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THE COST OF INEXPERIENCE

Mirit Eyal-Cohen *

ABSTRACT

Free market entry is vital in preventing concentration of market power and eliminating large deadweight losses. Yet, in recent years, studies show that newcomers are less successful than existing firms that have diversified their products in the market. What might explain this phenomenon?

This Article unveils a regulatory catch 22. It reveals that although a regulation may be efficient in correcting a certain market failure, its distributional effects may create another. It exposes the degree to which “economies of experience” in regulation create significant disadvantages to newcomers and provide substantial advantages to old-timers. Being well-versed in their marketplace, old-timers possess knowledge, familiarity, and influence over the rulemaking process. New or “green” entities entering regulated market or dealing with a new rule face proportionally larger costs to obtain regulatory insight. Consequently, an anomaly exists when government choice may de facto hamper innovation and survival of newcomers, the same goals it seeks to promote.

To remedy this inconsistency, the Article suggests ways to offset these distributional asymmetries through the use of information cooperatives, regulatory sandboxes, and compensatory mechanisms. These solutions offer policymakers greater regulatory efficiency without resorting to deregulation.

Keywords: Regulation, Regulatory Sandbox, Innovation, Information Sharing, Entry Barriers, Transaction Cost, Compliance Cost, Distribution, Regressive, Asymmetry, Externalities, Experience, Age, Scope, Economic Growth, Efficiency, Competition.

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I. INTRODUCTION

In last two decades, studies have demonstrated that while the rate of newcomers entering the market is high,¹ these newcomers are less successful than existing firms that have diversified their products in the market.² What might be the reason for this anomaly? To date, the doctrinal analysis has lacked a discussion of the distributional impact of government regulation on private enterprise.³ Modern business practice requires adhering to numerous regulations, obtaining licenses or approvals from various governmental authorities, and making informational filings to either enter or stay in the market. However, it is unclear what role these government rules play in newcomers' survival.⁴

This Article reveals the effects of government regulation on newcomers. The concepts of "newcomers" and "old-timers" play a central role in this Article. It will be helpful, therefore, to clarify the meaning of these terms at the outset. Although the term has several meanings, this Article uses newcomers to describe young and inexperienced firms in various industries. Old-timers are the opposite of newcomers and possess an abundance of market experience, connections, and industrial and regulatory knowledge.⁵ Although the terms may refer to both individuals and entities, this Article focuses on the latter.

Consider Entities A and B both currently in the development stage of drones for commercial delivery use. Entity A is a newcomer while Entity B has been producing drones for various industrial surveillance use. Entity A developed drones that are made from lighter material, can

¹ See Douglas W. Elmendorf, Director, Nat'l Bureau of Econ. Research, Presentation at the Kaufmann Foundation Conference on Federal Tax Policy and Entrepreneurship (Sept. 27, 2013) (examining innovation in the U.S.).

² See, e.g., Ian Hathaway & Robert E. Litan, *Declining Business Dynamism in the United States: A Look at States and Metros*, BROOKINGS, (May 5, 2014) <https://www.brookings.edu/research/declining-business-dynamism-in-the-united-states-a-look-at-states-and-metros/> (documenting a pervasive increase in business consolidation during the last few decades); Ruth Simon & Joe Shoulak, *Level of New U.S. Startups Has Stalled*, WALL ST. J., Oct. 14, 2015 (reporting long-term decline in entrepreneurship activity); Leigh Buchanan, *American Entrepreneurship Is Actually Vanishing. Here's Why*, INC. MAGAZINE (May 2015) (citing Census data and concluding that more new businesses are dying than are being born). See also Timothy Dunne et al., *Patterns of Entry and Exit in U.S. Manufacturing Industries*, 19 RAND J. ECON. 495, 513, tbl.11 (1998) (an empirical study on entry and exit rates for both startups and diversifying entrants); P.A. Geroski, *What Do We Know About Entry?*, 13 INT'L J. INDUS. ORG. 421, 424 (1995) ("de novo entry is more common but less successful than entry by diversification.").

³ See, e.g., PHILLIP E. AREEDA & HERBERT J. HOVENKAMP, *ANTITRUST LAW: AN ANALYSIS OF ANTITRUST PRINCIPLES AND THEIR APPLICATION* (2d ed. 2000) (demonstrating the interconnection between market entry and antitrust law); Harvey L. Pitt & Karl A. Groskaufmanis, *Minimizing Corporate Civil and Criminal Liability: A Second Look at Corporate Codes of Conduct*, 78 GEO. L.J. 1559, 1559 (1990) (debating whether corporate self-regulation is preferable to government regulation).

⁴ Dunne et al., *supra* note 2, at 515.

⁵ See, e.g., Canice Prendergast & Lars Stole, *Impetuous Youngsters and Jaded Old-Timers: Acquiring a Reputation for Learning*, 104 J. POLI. ECON. 1105, 1106 (1996) (examining investment management decision-making process in correlation to ability to learn).

operate longer, and include enhanced security features. However, it will face many preliminary costs. It needs to resolve technological issues such as ensuring reliable service, safe use, and aerial communication.⁶ Like any other business, it will have to find investors, study the market structure, create a customer base, and establish a chain of suppliers. To survive in the market, it will need to do so while selling its products at a competitive price. These costs are part of the price of doing business.

Nevertheless, unlike Entity B, Entity A also will need to acquire knowledge about the air and public safety regulations that govern the airborne artefacts market such as the Federal Aviation Administration regulation and various state legislation.⁷ It might also need to research the regulatory environments of its potential collaborators such as Walmart, Amazon, Google, and Alibaba to avoid putting them in compliance default by using its drones.⁸ Yet, current airborne artefacts regulation is outdated and does not address widespread commercial delivery use. Entity A may be compelled to pursue regulatory change before it is able to widely retail its innovative drones.⁹

These regulatory costs are not trivial. They serve as high entry barriers.¹⁰ As a current industrial drone manufacturer Entity B already possesses this knowledge and market influence. It has experience with air safety and product liability regulation. It has a greater ability to mitigate future regulatory changes. It may even utilize its knowledge to block Entity A's entry or persuade the regulator to hamper Entity A's ability to compete in the drone market.¹¹ If Entity A is still under development of its innovative drone, such regulatory pressure may restrain its progress and even halt production altogether. It may deter a universe of new technologies from coming into existence. Scholars have noted that identifying innovation restraints has proven to be very

⁶ See, e.g., Robert Clark, *Understanding the Drone Epidemic*, 30 COMP. L. & SECUR. REV. 230, 234 (2014) (documenting the nature, purpose, and characteristics of drones).

⁷ See Unmanned Aircraft Operations in the National Airspace System, 72 Fed. Reg. 6689, 6689-90 (Feb. 13, 2007); Rich Williams, *2014 State Unmanned Aircraft Systems (UAS) Legislation*, NCSL (Sept. 16, 2014), <http://www.ncsl.org/research/civil-and-criminal-justice/2014-state-unmanned-aircraft-systems-uas-legislation.aspx>. See also Roger Clark & Lyria Bennett Moses, *The Regulation of Civilian Drones' Impacts on Public Safety*, 30 COMP. L. & SECUR. REV. 263, 264 (2014) (identifying a range of regulatory gaps and uncertainties in the drone industry).

⁸ See, e.g., Teresa Hayes, *The Rising Demand for Drones in the Retail Sector*, MARKETRESEARCH.COM (Jun. 29, 2016) (surveying the growing interest in delivery drones). See also the effect on Mazda's reputation as a result of a third party airbag manufacturer's malfunction. WASH. POST, Nov. 29, 2015, at G02 (reporting that "Ford (joining Honda, Toyota and Nissan) will no longer be using air-bag inflators made by Takata, another blow to the troubled Japanese parts supplier. Takata inflators can explode with too much force, sending shrapnel into drivers and passengers.").

⁹ Consider, for example, the case of a PVC tube manufacturer who did not receive approval from the electrical Code due to the lobbying efforts of old-timers who produced steel conductors. *Allied Tube & Conduit Corp. v. Indian Head*, *infra* note 139.

¹⁰ See *infra* Part IV.

¹¹ The case of *City of Columbia v. Omni Outdoor Advertising* is an example of this truism. *City of Columbia v. Omni Outdoor Advertising, Inc.*, *infra* note 159 (Old-timer family corporation using its influence to convince the City of Columbia to block a newcomer from erecting signs in its territory).

difficult.¹² Developing suitable remedies has been even more problematic.¹³

This Article shows that regulations affect newcomers more perversely than old-timers.¹⁴ At the heart of the problem lie economies of experience, namely the benefit of age and scope.¹⁵ Whereas old-timers can spread regulatory costs over their output or longevity, newcomers are limited in their ability to mitigate these costs due to structural obstacles.¹⁶ This observation reveals regressive regulatory barriers.¹⁷ Many newcomers are not aware of the extent of these pitfalls until faced with administrative delays and overwhelming costs. Others may forgo entering the market altogether.

The significant effects of regulatory asymmetries on newcomers are palpable. Economic development correlates significantly with the existence of young firms.¹⁸ Free market entry is the foundation of a vibrant economy.¹⁹ It helps prevent the concentration of market power, reduces supracompetitive profits,²⁰ and eliminates large deadweight

¹² Herbert Hovenkamp, *Restraints on Innovation*, 29 CARDOZO L. REV. 247, 253 (2007).

¹³ *Id.*

¹⁴ By “regulation,” this Article refers to the vast range of formal rules (judicial, legislative, and administrative) that are “regulatory” in the sense that they burden behavior in order to change social welfare payoffs. *See generally*, WILLIAM EDWARD LEUCHTENBURG, *THE FDR YEARS: ON ROOSEVELT AND HIS LEGACY* 165-170 (1995) (describing the proliferation of government regulation during President Roosevelt’s years).

¹⁵ *See infra* Part III.

¹⁶ *See infra* Part IV.

¹⁷ For a clarification of the use of the term “regressive” in this Article *see supra* note 26. *See* MICHAELA SAISANA & STEFANO TARANTOLA, STATE-OF-THE-ART REPORT ON CURRENT METHODOLOGIES AND PRACTICES FOR COMPOSITE INDICATOR DEVELOPMENT 5 (2002) (defining a Composite Indicator as a mathematical combination of indicators and proposing it to be a better way to represent different dimensions of a concept as the subject of examination).

