default, such as health, safety, or distributional consequences. Recognizing that the rise of solar power and distributed solar or other renewable energy generation can reduce deleterious fossil fuel emissions, this technological development is clearly a *Solution* and thus ought to be

141. For example, the Nevada Supreme Court recently blocked a vote on a referendum that would have restored favorable rates for net-metering solar customers after the state public utilities commission sought to impose higher fees on distributed solar generation. Julia Pyper, *Nevada Supreme Court Blocks Rooftop Solar Referendum*, GREENTECH MEDIA (Aug. 8, 2016), https://www.greentechmedia.com/articles/read/nevada-supreme-court-blocks-rooftop-solar-referendum [https://perma.cc/D86T-JCMH].

encouraged. Yet rooftop solar and distributed generation do raise the same kinds of policy concerns about cross subsidization and ensuring financial support for infrastructure and distribution lines that the current policy regime is designed to address. This suggests that a *Free Pass* is not warranted, but instead that a *NewReg* strategy would better protect these policy interests. The entry of rooftop solar could, however, have negative distributional consequences for those who cannot afford to use rooftop solar.

At Step Three, it would become clear that reliance interests are heavily implicated. Allowing net metering with rooftop solar would raise concerns about reliance interests, because utilities have fixed costs to maintain transmission and distribution lines and because rooftop solar providers may not be contributing adequately to those goods that serve distributional interests.[142] A neutral approach would require asking whether some of the protections against legal transitions—a *Buy Out*—could be addressed through side payments raised through general tax revenues.

### *B. The Case of Tesla*

A second example of how the neutrality principle would operate arises out of state franchise rules that would prohibit Tesla from selling its products to consumers. The issue is whether the direct-sales bans, which were originally meant to resolve bargaining disparities between dealers and automakers, should *Block* an automaker like Tesla, which engages *exclusively* in direct sales. The principle of organizational neutrality would set a default at Step One that Tesla should neither be penalized nor subsidized for its new form of business organization—forward integration—in selling cars to consumers. A total ban (*Block*) seems like a clear penalty in this regard. If these laws could be interpreted simply not to apply to Tesla (*Free Pass*), that would permit its entry into the markets without regulatory penalty. The concerns that motivated these laws—coercive practices by auto manufacturers toward dealers (e.g., forcing them to take unwanted inventory and threatening not to supply them with inventory in the future if they refused)—would not apply to a forward-integrated firm in which the manufacturer also is selling the vehicles directly, making an *OldReg* strategy unwarranted or impossible to implement. If such a neutral,

142. Rooftop solar/distributed generation also arguably falls under the category of *Solutions* because the innovation solves a problem that the incumbent presents for the future under the extant regime—namely, the climate problem.

purposive interpretation is impossible, then organizational neutrality would require changing the law (*NewReg*).

At Step Two, a neutral approach would require asking whether other third-party interests and factors are implicated in a meaningful way. Because the purpose of these laws is intimately bound with correcting for coercive bargaining tactics, Step Two merges into Step Three in this example. The parties bring protected are not third parties or members of the public, but rather, parties to the dealership franchise agreements.

Step Three requires asking if there remains any continuing need to protect dealers from coercive tactics by manufacturers (Step Two) or to compensate dealers for legal transitions if they lose business as a result of a legal change (Step Three). In this case, existing dealers of gasoline-powered vehicles may continue to sell their wares; they simply face competition from a new product. And unlike the IOUs in the case of electricity generation, existing dealers have not undertaken extensive investments in infrastructure which Tesla would be using for free; nor did entrants have to pay a significant sum to enter the market that Tesla would not pay (i.e., the costs of setting up a showroom), as in the case of taxi medallion owners. Thus, the case for any kind of transition relief is weaker in the Tesla context than for distributed generation. Even if regulators wanted to provide some kind of transition relief, again, a neutral approach would require asking whether such ends must be achieved through these regulations or some other method, such as side payments, general revenue, or other legal rules against fraud or coercion in contracting, that would allow the overall regulatory regime to permit business innovation without "nonneutral" distortions. And while a strategy of *Free Pass* ordinarily might make a strong case for *Buy Out*; here, it is not clear that the claim to transitional payments is as strong where Tesla is not exploiting a loophole in the law. This is not an *End-run*, but a *Solution*. Existing legal rules will continue to protect dealers from power disparities in relation to manufacturers, and Tesla's presence is simply orthogonal to the problem that the original legislation was designed to address. The only question is who is going to sell more cars. To the extent that Tesla's direct sales raise new policy concerns, it may also be considered a *Gap*. And regulators will need to respond accordingly with new legal rules.