¹⁸ *See* ISRAEL M. KIRZNER, COMPETITION AND ENTREPRENEURSHIP 81 (1973). *See generally* ISRAEL M. KIRZNER, *THE DRIVING FORCE OF THE MARKET: ESSAYS IN AUSTRIAN ECONOMICS* (2d ed. 2002) (Continuing the Mises-Hayek legacy that examines the market economy and theories of Competition and Entrepreneurship). *See also* John Haltiwanger, *Entrepreneurship and Job Growth*, in *ENTREPRENEURSHIP, GROWTH, AND PUBLIC POLICY*, 319, 319 (Zoltan J. Acs et al. eds., 2009); John Haltiwanger et al., *Who Creates Jobs? Small Versus Large Versus Young*, 95 REV. ECON. & STAT. 347, 360 (2013); *Global Entrepreneurship Week*, FED. NEWS FEED (Dec. 15, 2015).

¹⁹ *See, e.g.*, JOE STATEN BAIN, *BARRIERS TO NEW COMPETITION: THEIR CHARACTER AND CONSEQUENCES IN MANUFACTURING INDUSTRIES* 142 (1956) (defining barriers to entry as factors that allow corporations to obtain higher than normal profits while deterring others from entering and competing); GEORGE J. STIGLER, *THE ORGANIZATION OF INDUSTRY* 67 (1968) (distinguishing between capital requirements and barriers to entry by holding that existing firms also have to meet these requirements while acknowledging that they serve as a determinant of economies of scale and the shape of the long-run average cost curve). *See also* Richard Schmalensee, *Sunk Costs and Antitrust Barriers to Entry*, 94 AM. ECON. REV. 471, 471-77 (2004) (noting that economists disagree about what market characteristics constitute “true” barriers to entry). *But see* Einer Elhauge, *Are Term Limits Undemocratic?*, 64 U. CHI. L. REV. 83, 161 (1997) (noting that higher entry barriers can be beneficial in encouraging entry by emphasizing the benefits of successful entry).

²⁰ *See, e.g.*, Christopher S. Yoo, *Rethinking the Commitment to Free, Local*

losses.²¹ It increases productive efficiency by forcing market players to innovate and to lower costs, thereby creating benefits for consumers.²² Freedom of entry also facilitates greater competition.²³ Although legislators purport to embolden free entry, ironically, newcomers are the ones most disadvantaged by the power to regulate. Aside from technological limitations, it is many times the case that government choices obstruct innovation. By its own action, the government is responsible for placing heavier burdens on those seeking to enter the market and compete.²⁴ While trying to correct certain imperfect outcomes, the government may create others.

Following this introduction, Part II begins by discussing the attributes of regulatory costs.²⁵ They are especially detrimental to newcomers that are not aware of their existence until later in the process. They can be direct or indirect. They may be borne by the regulator, the regulated, or unregulated parties. Part III presents the concept of economies of experience through accretions in age and scope. It also discusses when diseconomies of experience might occur. Part IV demonstrates that an entity's ability to mitigate new and existing regulatory burdens is a function of its regulatory industrial maturity, knowledge, and market familiarity. It also demonstrates how regulatory action combined with economies of experience in fact creates a regressive distributional impact.²⁶ Thereafter, it reveals that the incidence

Television, 52 EMORY L.J. 1579, 1592 (2003) (noting that free entry by new competitors dissipates supra-competitive profits that may exist in the short run); Transp. Research Bd., Nat'l Research Council, *Entry and Competition in the U.S. Airline Industry* 24-26 (1999) (advocating government policies should generate outcomes closer to what would be produced by free entry with price discrimination.).

²¹ See also Douglas Gegax & Kenneth Nowotny, *Competition and the Electric Utility Industry: An Evaluation*, 10 YALE J. ON REG. 63, 82 (1993) (noting that the existence of competitors ensures many benefits of competitive markets.) For a discussion of the centrality of the value of free enterprise in American history, see Mirit Eyal-Cohen, *Why is Small Business the Chief Business of Congress?* 43 RUTGERS L.J. 1, 13 (2012) (arguing that mistrust of big corporations and a belief in free enterprise are central social values in U.S. history).

²² See Thomas W. Hazlett, *Private Monopoly and The Public Interest: An Economic Analysis of the Cable Television Franchise*, 134 U. PA. L. REV. 1335, 1342-1343 (1986) (discussing entry and competitive conditions in the cable television industry). But see Chang-Tai Hsieh & Enrico Moretti, *Can Free Entry Be Inefficient? Fixed Commissions and Social Waste in the Real Estate Industry*, 111 J. POLI. ECON. 1076, 1076 (2003) (describing situations where free entry policy may not be in the public interest).

²³ See HERBERT HOVENKAMP, *THE ANTITRUST ENTERPRISE: PRINCIPLE AND EXECUTION* 54 (2009) (indicating that we should strive to assure easy entry into the market); DANIEL F. SPULBER, *REGULATION AND MARKETS* 138 (1989) ("the possibility of competitive entry limits the profits of incumbent firms.").

²⁴ ISRAEL M. KIRZNER, *DISCOVERY AND THE CAPITALIST PROCESS* 121 (1985).

²⁵ See, e.g., SIDNEY A. SHAPIRO & JOSEPH P. TOMAIN, *REGULATORY LAW AND POLICY: CASES AND MATERIALS* 53-54 (3d ed. 2003) (discussing regulatory controls in the transportation, energy, and telecommunications industries).

²⁶ By "regressive", this Article refers to the reverse graduated nature of the regulatory burden, which puts a higher burden on those with lower experience levels. The use of the phrase in this Article is distinguished from its use in tax literature in reference to placing higher tax burdens on individuals with a lower ability to pay. *Regressive tax* (*regressivity*), BOUVIER LAW DICTIONARY (6th ed. 1856); JOEL SLEMMOD AND JON BAKIJA, *TAXING OURSELVES: A CITIZEN'S GUIDE TO THE GREAT DEBATE OVER TAX REFORM* 50-

of these distributional effects is significant not only with regulated entities, but also with unregulated third parties in society. Part V presents potential solutions and new approaches to alleviate perverse regulatory effects through collaborative mechanisms and regulatory sandboxes that increase information sharing and participation of newcomers in the regulatory process. Part VI concludes by reflecting on current and future policy discourse surrounding the effect of government action on innovation.

II. REGULATORY COSTS

Many rules and regulations aim to repair market failures. Governments establish new regulations in order to promote social welfare in health,²⁷ workplace safety,²⁸ immigration and homeland security,²⁹ fair labor and employment,³⁰ and environmental responsibility.³¹ Arthur Pigou has long held that, “where there is reason to believe that the free play of self-interest will cause an amount of resources to be invested different from the amount that is required in the best interest of the national dividend, there is a *prima facie* case for public intervention.”³² However, Pigou also identified the need to frequently reassess the efficiency of public intervention.³³ Although

51 (1996). This Article concerns itself with entities rather than the individuals who have a property interest in entities.

²⁷ See, e.g., Patient Protection and Affordable Care Act, Pub. L. No. 111-148, 124 Stat. 119 (Mar. 23, 2010) (An Act to reform the health care system to affect hospitals, employers and primary physicians practices to drive better health outcomes, lower costs and improve accessibility.); The Health Insurance Portability and Accountability Act of 1996, Pub. L. 104-191, 110 Stat. 1936 (Aug. 21, 1996) (An Act to improve portability and continuity of health insurance coverage in the group and individual markets).

²⁸ See, e.g., FDA Food Safety Modernization Act of 2010, Pub. L. No. 111-353, 124 Stat. 3885 (Jan. 4, 2011) (An act to improve inspections, protection and capacity to prevent food safety problems); Toxic Substances Control Act of 1976, Pub. L. No. 94-469, 90 Stat. 2003 (Oct. 11, 1976) (An Act to assess and regulate new commercial chemicals before their entrance into the market); Kefauver Harris Amendment, Pub. L. No. 87-781, 76 Stat. 780 (Oct. 10, 1962) (An act requiring drug manufacturers to provide proof of the effectiveness and safety of their drugs before approval, and requiring drug advertising to disclose accurate information about side effects.).

²⁹ See, e.g., The REAL ID Act of 2005, Pub. L. No. 109-13, 119 Stat. 302 (May 11, 2005) (An Act pertaining to security, authentication, and issuance procedure standards for the state driver’s licenses and identification (ID) cards, as well as various immigration issues pertaining to terrorism.); The Intelligence Reform and Terrorism Prevention Act of 2004, 108 Pub. L. No. 458, 118 Stat. 3638 (Dec. 17, 2004) (An Act To reform intelligence-related activities such as authorizing requests for a criminal history record.).

³⁰ See, e.g., The Fair Labor Standards Act of 1938, 29 USCS § 201, 52 Stat. 1060, ch 676, § 1 (Jun. 25, 1938) (An Act that establishes standard employment conditions such as minimum wage, overtime pay, and youth employment.); Equal Employment Opportunity Act of 1964, Pub. L. No. 92-261, § 11, 86 Stat. 111 (Mar. 24, 1972) (An Act to assure nondiscrimination in employment or equal employment opportunity.).

³¹ See, e.g., The Clean Water Act, Pub. L. No. 92-500, 86 Stat. 816, (Oct. 18, 1972) (An Act to restore and maintain the chemical, physical, and biological integrity of the nation’s waters and wetlands.); The Clean Air Act, Pub. L. No. 88-206, 77 Stat. 392 (Dec. 17, 1963) (An Act to improve, monitor and control air pollution).

³² ARTHUR C. PIGOU, THE ECONOMICS OF WELFARE II.XX.4 (1920).

³³ *Id.* at 5.

regulation is intended to benefit society, it can be socially undesirable if it becomes too costly to maneuver.³⁴

Government regulation may be explicit or implicit.³⁵ It can be imposed before or contemporaneously with the harmful activity it seeks to prevent.³⁶ Taxes, price controls, and administrative requirements are just a few examples of ways that regulators administer certain economic behaviors.³⁷ Many regulations aim to remedy situations where parties act opportunistically, as well as to solve free riding problems.³⁸ Likewise, they purport to force parties to consider the consequences of their actions.³⁹ They do this by creating mechanisms for parties to internalize costs, which are the effects of their behavior on society.⁴⁰ Still, regulations can also create severe entry barriers and deter parties from engaging in the activity altogether.⁴¹ This may result in an overall social loss.⁴²

³⁴ See, e.g., Chris Kirkham, *Home Builders Say They Are Squeezed by Rising Compliance Costs*, WALL ST. J., May 7, 2016 (stating that regulatory fees have increased by nearly 30% since 2011). Welfare Economics literature stipulates that society should enact only those regulations that provide a net social benefit. See, e.g., SEC Div. of Risk, Strategy, and Fin. Innovation & Office of Gen. Counsel, *Memorandum: Current Guidance on Economic Analysis in SEC Rulemakings* 3 (Mar. 16, 2012), http://www.sec.gov/divisions/riskfin/rsfi_guidance_econ_analy_secrulemaking.pdf (observing that independent agencies are not bound to the cost-benefit analyses that are binding on executive agencies, but merely encouraged to follow them.). See also Robert B. Ahdieh, *Reanalyzing Cost-Benefit Analysis: Toward A Framework of Function(s) and Form(s)*, 88 N.Y.U.L. REV. 1983, 1985 (2013) (suggesting the need to carefully analyze the function of the cost-benefit analysis mandate in Section 106 of the National Securities Market Improvement Act); Jason Scott Johnston, *A Game Theoretic Analysis of Alternative Institutions for Regulatory Cost-Benefit Analysis*, 150 U. PA. L. REV. 1343, 1351 (2002) (reviewing regulatory mandates through cost-benefit analysis and game theory); Thomas O. McGarity & Ruth Ruttenger, *Counting the Cost of Health, Safety and Environmental Regulation*, 80 TEX. L. REV. 1997, 1998-2000 (2002) (focusing on the empirical basis for cost assessments that go into regulatory impact analyses.); Alexander Wendt, *Constructing International Politics*, 20 INT'L SECURITY 71, 73 (1995) (discussing compliance in the international security context through cost-benefit analysis).

³⁵ Richard A. Posner, *Theories of Economic Regulation*, NBER WORKING PAPER SERIES No. 41, 1 (May 1974), <http://www.nber.org/papers/w0041.pdf> (stating that a tort judgment, like a tax, is a payment for a specific conduct.).

³⁶ See Brian Galle, *In Praise of Ex Ante Regulation*, 68 VAND. L. REV. 1715, 1725 (2015) (describing the social costs of ex post regulation); Louis Kaplow & Steven Shavell, *Property Rules Versus Liability Rules: An Economic Analysis*, 109 HARV. L. REV. 713, 778-79 (1996) (noting the ex post and ex ante characteristics of liability rules).

³⁷ See Cass R. Sunstein, *Interpreting Statutes in the Regulatory State*, 103 HARV. L. REV. 405, 499 (1989) (measuring the monetary and nonmonetary costs and benefits of economic regulation).

³⁸ For example, a regulation that solves a tragedy of the commons. See Garrett Hardin, *The Tragedy of the Commons*, 162 SCIENCE 1243, 1244-45 (1968) (suggesting government regulation as a potential remedy to the tragedy of the commons).

³⁹ See Daniel B. Kelly, *Strategic Spillovers*, 111 COLUM. L. REV. 1641, 1648 (2011).

⁴⁰ See STEVEN SHAVELL, *ECONOMIC ANALYSIS OF ACCIDENT LAW* 52-54 (1987) (stating that, under certain assumptions, strict liability may lead to optimal activity and care levels in the product market); Jon D. Hanson & Kyle D. Logue, *The Costs of Cigarettes: The Economic Case for Ex Post Incentive-Based Regulation*, 107 YALE L.J. 1163, 1273 (1998) (arguing that any form of regulation that seeks to internalize costs must measure actual damages).

⁴¹ See Stacey L. Dogan & Mark A. Lemley, *Antitrust Law and Regulatory Gaming*, 87 TEX. L. REV. 685, 685 (2009) ("Government regulation may or may not promote either

Cost-benefit analyses consider whether net benefits from regulations outweigh their net costs.⁴³ This Article takes a different approach. It begins by assuming a regulation is socially efficient for the initial purpose for which it was created. Thereafter, it examines the distributional effects of regulatory costs on current and future market players. The following section outlines the composition of the costs associated with a regulatory action.⁴⁴ The next Part discusses the various economies that create the regressive distributional effects of these costs.

A. Direct Regulatory Costs

Regulation is costly.⁴⁵ Compliance costs derive from the need to obey rules or to bear penalties. Both are integral parts of a regulated environment. For example, environmental regulations necessitate purchasing capital-intensive technology to reduce emissions.⁴⁶ In another case, compliance costs may be created by a new rule requiring a different

competition or efficiency, depending on the goals of the agency, its competence, and the effects of industry "capture.")

⁴² See M. FRIEDMAN, *CAPITALISM AND FREEDOM*, 125-26 (1982) (finding that a government regulation that serves as an entry barrier is a dangerous form of trade restraint); Daniel J. Gifford, *The Antitrust State-Action Doctrine After Fisher v. Berkeley*, 39 VAND. L. REV. 1257, 1295-1296 (1986) (defining "deadweight social loss" as "the value (including lost consumer surplus) in goods or services that would have been produced or sold in a competitive market but that are not produced because of the anticompetitive effects of the law of a state or a political subdivision thereof.").

⁴³ See, e.g., KENNETH J. ARROW ET AL., *BENEFIT-COST ANALYSIS IN ENVIRONMENTAL, HEALTH, AND SAFETY REGULATION: A STATEMENT OF PRINCIPLES* (1996); G. Douglass & J. Miller, *Economic Regulation of Domestic Air Transport: Theory and Policy* (1974) (analyzing a cost analysis of regulation in the airline industry); Harold Demsetz, *Barriers to Entry*, 72 AMER. ECON. REV. 56 (1982) (defining regulatory decision-making as "defining which costs of undertaking activities are socially desirable and which are not."); James M. Griffin, *The Welfare Implications of Externalities and Price Elasticities for Telecommunications Pricing*, 64 REV. ECON. & STATISTICS 59 (1982) (reviewing welfare losses in the U.S. telecommunication industry); Robert W. Hahn & John A. Hird, *The Costs and Benefits of Regulation: Review and Synthesis*, 8 YALE J. REG. 233, 261-270 (1991) (reviewing several regulatory cost-benefit studies); G. Hufbauer D. Berliner & K. Elliot, *Trade Protection in the United States*, 31 CASE STUDIES (1986) (A cost benefit analysis of international trade barriers); Steven A. Morrison et al., *Fundamental Flaws of Social Regulation: The Case of Airplane Noise*, 42 J. L. & ECON. 723 (1999) (analyzing air traffic regulation from a cost-benefit analysis perspective); Cass R. Sunstein, *Lives, Life-Years, and Willingness to Pay*, 104 COLUM. L. REV. 205 (2004) (debating how to monetize life-years and willingness to pay in cost-benefit analyses).

⁴⁴ These costs are divided into direct financial costs (compliance, enforcement, and administrative) and indirect costs (informational and opportunity), as a side effect of regulation. See, e.g., David M. Cutler & Brigitte C. Madrian, *Labor Market Responses to Rising Health Insurance Costs: Evidence on Hours Worked*, 29 RAND J. ECON. 509, 510 (1998) (examining labor markets' response to rising fixed costs in health insurance costs); Henry Hansmann, *When Does Worker Ownership Work? ESOPs, Law Entities, Codetermination, and Economic Democracy*, 99 YALE L.J. 1749, 1787 (1990) (noting that law entities incur fixed health insurance costs that do not vary with a partner's billable hours).

⁴⁵ RICHARD A. IPPOLITO, *ECONOMICS FOR LAWYERS* 122 (2005).

⁴⁶ On technology-enforcing mechanisms, see Christoph Muller & Andre Nijsen, *Development of an RIA Coordination with a Focus on SME and Start-Ups*, in BUSINESS REGULATION AND PUBLIC POLICY 281 (A. Nijsen et al. eds., 2009).

notice to customers about health risks. The regulatory action imposes a new cost to review and correct current health notices.⁴⁷

The regulatory norm may also necessitate the creation of new processes and procedures. It could require revising the production process to comply with the regulated range of behaviors. It might even entail altering distribution schemes to incorporate the new regulatory change.⁴⁸ For example, a new emissions standard may call for altering the production process to use less thermal units of energy.⁴⁹ Similarly, a new health privacy rule may compel the modification of information transfers with customers and third parties in order to remain compliant.⁵⁰ All of these changes may affect the price of producing a product.

At times, regulations can impose administrative filing and disclosure requirements. In its recent Information Collection Budget, the Office of Management and Budget reported 9.45 billion hours annually required to complete regulatory paperwork.⁵¹ Procuring, researching, and understanding regulations are not trivial costs. These actions may be carried out internally by employees or externally by compliance agencies.⁵² Reporting and recordkeeping requirements are another major cost imposed on regulated entities.⁵³ These costs usually include, but are not limited to, compiling the necessary information, training employees, conferring with professionals, and preparing reports.⁵⁴ These administrative costs result from compliance with the legal duties to furnish information and can be high and fixed, regardless of the entity's production level.

Obedying regulation also involves strategic and opportunity costs, because making one choice means renouncing the other courses of action. Opportunity costs include the time and money not spent on an alternative available actions. Scholars have long held that, among

⁴⁷ Steven C. Bradford, *Does Size Matter? An Economic Analysis of Small Business Exemptions from Regulation*, 8 J. SMALL & EMERGING BUS. L. 1, 8 (2004) (reviewing administrative requirements of small business).

⁴⁸ See David Sunding & David Zilberman, *Consideration of Economics Under California's Porter-Cologne Act*, 13 HASTINGS W.-N.W. J. ENV. L. & POL'Y 73, 86 (2007) (discussing the regulatory transaction costs of regulation effects on the need to alter production technologies or substitute inputs).

⁴⁹ Bernard S. Black & Richard J. Pierce, Jr., *The Choice Between Markets and Central Planning in Regulating the U.S. Electricity Industry*, 93 COLUM. L. REV. 1341, 1390 (1993) ("the new source performance standards for fossil fuel-fired power plants apply only to sources that consume at least 250 million British Thermal Units of heat energy per year, an amount roughly equivalent to 73 megawatts of heat energy.")

⁵⁰ See *infra* Part IV.B.

⁵¹ Office of Management and Budget, *2015 Report to Congress on the Benefits and Costs of Federal Regulations and Agency Compliance with the Unfunded Mandates Reform Act* (Oct. 16, 2015), http://www.whitehouse.gov/omb/inforeg_regpol_reports_congress.

⁵² See, e.g., Robert Prentice, *Sarbanes-Oxley: The Evidence Regarding the Impact of SOX 404*, 29 CARDOZO L. REV. 703, 731 (2007) (noting the cost of an external consulting firm to implement new controls under the Sarbanes-Oxley Act of 2002).

⁵³ See generally, *Federal Paperwork Requirements: Hearings Before Subcomm. On Gov't Reg. and Paperwork of the S. Select Comm. On Small Bus.*, 96th Cong. 1 (1979).