## CONCLUSION

This Article has offered a framework for understanding an important subset of policy disruptions—those that arise when

innovative business models strain existing laws that are themselves built on assumptions about how particular firms in an industry are organized. We have also proposed a framework to guide regulators in managing these policy disruptions when they arise, suggesting that a normative goal of neutrality between incumbents and innovators should be the default. Given the context-specific nature of existing legal rules, it is beyond the scope of our analysis to answer a related question—which policy tools or specific legal rules regulators might choose a priori, before confronting a specific policy disruption. In the interests of furthering this important research question, though, we wish to emphasize two fundamental points.

First, as we demonstrated in Part II, the problem of business innovation creating policy disruption is a recurring one. Regulators must therefore ask whether there are ways to design regulatory systems or public policy instruments more neutrally in the first place, so that legal rules are less likely to create such policy disruptions and better able to fold in business innovation in the future. This point is particularly salient if regulators adopt a *NewReg* strategy. When crafting new legal rules, it may be tempting to consider only the public policy implications of the latest business innovation.[143] Indeed, in a number of states, Tesla has obtained legislative or regulatory permission to sell directly to consumers without encumbrance, the *Free Pass* model. In doing so, however, it has often successfully lobbied for legislation that grants the power to sell directly *to Tesla alone*, blocking off any future additional competitors.[144] Regulators should consider whether they are simply recreating the same problem of tying new regulations too tightly to today's "new" business model, which may have implications for the innovations of the future. Solving one policy disruption may set up a future conflict.

Second, there are certain types of policy instruments that may fit better with a normative goal of neutrality. For example, general permits may be particularly useful in this context.[145] Regulators could adopt a general permit program and apply it broadly to an entire field—for example, transportation-for-hire or short-term housing rentals. General permit systems impose low, minimal, or no compliance burdens

143. *See* Pollman & Barry, *supra* note 11, at 442–47 (discussing limitations of regulatory entrepreneurship).

144. *Id.*

145. Eric Biber & J.B. Ruhl, *The Permit Power Revisited: The Theory and Practice of Regulatory Permits in the Administrative State*, 64 DUKE L.J. 133, 232–33 (2014) (suggesting that regulatory permits may be appropriately flexible to address new firms in the platform economy).

on regulated parties, so long as certain conditions are met.[146] For instance, the wetlands regulatory program under Section 404 of the Clean Water Act uses a general permit program to allow a wide range of relatively low-impact and common everyday activities (such as the installation of navigation equipment in waterways or small-scale residential development) to occur with minimal or no paperwork. General permits could allow new business models to start up at a "pilot" level while the impacts of the new business model remain relatively minimal, affording regulators a chance to study its impacts and integration.[147] Such a permit could terminate in one of two ways. First, the permit could operate expressly for a limited period of time and automatically sunset after that time period ended. If the new business model has proved successful, then a new permanent regulatory program would have to be developed to manage it, again keeping in mind our three-step process for weighing competing values. By the time of the sunset, presumably the new business model (if it is successful) will have enough resources and political power that it can ensure that its voice is heard in the political and regulatory process. There could be a provision for automatic termination if certain conditions are triggered. Once the impacts of a new business model rise above a certain level—for instance, a certain number of cars are operating under a new ride-sharing business model on the streets of a city, or a significant number of homeowners want to rent out spare rooms on Airbnb—then a more permanent solution might be required.[148] Again, the growth of the new business model during the general permitting stage would allow the gathering of information about what its impacts are, what the appropriate regulatory structure would be, and also for the new business model to grow enough to ensure it has a voice in the political and regulatory process.