⁵⁴ See *infra* part II.C.

competing opportunities, the best choice is the one that maximizes surplus while taking into account the loss of all other opportunities from forgone actions.⁵⁵ Opportunistic regulated parties may invest time and resources on ways to evade regulations. For example, firms may attempt to shorten or avoid the agency approval process to their benefit. Others may advocate for increased regulatory entry barriers for competitive advantages.⁵⁶ They may lobby for higher entry barriers to stifle competition.⁵⁷

Finally, a prominent opportunity cost associated with regulation is administrative delay. Although firms aim to execute their decisions quickly and without delays, regulations can create substantial deferments.⁵⁸ At times, entities are forced to postpone productive activities until their administrative staff can vet a lengthy assurance process.⁵⁹ In extreme cases, a permanent loss of opportunities can occur because of an undue regulatory burden resulting in unexpected suspensions or monetary costs.

B. Indirect Regulatory Costs

Besides imposing direct costs, regulations can be conceptualized as a system of knowledge about rules that determine who might take an action under certain circumstances.⁶⁰ Regulated entities incur indirect informational costs to learn, interpret, and comply with the requirements of a regulation. Thereafter, they create protocols and keep abreast of new or revised regulations.⁶¹ This includes developing practices and putting monitoring systems into place to stay informed of regulatory changes.

There are similar informational costs incurred by unregulated third parties. Although third parties are outside of regulator's reaches, they are also affected by regulatory realities. They endure costs that are different from those shouldered by regulated entities. In to minimize their risk, third parties often are required to monitor the compliance of regulated

⁵⁵ See PAUL A. SAMUELSON & WILLIAM D. NORDHAUS, *ECONOMICS* 119 (15th ed. 1995). See also Daniel A. Farber & Paul A. Hemmersbaugh, *The Shadow of the Future: Discount Rates, Later Generations, and the Environment*, 46 VAND. L. REV. 267, 287 (1993) (discussing how policymakers should assess opportunity costs of environmental regulation).

⁵⁶ Kelly, *supra* note 39, at 1646. See also *infra* Part IV.A.; *Regulate Us, Please*, THE ECONOMIST, Jan. 8, 1994, at 67 (noting established firms' attempts to impose stricter regulations to increase newcomers' barriers to entry).

⁵⁷ See generally ALFRED E. KAHN, *THE ECONOMICS OF REGULATION* 40-41 (1988) (discussing the need to take into account the opportunity cost or market-based influence resulting from regulations). See also Lynn A. Baker, *Conditional Federal Spending After Lopez*, 95 COLUM. L. REV. 1911, 1969 n. 273 (1995) (discussing the need to compensate incumbents in case of regulatory entry barriers for the opportunity cost of alternative uses of the facilities used to supply access).

⁵⁸ Michael Abramowicz, *Orphan Business Models: Toward A New Form of Intellectual Property*, 124 HARV. L. REV. 1362, 1402 (2011) (noting that regulatory delays can potentially ameliorate the problem of orphan business models for drugs).

⁵⁹ *Id.* at 282.

⁶⁰ Joshua A. T. Fairfield, *Bitproperty*, 88 S. CAL. L. REV. 805, 857 (2015) (in a similar manner conceptualizing property as data).

⁶¹ *Id.*, at 856 (2015) (defining "protocols" as procedures for quickly, effectively, securely and cheaply communicating information).

parties or seek remedies in the case of non-compliance. This is especially true when the regulation aims to protect third party dealings with regulated entities.

Consider the use T's airbags in M's cars. If these airbags are subject to specific safety regulations that could adversely affect M's product, it will invest more time in deciding which airbags to buy and whether each part of the airbag complies with its specific industry regulation. It may be more efficient for M to abandon the use of T's products or to vertically integrate with T to minimize risks to its reputation and cars.⁶² Thus, the regulatory action causes unregulated third parties to incur added information and administrative costs. In some cases, these costs may dissuade unregulated third parties from completing a transaction with a regulated party.

Lastly, it is worth noting that the regulator incurs significant costs in the process of establishing a rule.⁶³ Regulatory agencies may sustain major costs at the promulgation and enforcement stages. These costs are central to the decision of whether to adopt a rule. They include, but are not limited to, creating and sustaining norms and the cost of researching alternatives to regulation.⁶⁴ Once enacted, regulatory agencies receive feedback on regulations and incur monitoring costs when appraising and updating these directives. During this process, agencies may need to issue guidelines and clarify rules to complement and explain the primary regulation.

Enforcement, detection, and auditing expenses are other costs associated with regulatory action. Strategic planning and avoidance by regulated parties increases costs for regulated entities and for regulators. With the need to close loopholes comes added complexity. Convolutioned rules increase administrative and compliance costs for regulated entities and the regulatory agencies that oversee them. The next Part discusses specific factors that affect the distributional nature of the abovementioned costs.

⁶² See Reuters, *Mazda to Recall Vehicles Linked to Defective Airbags*, N.Y. TIMES, Jan. 9, 2016, at B2 (noting "The airbag recalls are among the largest in United States automotive history, encompassing 23 million airbag inflators in 19 million vehicles manufactured by 12 car companies."); Mike Spector, *Business News: Car Makers Vow To Boost Safety*, WALL ST. J., Jan. 16, 2016, at B4 (reporting that "In September, GM paid a \$900 million penalty to settle a Justice Department criminal probe of a defective ignition switch linked to 124 deaths.... Meantime, Fiat Chrysler suffered fines resulting from regulatory investigations.").

⁶³ Kaplow refers to these costs as "costs of inquiry". Louis Kaplow, *Rules and Standards: An Economic Analysis*, 42 DUKE L. J. 557, 583 (1992) (describing the regulatory costs of the inquiry into rules and standards).

⁶⁴ Such as no regulation at all or creating a rule that renders a certain outcome as socially and reasonably desirable. For example, under the Regulatory Flexibility Act, U.S.C. §§601-612 (Added Sept. 19, 1980, P.L. 96-354, § 3(a), 94 Stat. 1165, every government agency needs to assess and mitigate the discriminatory effect of regulation on small business.

III. ECONOMIES OF EXPERIENCE

A dynamic process of learning creates economies of experience. Knowledge fluctuates for each entity according to factors such as education, background, product progression, and industrial and financial conditions.⁶⁵ Yet, all else being equal, this Part reveals that some factors affect the economies of experience curve more than others do. Thereafter, the next Part IV argues that certain experience-based economies offer significant benefits to entities that possess them in the regulatory context.

A. Age

The older the entity, the more time it has had to become informed about its marketplace and become acquainted with its landscape. Market and production information is subject to economies that contribute to movements along dimensions of experience. Accordingly, the passage of time is beneficial to obtain such knowledge. Here, “economies of age” refer to the notion that newcomers incur immediate, higher learning costs compared to veteran firms.⁶⁶ Old-timers are better equipped to adapt to market changes. They can more easily experiment with new methods of production or introduce new products, while relying on previous input.

Economies of age can be beneficial to achieving familiarity *within* the marketplace and *of* its environment. Old-timers benefit from conversance *within* the market by other market players. They establish positive customer relationships and acquaintance with their products.⁶⁷ Generally, firms that enter the market early enjoy a substantial “first-mover advantage” over later entrants.⁶⁸ This may result from practical

⁶⁵ See, e.g., Serguey Braguinsky, Steven Klepper, & Atsushi Ohyama, *High-Tech Entrepreneurship*, 55 J. LAW & ECON. 869, 881 (2012) (noting that the amount of education of entrepreneurs in the technology-related usually higher than in the paid-work); Douglas G. Baird & Anthony J. Casey, *No Exit? Withdrawal Rights and the Law of Corporate Reorganizations*, 113 COLUM. L. REV. 1, 34-35 (2013) (examining the ability of entities to exit based on several factors including financial condition affiliated entities in the group).

⁶⁶ Under socialism, the law of economy of time is expressed in the reduction of time required to produce and prepare the necessary product. See *Economy of Time*, THE GREAT SOVIET ENCYCLOPEDIA (3rd ed. 1970-1979)), <http://encyclopedia2.thefreedictionary.com/Economy+of+Time,+Law+of>; William James Booth, *Economies of Time: On the Idea of Time in Marx's Political Economy*, 19 POLI. THEO. 7 (1991).

⁶⁷ See, e.g., Tamara C. Belinfanti, *The Proxy Advisory and Corporate Governance Industry: The Case for Increased Oversight and Control*, 14 STAN. J. L. BUS. & FIN. 384, 413 (2009) (“The economic and psychological costs to consumers of switching brands may benefit a first mover if the first mover is able to effectively capture market share early on.”). See also Dennis S. Corgill, *Insider Trading, Price Signals, and Noisy Information*, 71 IND. L.J. 355, 395 (1996) (noting the first-mover advantage provides the reward of a limited informational monopoly); Brian Galle & Joseph Leahy, *Laboratories of Democracy? Policy Innovation in Decentralized Governments*, 58 EMORY L.J. 1333, 1367 (2009) (arguing that size tends to cure many of the downsides of being a first mover by allowing absorption of the cost and diversification against the risk of failure).

⁶⁸ This is pronounced for regulatory and market information. See, e.g., David Szymanski, Lisa Troy & Sundar Bharadwaj, *Order of Entry and Business Performance: An Empirical Synthesis and Reexamination*, 59 J. MARKETING 17 (1995) (examining the

limitations on access and delays associated with incomplete production knowledge.⁶⁹ To overcome this phenomenon, newcomers need to discover more efficient production methods. They also may integrate with old-timers and exit the market.

Yet, at times, the first-mover premium may generate market control when the government places physical and informational restrictions on market entry.⁷⁰ From the entrepreneur's perspective, heavily regulated markets impose high costs that sometimes render the opportunity to pursue not worthwhile. This results in a long-term loss to society and provides greater market power to established entities.⁷¹ Accordingly, it is in the interest of the government to allow free and easy entrance into the marketplace. This may improve the state of competition and increase the efficiency of current products.

Longevity may also be advantageous to old-timers in achieving familiarity of the market environment. Information about the structure, composition, state of competition, and possible failures are other examples of beneficial knowledge of the marketplace.⁷² Because market information is a valuable and costly factor of production, new entrants experience a net increase in their cost-per-unit, lowering their present value of future profits. That cost may prevent young firms from even entering the market. High entry barriers may be required in some industries,⁷³ but they may be an unintended cost in others.⁷⁴

empirics of early entry and business performance); Pieter VanderWerf & John. F. Mahon, *Meta-Analysis of the Impact of Research Methods on Findings of First-Mover Advantage*, 43 Mgmt. Sci. 1510 (1997) (empirically testing the first mover advantage). *But see* Marvin B. Lieberman & David B. Montgomery, *First-Mover Advantages*, 9 STRATEGIC MGMT. J. 41, 47-49 (1988) (noting that in other aspects "late-movers may be able to 'free-ride' on a pioneering firm's investments).

⁶⁹ Lieberman & Montgomery, *supra* note 68, at 46 (attributing the advantages of being a first-mover to network effects, consumer switching costs, acquisition of resources, and technology preemption). *See also* Mark A. Lemley & David W. O'Brien, *Encouraging Software Reuse*, 49 STAN. L. REV. 255, 274 (1997) (noting that "empirical data shows that such first mover advantages function as innovation incentives.").

⁷⁰ *But see* Michael Abramowicz & John F. Duffy, *Intellectual Property for Market Experimentation*, 83 N.Y.U.L. REV. 337, 354 (2008) (noting that increased legal protection from the government in the form of a higher degree of market exclusivity to increase the first-mover advantage, can promote social welfare by increasing the number of experiments that private parties are willing to undertake).

⁷¹ ISRAEL M. KIRZNER, *DISCOVERY AND THE CAPITALIST PROCESS* 39 (1985) (finding that protection from entrepreneurial competition does not necessarily spur entrepreneurial discovery).

⁷² *See* Thomas J. Dean & Robert L. Brown, *Pollution Regulation as a Barrier to New Firm Entry: Initial Evidence and Implications for Future Research*, 38 ACAD. MANAG. J. 288, 289 (1995).

⁷³ For example, the key entry barriers in the pharmaceutical industry are characterized as a great deal of innovation risk to develop a drug and to complete the FDA approval process. *See generally* Herbert Hovenkamp, *Sensible Antitrust Rules for Pharmaceutical Competition*, 39 U.S.F. L. REV. 11, 15 (2004) (discussing the implications of regulatory entry barriers on pharma competition); Mary Lou Steptoe & David Baltoby, *Cover Stories, Finding the Right Prescription: The FTC's Use of Innovative Merger Remedies*, 10 ANTITRUST ABA 16, 16-17 (1995) (describing the FDA approval process as requiring a potential entrant to demonstrate the safety and efficacy of its drug through animal studies and human clinical trials and to demonstrate that it can

Veteran entities enjoy economies of age in the gathering and processing of information.⁷⁵ Experienced entities become well-versed in industry rules and protocols to accommodate their production process. As such, they tend to adapt faster to changes in regulations or new rules.⁷⁶ They have built relationship with policymakers and cultivated connections with other market players. As will be discussed later, they possess greater influence over the rulemaking process.⁷⁷

There are high informational costs obtaining licenses, importing goods, hiring employees, and managing financial transactions that not only control the market, but also limit entrance into it.⁷⁸ Professionals, such as lawyers, bankers, and compliance agents, are costly. These market controls can be conceptualized as a kind of subsidy to those who possess experience in the marketplace.⁷⁹ As the next Part will demonstrate, they may even be utilized to increase the marginal costs of newcomers and serve as internal subsidies to existing market players.

B. Scope

Economies of scope are similar to economies of age when observed in connection with market experience. However, the focus of economies of scope is not on the longevity of the entity, but rather its previous interaction with the market. It is associated with vertical integration of production experience. Economies of scope emanate from the creation of different but compatible products.⁸⁰ Assume that two entities, C and D, each develop a new product, X. Entity C has already produced and distributed a related or similar product, Z, and is well-known in the marketplace for that product. Entity C will benefit from economies of scope over Entity D in a number of aspects. First, due to the market's familiarity with its product, Entity C's customers will tend to trust its

manufacture the drug in commercial lot sizes, and according to good manufacturing standards.).

⁷⁴ See, e.g., Cindy R. Alexander & Yoon-Ho Alex Lee, *The Economics of Regulatory Reform: Termination of Airline Computer Reservation System Rules*, 21 YALE J. ON REG. 369, 392 (2004) (examining airline computer reservation regulations and concluding that the traditional approach to evaluating the merits of a regulation exhibits a bias toward rule retention by assuming that the relevant alternative to regulation is a state of laissez-faire.).

⁷⁵ Alejandro E. Camacho, *Can Regulation Evolve? Lessons from a Study in Maladaptive Management*, 55 UCLA L. REV. 293, 309-23, 342-44 (2007) (finding that, over time, a regulators' experience with staging will provide feedback information regarding which kinds of regulation are best suited for staging, and the optimal procedures to be adopted in gathering information and modifying new rules as they are implemented.).

⁷⁶ Charles K. Whitehead, *The Goldilocks Approach: Financial Risk and staged Regulation*, 97 CORNELL L. REV. 1267, 1306 (2012).

⁷⁷ See *infra* Part IV.A.2.

⁷⁸ See M. PARKIN, M. POWELL & K. MATTHEWS, *ECONOMICS* 1 (2003) (arguing that licenses controlling entry creates a legal monopoly).

⁷⁹ Richard A. Posner, *Theories of Economic Regulation*, NBER WORKING PAPER SERIES No. 41, 1 (May 1974), <http://www.nber.org/papers/w0041.pdf> (equating regulation with taxation).

⁸⁰ See John C. Panzar & Robert D. Willig, *Economies of Scope*, 71 AM. ECON. REV. 268, 268 (1981) (discussing the multi-product cost function of economies of scope as a form of complementarity in production).

new products. Second, even if Entity C is not dominant in its market, it possesses an advantage over Entity D, due to its knowledge of production processes, regulations, market structure, marketing methods, distribution channels, and retailer relationships, that entail producing product Z. Entity C can more easily expand the range of its products by leveraging its existing resources, knowledge, and positive customer experience.⁸¹

When an entity produces two or more *related* products, it can reduce its overall cost-per-unit compared to entities that produce each product separately in similar quantities.⁸² The essence of economies of scope is expertise, and specialized knowledge.⁸³ For example, a producer of apple juice may use existing knowledge, expertise, and equipment to produce orange juice; thus, the cost-per-unit for the producer of both kinds of juice decreases compared to a single-product manufacturer.

Economies of scope can transpire through reduced costs of production. Information is as much of an input or resource as other factors of production.⁸⁴ As an entity accumulates knowledge on production methods, the learning effect decreases its cost-per-unit.⁸⁵ They also can occur through reducing distribution and marketing costs by using existing customers and utilizing the geographic concentration of customers.⁸⁶

In addition to a lower cost-per-unit for related products, multi-product entities can exploit their market familiarity by bundling their products or engaging in anticompetitive price manipulation.⁸⁷ There are many examples of this phenomenon. For instance, Google and Microsoft often offer similar products to their customers.⁸⁸ They use their “captive audience” to introduce new and related products to reduce their advertising and marketing costs.⁸⁹ Google advertises its product Google

⁸¹ Diseconomies of scope and age can occur when customers have a negative experience. See Kevin M. Warsh, *Corporate Spinoffs and Mass Tort Liability*, 1995 COLUM. BUS. L. REV. 675, 714 (1995) (noting cases where management became preoccupied with tobacco litigation which transformed into a factor of diseconomies of scale).

⁸² Nevertheless, economies of scope do not necessitate that goods be sold together. See Ian Ayres, *Rationalizing Antitrust Cluster Markets*, 95 YALE L.J. 109, 117-118 (1985).

⁸³ See Erica Gorga & Michael Halberstam, *Knowledge Inputs, Legal Institutions and Firm Structure: Towards a Knowledge-Based Theory of the Firm*, 101 NW. U. L. REV. 1123, 1201 (2007) (advocating that knowledge generates hypotheses about when vertical integration or market contracting will take place.).

⁸⁴ See Kirzner, *supra* note 1, at 90.

⁸⁵ PRATTEN, *supra* note 99, at 18.

⁸⁶ *Id.* at 15.

⁸⁷ See Dillbary, *infra* note 129, at 1238-1240. For example, a “Price Squeeze” refers to an anti-competitive phenomenon by which a firm with a monopoly at the wholesale level and competition at the retail level manipulates its wholesale prices in order to “squeeze” competitors out of the retail market. See John E. Lopatka, *The Electric Utility Price Squeeze as an Antitrust Cause of Action*, 31 UCLA L. REV. 563, 565 (1984).

⁸⁸ See David S. Evans, *Antitrust Issues Raised by the Emerging Global Internet Economy*, 102 NW. U. L. REV. COLLOQUY 285, 297 (2008).

⁸⁹ See David A. Weisbach & Jacob Nussim, *The Integration of Tax and Spending*

Calendar to its current Gmail customers. Microsoft regularly bundles new products (such as OneNote) with existing product upgrades to introduce the new products to existing Office and Windows customers.⁹⁰ Moreover, Google allows software developers to use its application programming interfaces in exchange for the right to advertise in their gadgets. These programs not only are compatible with Google's current products but also interconnect and cross reference to Google's other products. For example, when Orbitz updated its website it used Google Maps interface using the Google Maps. Now Orbitz users can get information on not only traffic but also weather and parking through Google's other applications.

Firms with market proficiency can more easily expand the range of their products and entrench customers' reliance on these products.⁹¹ This is achieved by using their existing retailer relationships and customer base.⁹² It is easier for these firms to vertically integrate with newcomers or take over their competitors. Overwhelmed, entities lacking economies of experience may have no choice but to merge with entities possessing sufficient experience.⁹³ Accordingly, economies of scope can lead to market dominance and deter market entrance.⁹⁴

Positive consumer experience with existing products in the market naturally creates higher entry barriers for unfamiliar or undiversified entities.⁹⁵ In the example above, both Entities C and D are producers

Programs, 113 YALE L.J. 955, 991 (2004) (noting that economies of scope are a form of complementarity in production, when it is less costly to combine two or more product lines in one firm than to produce them separately). See also WILLIAM J. BAUMOL, J. PANZAR & R. WILLIG, *CONTESTABLE MARKETS AND THE THEORY OF INDUSTRY STRUCTURE* 279-303 (1982) (discussing the advantages of existing market players).

⁹⁰ Evans, *supra* note 88, at 297 ("Since January 2007, developers have written around 20,000 'gadgets'--mini-applications that use the Google Gadgets API and can run on Google platforms (e.g. Google Calendar, iGoogle--a personalized Google homepage, Google Desktop, Blogger, Google Maps, Orkut), which can be embedded in any webpage, and can run on third party applications (e.g. MyAOL)--which are used across 100,000 websites.").