Two other policy instruments likewise may promote the ends of neutrality better than other kinds of tools. Upstream policy instruments like taxes or cap-and-trade systems can avoid regulating the downstream provider of service to customers entirely.[149] Such

146. *Id.*

147. Cortez, *supra* note 40, at 218–20 (noting possibility of permit programs that are developed as pilots but are subject to sunset provisions).

148. *See* Zale, *supra* note 3 (developing the concept of conditional triggers).

149. *Cf.* Reuven S. Avi-Yonah & David M. Uhlmann, *Combating Global Climate Change: Why a Carbon Tax is a Better Response to Global Warming Than Cap and Trade*, 28 STAN. ENVTL. L.J. 3, 6–9 (2009) (advocating an upstream carbon tax to regulate greenhouse gas emissions); Robert N. Stavins, *A Meaningful Cap-and-Trade System to Address Climate Change*, 32 HARV. ENVTL. L. REV. 293, 344–53 (2008) (advocating upstream cap-and-trade to regulate greenhouse gas emissions).

instruments would be particularly useful to address the impacts of business innovation on third parties, like environmental impacts. For example, an upstream tax on carbon would be neutral as between a taxi firm, Uber, and a private individual driving her own vehicle. Alternatively, some form of informational regulation or governance could easily be made neutral as between incumbents and innovators.[150] Responsibility for information disclosure would be on the platform to share information about its impacts, its costs, and its benefits.[151] Information disclosure can serve either as an end in itself or as a method to improve substantive legal rules, including permit programs.[152] Whether the platform "owns" vehicles or "rents" them from drivers, or "owns" rooms or "rents" them from Airbnb hosts, the platform is the best locus for regulatory action.

There is much more work to be done in this space.[153] To be clear, though, the acceleration of technological innovation means that the problems of new business models clashing with regulatory structures will only increase. Designing regulatory structures that are both resilient enough to protect society from harm and also flexible enough to facilitate the development of new business models that benefit society will remain a challenge for legal scholars, policymakers, and stakeholders. We have shown that this challenge is bigger than a recent business innovation (even one as far-reaching as the platform economy), and not a question of "demons and angels" on either side. Instead, the problem of policy disruption is an inevitable and necessary consequence of market forces in the administrative state. Our framework provides a clear, general basis for analysis that can guide these difficult but necessary decisions today and into the future.

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150. *Cf.* James Salzman, *Beyond the Smokestack: Environmental Protection in the Service Economy*, 47 UCLA L. REV. 411, 457–58 (1999) (exploring economic methods of governance).

151. *Id.* at 473–74 (citing Reinier H. Kraakman, *Corporate Liability Strategies and the Costs of Legal Controls*, 93 YALE L.J. 857, 889 (1984)).

152. Bradley C. Karkkainen, *Bottlenecks and Baselines: Tackling Information Deficits in Environmental Regulation*, 86 TEX. L. REV. 1409, 1412–13 (2008) (discussing benefits and drawbacks of informational regulation); Sarah E. Light, *NEPA's Footprint: Information Disclosure as a Quasi-Carbon Tax on Agencies*, 87 TUL. L. REV. 511, 519–25 (2013) (discussing rationales for information disclosure and surveying literature).

153. For instance, if regulatory agencies are subject to capture by incumbent regulated parties, then regulatory agencies will be less open to the analysis and creative solutions that we believe are necessary to facilitate business innovation while promoting the public interest. For a discussion of how to reduce the risk of capture of regulatory agencies, see Rachel E. Barkow, *Insulating Agencies: Avoiding Capture Through Institutional Design*, 89 TEX. L. REV. 15 (2010).