⁹¹ See William S. Comanor, *Vertical Arrangements and Antitrust Analysis*, 62 N.Y.U.L. REV. 1153, 1161 (1987) (noting that multiproduct entities enjoy economies of scope in the distribution sector by substantially reducing their distribution cost for their large number of products, which may have important anti-competitive results.).

⁹² *Id.*, at 1162.

⁹³ See, e.g., David Wallace, *Colorado Health Care: All Shook Up*, COLO. BUS. MAG., Aug. 8, 1995, at 16, 16. ("Some health plans, hospitals and physicians just can't operate economically in today's market. To get cost under control, it's merge or die."); Thomas A. Piraino, Jr., *A New Approach to The Antitrust Analysis of Mergers*, 83 B.U.L. REV. 785, 831 (2003) ("It is often more efficient for firms in such industries to merge with their competitors than to soldier on alone and ultimately die.").

⁹⁴ See Joseph Bankman & Ronald J. Gilson, *Why Start-Ups?*, 51 STAN. L. REV. 289, 298 (1999) ("To the extent that the innovation builds on the employer's existing technology, it is quite likely that the employer can achieve economies of scope in connection with the innovation's commercialization, manufacturing, and marketing.").

⁹⁵ Paul W. MacAvoy, Daniel F. Spulber & Bruce E. Stangle, *Is Competitive Entry Free? Bypass and Partial Deregulation in Natural Gas Markets*, 6 YALE J. ON REG. 209, 235 (1989) ("If the incumbent has variable costs that exhibit economies of scope, the sum of the stand-alone costs of separately serving each customer class will exceed the total costs of jointly serving all customer classes.").

competing over the same customers of new product X. Nevertheless, as creator of the previously successful related product Z, Entity C has a scope advantage over the new producer Entity D in the same marketplace. Many operating systems, applications, and related software will have to be realigned when using a new product, even if the new product is superior to existing products in the market.⁹⁶ If product X is interconnected to current product Z with strong economies of scope, Entity D will have greater difficulties penetrating the market.⁹⁷ Path dependency and high learning and switching costs prevent many customers from converting from a familiar product (such as the PC computer) to a new one (the iMac computer).⁹⁸

C. Other Economies

Larger entities may have a greater ability to defray costs as well.⁹⁹ Through the operation of the law of large numbers, economies of scale reduce the average unit cost as the scale of output increases.¹⁰⁰ Therefore, firms that benefit from economies of scale may have a greater capacity to spread costs over their larger output.¹⁰¹ Economies of scale can occur in several ways. They include but are not limited to, the total output, the duration of production time, the rate of production, the extent of the calibration of products, the production capacity of plant or machinery, and the stages of productions.¹⁰² The bigger the entity, the better its performance in these aspects.

⁹⁶ See, e.g., Mark J. Roe, *Chaos and Evolution in Law and Economics*, 109 HARV. L. REV. 641, 645–46 (1996) (arguing that the possibility of breaking out of a lock-in situation lies in the overall efficiency and strength of the pattern created in the past); Daryl Lim, *Copyright Under Siege: An Economic Analysis of the Essential Facilities Doctrine and the Compulsory Licensing of Copyrighted Works*, 17 ALB. L.J. SCI. & TECH. 481, 508 (2007) (“Consumers become ‘locked in’ to the product because of switching costs associated with moving from one network to another.”).

⁹⁷ See J. Gregory Sidak & Daniel F. Spulber, *The Tragedy of the Telecommons: Government Pricing of Unbounded Network Elements Under the Telecommunications Act of 1996*, 97 COLUM. L. REV. 1081, 1136 (1997) (conflating economies of scope with a natural monopoly, noting that “a given production technology exhibits the property of natural monopoly if a single firm can supply the market at lower cost than can two or more entities.”).

⁹⁸ See Lieberman & Montgomery, *supra* note 68, at 46 (noting that consumers’ loyalty toward brands may create first-mover advantage); Aaron S. Edlin & Robert G. Harris, *The Role of Switching Costs in Antitrust Analysis: A Comparison of Microsoft and Google*, 15 YALE J. L. & TECH. 169, 171 (2013) (“Microsoft was not simply an innocent beneficiary of high switching costs: it made strategic choices to substantially increase switching costs.”).

⁹⁹ CLIFF PRATTEN, *THE COMPETITIVENESS OF SMALL ENTITIES* 14 (1991) (enumerating the dimensions affecting the efficiency of production).

¹⁰⁰ *Id.* See also GEORGE J. STIGLER, *THE ORGANIZATION OF INDUSTRY* 71 (1968) (examining the relationship between the scale and the rate of output of the enterprise.).

¹⁰¹ See B. Peter Pashigian, *A Theory of Prevention and Legal Defense with an Application to the Legal Costs of Companies*, 25 J. L. & ECON. 247, 261 (1982) (finding economies of scale in both in-house and outside legal costs in a study of 500 of the top 750 Fortune companies); Milton Z. Kafoglis, *Mandated Costs: Impact on Small Business, in ECONOMIC EFFECTS OF GOVERNMENT-MANDATED COSTS* 11 (1978) (arguing that small businesses are not effective in mitigating regulatory costs).

¹⁰² ROBERT S. PINDYCK & DANIEL L. RUBINFELD, *MICROECONOMICS* 221–24 (1989) (noting that economies of scope typically arise from joint usage of fixed resources). See

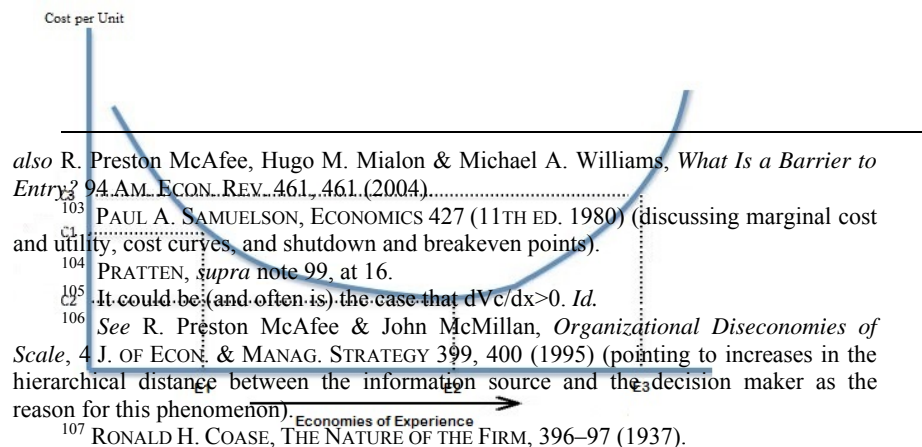
The dynamic impact of economies of scale is mainly observed in industries that involve high fixed costs. Fixed costs are expenses that are incurred even with zero output. They do not change as a function of the business activity within a relevant period.¹⁰³ Examples of fixed costs include capital expenditures on newly required machinery and equipment.¹⁰⁴ Accordingly, if all entities incur the same fixed costs, those with greater output are better able to bear them. As the dimensions of the production scale increase, these costs can be spread over a larger output to reduce the cost-per-unit of production.¹⁰⁵

Nevertheless, it is important to note the phenomenon of diseconomies of scale. In such case, entities may see a rise, rather than a decline, in their costs as their scale increases. This may be a result of variable costs that increase, rather than decrease, with scale. For example, there may be a need to design, build, and run bigger equipment and machinery as the firm increases its output. In this case entities with enlarged scale may be disadvantaged by the upsurge in the variable cost.¹⁰⁶

In *The Nature of the Firm*, Ronald Coase discussed diseconomies of scale. He described various factors that may increase, rather than decrease, transaction costs of larger firms:

Apart from variations in the supply price of factors of production to firms of different sizes, it would appear that the costs of organizing and the losses through mistakes will increase with an increase in the spatial distribution of the transactions organized, in the dissimilarity of the transactions, and in the probability of changes in the relevant prices. As more transactions are organized by an entrepreneur, it would appear that the transactions would tend to be either different in kind or in different places. This furnishes an additional reason why efficiency will tend to decrease as the firm gets larger.¹⁰⁷

One can imagine diseconomies of experience transpiring in a like manner. Consider the U-shaped curve below, with a two-dimensional mirror arc. It describes the cost-per-unit of production as a function of increases in the marketplace experience of the entity.



As the economies of experience of the entity increases, its cost-per-unit decreases. This is a result of the forces of age and scope. Nevertheless, in some cases we may witness diseconomies of experience occurring at the right end of the spectrum. After the marginal cost-per-unit reaches an optimal level and ceases to fall, it begins to increase with age and scope. From this moment on, old-timers begin to produce goods and services at an increased cost-per-unit.¹⁰⁸ Their ability to defray costs may decrease as they mature.

Some of the factors that may contribute to diseconomies of experience can be traced to increased bureaucracy, duplication of efforts, and office politics.¹⁰⁹ For example, over a period of years, power and social networking within an organization could hamper changes that benefit the organization.¹¹⁰ Veteran employees and unions who have organizational influence may serve their own personal interests, without regard to the interests of the organization.¹¹¹ Yet, aside from the conditions mentioned above, which disadvantage some old-timers, in most cases, economies of experience disadvantage newcomers.

To conclude, marketplace experience may offer a significant benefit to those who possess that knowledge. Economies of experience in age and scope often afford old-timers a market advantage over newcomers.

¹⁰⁸ See Joseph A. Schumpeter, *Business Cycles* (1939), reprinted in JOSEPH A. SCHUMPETER, *THE ENTREPRENEUR*, in *THE ENTREPRENEUR*, CLASSIC TEXTS BY JOSEPH A. SCHUMPETER 294 (2011) (pointing to “big, particularly of ‘giant’ concerns, which often are but shells within which an ever-changing personnel may go from innovation to innovation.”).

¹⁰⁹ See Todd R. Zenger, *Explaining Organizational Diseconomies of Scale in R&D: Agency Problems and the Allocation of Engineering Talent, Ideas, and Effort by Firm Size*, 40 MANAG. SCI. 708, 709 (1994) (examining scale diseconomies and offering employment contracts as an explanation for diseconomies of scale in R&D).

¹¹⁰ Carrie R. Leana & Harry J. Van Buren, *Organizational Social Capital and Employment Practices*, 24 ACAD. MANAG. REV. 538, 529 (1999) (discussing employment practices as primary mechanisms by which social capital is fostered or discouraged within organizations.)

¹¹¹ *Id.* See also Mark C. Bolino, William H. Turnley & James M. Bloodgood, *Citizenship Behavior and The Creation of Social Capital in Organizations*, 27 ACAD. MANAG. REV. 505, 506 (2002) (suggesting that as opposed to politics, citizenship behaviors enhance firm functioning by contributing to the development of social capital in organizations). See also Janine Nahapiet & Sumantra Ghoshal, *Social Capital, Intellectual Capital, and the Organizational Advantage*, 23 ACAD. OF MANAG. REV. 242, 243 (1998) (arguing that a firm’s social capital is a critical source of sustainable organizational advantage).

This advantage can manifest itself in an increased ability to defray costs in the production or distribution process. The next Part will demonstrate the function of such economies in the context of regulation. It also demonstrates the incidence of regulatory transaction costs on unregulated parties that transact with these afflicted entities.

IV. REGULATORY ASYMMETRIES

Regulatory burdens affect some entities more adversely than others. An important type of cost that is often omitted in the literature is the influence of government action on newcomers. This Part reveals that regulatory action disadvantages this specific cohort of entities and their unregulated affiliates. Assuming that there are instances in which regulation is the most efficient means to achieve a certain cause,¹¹² what is the effect of a regulation on the cohort of newcomers? Who eventually bears the economic cost of governmental action?¹¹³ This Part attempts to answer these questions.

A. *Regulated Parties*

When regulatory norms affect certain parties more than others, the greater affected party's competitive position may deteriorate solely based on the regulatory action. Asymmetrical distribution of regulatory costs creates significant competitive hurdles. In extreme cases, the economic effect of certain regulations can be so perverse as to hamper innovation by inhibiting entrepreneurs from entering the market at all.¹¹⁴

1. Firsthand Learning

Becoming knowledgeable about industry's rules and guidelines is significant in the production process. Certain regulations may affect or even significantly alter the production process.¹¹⁵ Having to research, examine, and comply with regulations that govern the market increases the initial compliance and administrative costs for an inexperienced firm. As such, regulatory costs fall more heavily on inexperienced entities.¹¹⁶

¹¹² By "efficiency," I refer to the benefits of the regulatory action exceeding its known costs. *But see* MARK SAGOFF, *THE ECONOMY OF THE EARTH: PHILOSOPHY, LAW, AND THE ENVIRONMENT* 65-68 (1988) (finding that many statutes explicitly place regulatory goals above cost).

¹¹³ *See, e.g.,* Martin Feldstein, *The Surprising Incidence of a Tax on Pure Rent: A New Answer to an Old Question*, 85 J. POL. ECON. 349 (1977) (the burden, or "incidence," of the corporate tax falls on labor); Arnold C. Harberger, *The Incidence of the Corporation Income Tax*, 70 J. OF POL. ECON. 215, 216 (1962) (demonstrating that the corporate tax burden falls on all investors, not merely corporate investors); James M. Poterba, *Lifetime Incidence and the Distributional Burden of Excise Taxes*, 79 AM. ECON. REV. 325, 325 (1989).

¹¹⁴ *Id.* at 282 (defining "irritation costs" as the effect of regulation hindering the entrepreneur at the highest degree in his activities.).

¹¹⁵ *See* Richard J. Lazarus, *Pursuing "Environmental Justice": The Distributional Effects of Environmental Protection*, 87 NW. U. L. REV. 787, 792-806 (1993) (reviewing environmental regulations' disproportionate impact on minority and poor communities); *See also supra* part I.A.

¹¹⁶ *See, e.g.,* Jesse M. Fried & Mira Ganor, *Agency Costs of Venture Capitalist Control in Startups*, 81 N.Y.U.L. REV. 967, 1018 (2006) (describing the effect of new internal revenue regulations as undesirably increasing the overall tax burden on startups);

Regulatory knowledge is crucial in preventing non-compliance or regulatory default.¹¹⁷ All entities must remain informed of new or revised regulations, interpret them to determine whether they apply, and devise compliance strategies. “Written ... by lawyers for lawyers,” regulations are often too complex for business owners to comprehend.¹¹⁸ Entities must understand a significant body of regulations to determine what rules apply and how to avoid non-compliance.¹¹⁹ The yearly cost of complying to U.S. federal government regulations is estimated as \$10,000 per employee. This cost amounts to over \$2 trillion each year, an amount equal to 12 percent of GDP.¹²⁰ Although obtaining market information is a calculated cost, the literature has largely overlooked the distributive effects of regulatory knowledge.

Although newcomers often are nimble in their ability to adapt to new market conditions, this may not be true regarding regulation.¹²¹ New entities endure higher compliance costs than older ones.¹²² They incur additional outlays to learn the regulatory environment of their new market or industry.¹²³ Complex regulatory paperwork, multifaceted procedures, and cumbersome guidelines are unfamiliar territories to a new entity. It needs to spend either time or capital to obtain such information.¹²⁴ Thereafter it needs to monitor and follow changes in regulations. Early on in the process, it needs to figure out how to conform to regulation. Thus, young firms have significant upfront costs that include, but are not limited to, spending time or money learning

Robert B. Thompson & Donald C. Langevoort, *Redrawing the Public-Private Boundaries in Entrepreneurial Capital Raising*, 98 CORNELL L. REV. 1573, 1622 (2013) (“If securities regulation is indeed severely discouraging to entrepreneurs, this in all likelihood dominates as a strategy. The resulting threat to public markets like NASDAQ and NYSE is palpable.”).

¹¹⁷ See, e.g., Jukka Similä et al., *Biodiversity Protection in Private Forests: An Analysis of Compliance*, 26 J. ENVIRO. L. 83 (2014) (“One of the potential reasons leading to unintentional non-compliance is the lack of specific regulatory knowledge and expertise among regulatees.”).

¹¹⁸ *The Impact of Federal Occupational Safety and Health Requirements on Small Business: Hearing Before the Subcomm. on Reg., Bus. Opportunities, and Energy of the House Comm. on Small Bus.*, 102d Cong. 38 (1992) (testimony of John B. Moran).

¹¹⁹ See, e.g., Ted Schneyer, *From Self-Regulation to Bar Corporatism: What the S&L Crisis Means for the Regulation of Lawyers*, 35 S. TEX. L. REV. 639, 667 (1994) (“Where protocols have been approved by regulators, compliance should insulate law firms from liability if their clients fail.”).

¹²⁰ W. Mark Crain & Nicole V. Crain, *The Cost of Federal Regulation to the U.S. Economy, Manufacturing, and Small Business, A Report for the National Association of Manufacturers*, http://www.nam.org/Special/Total-Cost-of-Regulation.aspx?utm_source=nam&utm_medium=alias&utm_campaign=CostofRegulation (Sept. 10, 2014).

¹²¹ See Shyamkrishna Balganesh & Gideon Parchomovsky, *Equity’s Unstated Domain: The Role of Equity in Shaping Copyright Law*, 163 U. PA. L. REV. 1859, 1881 (2015).

¹²² See, e.g., Jeff Schwartz, *The Law and Economics of Scaled Equity Market Regulation*, 39 IOWA J. CORP. L. 347, 386 (2014) (“Younger entities are likely to spend more on compliance than older ones.”).

¹²³ *Id.*

¹²⁴ See Jeff Schwartz, *The Twilight of Equity Liquidity*, 34 CARDOZO L. REV. 531, 580 (2012) (noting that young firms suffer upfront higher compliance costs).

administrative facts and procedures, obtaining legal advice, and paying fines and penalties for non-compliance.¹²⁵

Therefore, the combined impact of economies of experience and regulation results in a greater burden on those unfamiliar with a market or its regulatory environment. Newcomers are often overwhelmed by other goals, such as developing their product and penetrating the market. Bureaucratic processes result in more complex and intensive regulation, unnecessary delays, penalties, prohibitive costs, and increasing data requirements.¹²⁶ These hurdles may create such high costs that new entrants are not able to meet price competition from existing entities in the market, leading to their failure.¹²⁷ In extreme cases, regulations decrease the incentive for new entities to penetrate the market.¹²⁸

Regulatory knowledge that has been obtained and written off by old-timers gives them a distinct advantage over newcomers. Accordingly, established firms possess a greater ability to handle regulatory variance due to their economies of experience. They can more easily spread costs over time and preexisting output.

As it pertains to scope, a single-product entity is more likely to be in an inferior *regulatory* position to an entity with two or more related products that can be produced or retailed using similar methods.¹²⁹ Firms with increased economies of experience either have more regulatory knowledge or employ skilled employees who are able to maneuver such information. They have strategic protocols in place to learn and comply with existing regulations.¹³⁰ As a result, their superior information improves their competitive position. Their regulatory expertise provides them with more opportunities to diversify their products (scope), suppliers, and customers. This may allow them to develop a greater position in the market.

¹²⁵ See MILTON Z. KAFOGLIS, MANDATED COSTS: IMPACT ON SMALL BUSINESS, IN ECONOMIC EFFECTS OF GOVERNMENT-MANDATED COSTS 11 (1978) (arguing that small business are not effective in mitigating regulatory costs); B. Peter Pashigian, *A Theory of Prevention and Legal Defense with an Application to the Legal Costs of Companies*, 25 J.L. & ECON. 247, 261 (1982) (finding economies of scale in both in-house and outside legal costs in a study of 500 of the top 750 Fortune companies).

¹²⁶ Mary K. Olson, *Explaining Regulatory Behavior in the FDA: Political Control vs. Agency Discretion*, in 7 ADVANCES IN THE STUDY OF ENTREPRENEURSHIP, INNOVATION AND ECONOMIC GROWTH 71, 73 (Gary D. Libecap ed., 1996) (illustrating how excessive compliance barriers pose threats to the development of new entities.).

¹²⁷ *Id.*

¹²⁸ See R. E. Rights, *Resurrecting Economic Rights: The Doctrine of Economic Due Process Reconsidered*, 103 HARV. L. REV. 1363, 1372 (1990) (“Regulations such as minimum wage and maximum hours statutes, land-use restrictions, price controls, and barriers to market entry all reduce the supply of “product” by increasing the marginal cost of producing the relevant goods and services.”).

¹²⁹ See J. Shahar Dillbary, *Predatory Bundling and the Exclusionary Standard*, 6 WASH. & LEE L. REV. 1231, 1238 (2010) (arguing that a multi-product manufacturer may have an advantage, due to its ability to bundle products and price discriminate).

¹³⁰ Victor Fleischer, *Regulatory Arbitrage*, 89 TEX. L. REV. 227, 230 (2010) (“well-established companies with strong governance structures engage in more aggressive regulatory planning than start-ups or closely held firms.”).

2. Rulemaking Process

Federal regulations are often created through a process of notice-and-comment.¹³¹ Naturally, the input from this process comes from existing entities in the marketplace.¹³² Moreover, regulatory agencies often correspond informally with representatives of interested groups or constituents who have captured their attention.¹³³ Trade associations and old-timers leaders of regulated industry often participate and share the cost of filing comments during the notice-and-comment period. These trade associations are powerful repeat players with the financial ability to undertake expensive litigation to challenge new rules. For example, the U.S. Chamber of Commerce, a major lobbying force, spends considerable resources on lobbying the White House, Congress and regulatory agencies on legal matters.¹³⁴ Frequent interactions between old-timers and employees at regulating agencies often results in old timers winning seats on advisory councils, which provides them with advantages in managing regulatory compliance issues.¹³⁵

Newcomers and young entities arrive later in the rulemaking process. As a result, they lack the knowledge, resources, or agency relationships to exploit, learn, or affect administrative rulemaking.¹³⁶ They rarely attend, participate, and get involved in administrative rulemaking.¹³⁷ Their inability to influence this process places them at a distinct disadvantage. Accordingly, these entities remain ignorant of upcoming

¹³¹ 5 U.S.C. § 553 (2015) (prescribing notice-and-comment procedures). See Kristin E. Hickman, *Unpacking the Force of Law*, 66 VAND. L. REV. 465, 466 (2013) (describing the administrative process of notice-and-comment in Treasury regulations). See also Martha Dragich, *Gras-Fed Americans: Sick of Lax Regulation of Food Additives*, 49 IND. L. REV. 305, 315 (2106) (calling for full notice and comment in the food additive regulation.).

¹³² See William A. Birdthistle & M. Todd Henderson, *Becoming A Fifth Branch*, 99 CORNELL L. REV. 1, 10 (2013) (“For example, there is the possibility that relatively larger or more well-established entities might exert disproportionate influence on the SRO and manipulate the organization into imposing costs on relatively smaller or less established entities. In such a way, self-regulation might also give rise to anticompetitive behavior.”).

¹³³ See e.g., Donald E. Elliott, *Reinventing Rulemaking*, 41 DUKE L.J. 1490, 1492-93 (1992) (suggesting that agencies do not use the formal notice-and-comment process to obtain public input, but rather rely upon informal meetings with trade associations and other constituency groups).

¹³⁴ Jeffrey Rosen, *Supreme Court Inc.*, N.Y. TIMES (Mag.), Mar. 16, 2008, at 41 (reporting the U.S. Chamber of Commerce spent \$ 21 million on lobbying regulatory matters).

¹³⁵ See Richard W. Painter, *Game Theoretic and Contractarian Paradigms in the Uneasy Relationship Between Regulators and Regulatory Lawyers*, 65 FORDHAM L. REV. 149, 178 (1996) (“One of the most powerful influences on whether play between lawyers and regulators will evolve toward mutual cooperation, mutual defection, or some other equilibrium, is whether the players have an opportunity to negotiate before play begins.”). See also IAN AYRES & JOHN BRAITHWAITE, *RESPONSIVE REGULATION: TRANSCENDING THE DEREGULATION DEBATE* (1992).

¹³⁶ This depends on market conditions and natural monopolies, such as cable and television systems that use their first mover advantage to prevent further entry.

¹³⁷ Murray Weidenbaum, *Improving the Public Policy Climate for Midsize Business by Reforming Government*, in 10 ADVANCES IN THE STUDY OF ENTREPRENEURSHIP, INNOVATION AND ECONOMIC GROWTH 1, 6 (Gary D. Libecap ed., 1998) (stating that participating in academic-like rulemaking meetings is a rare luxury for certain entities).

new rules until they are already in place or when faced with a compliance default.¹³⁸

The *Allied Tube* case is an example of the importance of familiarity with the different factors of the rule-making process.¹³⁹ In that case, respondent Indian Head was a newcomer manufacturer of innovative polyvinyl chloride (“PVC”) tubes that were easier to handle and safer in contact with exposed wires. It submitted a proposal to the National Fire Protection Association (“NFPA”) to list its new product as an acceptable electrical conduit under the National Electrical Code (“Code”). This was a crucial step for Indian Head, because the Code was adopted into law by many state and local governments. It was widely accepted by insurers and contractors as identifying acceptable electrical products. The prospect of approving PVC pipes as an acceptable conduit threatened old-timer Allied Tube, then the nation’s largest producer of steel conduit. Accordingly, it met with more than 200 members of the steel industry, other steel conduit manufacturers, and its independent sales agents. They decided to pack the upcoming annual meeting of the NFPA with new members whose only function would be to vote against the PVC tube proposal. Allied alone recruited 155 people including employees, executives, sales agents, the agents’ employees, employees from two divisions that did not sell electrical products, and the wife of a national sales director. Along with other manufacturers, they paid over \$100,000 for the membership, registration, and attendance expenses of these new voters. This plan was successful, and Indian Head’s proposal to include PVC pipes in the Code was denied.¹⁴⁰

Indian Head sued Allied for violation of the Sherman Act. The District Court determined that Allied was protected under Noerr immunity doctrine because it used acceptable standards of political action to influence the NFPA.¹⁴¹ Indian Head appealed the decision, and the appellate court reversed.¹⁴² Allied appealed again and the Supreme Court, in a split decision, affirmed the appellate court’s holding.

This litigation saga demonstrates the regulatory obstacles that entities lacking economies of experience in regulation face. It

¹³⁸ Abraham J.B. Cable, *Fending for Themselves: Why Securities Regulations Should Encourage Angel Groups*, 13 U. PA. J. BUS. L. 107, 110 (2010) (arguing that the regulatory framework of the SEC is too cumbersome for early-stage startups.); Stephen J. Choi, *Law, Finance, and Path Dependence: Developing Strong Securities Markets*, 80 TEX. L. REV. 1657, 1705 (2002) (discussing national regulatory regimes regarding the differences among heterogeneous parties in the international arena); Fleischer, *infra* note 130, at 230 (“Large companies that can afford elite law firms employ more aggressive deal structures that push the regulatory frontier.”); Kenneth W. Starr, *Leviathan: The Federal Republic and the Challenge to Freedom*, 90 CORNELL L. REV. 1639, 1646 (2005) (“Local governments restrict entrepreneurship and start-up businesses by means of regulations, licensing requirements, and fees.”).

¹³⁹ *Allied Tube & Conduit Corp. v. Indian Head*, 486 U.S. 492 (1988).

¹⁴⁰ *Id.* at 498.

¹⁴¹ The Noerr-Pennington doctrine protects petitioning of the government from Sherman Act scrutiny. *Indian Head, Inc. v. Allied Tube & Conduit Corp.*, 560 F. Supp. 730 (S.D.N.Y. 1983).

¹⁴² *Indian Head, Inc. v. Allied Tube & Conduit Corp.*, 817 F.2d 938 (2d Cir. 1987).

exemplifies the power of old-timers to strategically block innovations through regulation. It leaves one wondering how many other ideas and disruptive technologies encountered such strong opposition from old-timers with influence over the regulator. Our economy and society as a whole lose when innovations are barred from entering the marketplace. It reflects poorly on the government when its action is one of the reasons for this outcome.

Not all newcomers possess the resources and stamina necessary for prolonged litigation. Unlike Indian Head, they usually lack sufficient administrative and legal staff. They do not have timely information, access to compliance strategies, and negotiation power in the rulemaking process.¹⁴³ Newcomers are either unaware or occupied, and are left to submit their ideas and views through the lengthy notice-and-comments period.¹⁴⁴ Costs of obtaining regulatory information and developing strategic protocols to stay compliant are elevated for these entities. They often contract with others to promote their regulatory affairs; thus, they face increased regulatory costs.¹⁴⁵ Economies of age, therefore, provide a competitive advantage for existing market players. In fact, as the next section reveals, it is in the old-timers' interest to advocate for market controls that hamper the entry of new entities.¹⁴⁶ Economists have long noted the systematic incentives of old-timers to encourage further market constraints and hamper competition.¹⁴⁷

3. Regulatory Capture

Nobel Prize-winning economist George Stigler, has long developed his model of "economic regulation," to denote government intervention in the market.¹⁴⁸ Realizing its affect over the industry and constituents' welfare, he argued, regulated parties naturally will seek to cast their influence over regulatory agencies.¹⁴⁹ Also known as "regulatory

¹⁴³ Joan MacLeod Heminway, *Rock, Paper, Scissors: Choosing the Right Vehicle for Federal Corporate Governance Initiatives*, 10 FORDHAM J. CORP. & FIN. L. 225, 353 (2005) (arguing that knowledge of the potential for influence and bias in the rulemaking process (as components of an impartiality analysis) influences the calculation of legal transition costs.).

¹⁴⁴ James T. O'Reilly, *Entrepreneurs and Regulators: Internet Technology, Agency, Estoppel, and the Balance of Trust*, 10 CORNELL J. L. & PUB. POL'Y 63, 73 (noting the decrease in significance of the notice and comments process due to increased complexity and unmanageable paper flow).

¹⁴⁵ See Zoltan J. Acs & David S. Evans, *Entrepreneurship and Small Business Growth: A Case Study*, in 6 ADVANCES IN THE STUDY OF ENTREPRENEURSHIP, INNOVATION AND ECONOMIC GROWTH 143, 169 (Gary D. Libecap ed., 1993).

¹⁴⁶ See RONALD A. CASS, *REVOLUTION IN THE WASTELAND: VALUE AND DIVERSITY IN TELEVISION* 139 (1981) (concluding that new entrants into the programming market are the first to be free from regulatory control).

¹⁴⁷ See *supra* Part IV.A.2

¹⁴⁸ See George J. Stigler, *The Theory of Economic Regulation*, 3 BELL J. ECON. & MGMT. SCI. 21, 22 (1971) (arguing through the regulatory process industry special interest will pressure regulator to the detriment of consumers).

¹⁴⁹ *Id.*, at 25. See also Sam Peltzman, *Toward A More General Theory of Regulation*, 19 J. OF L. & ECON., 211, 212 (1976) (refining Stigler's theory by adding that from the demand side, industry leaders will lobby most effectively to sway regulation in their favor).

capture,” his theory pointed out inevitable attempts by interest groups to affect government decision-making process.¹⁵⁰ In doing so, regulated entities may try various tactics (other than direct monetary bribes). They may promise future employment to the agency’s staff. Recurrent exchanges with agency’s officials may yield cultivation of personal relationship. Committing to refrain from publically criticizing the regulator is another way to yield agency’s favoritism. Applying indirect pressure through elected officials may also be a way to influence the regulated agency. Lastly, lobbying and rallying “grassroots” stakeholders affected by potential regulation (such as employees and local communities) is another manner by which regulated parties affect the decision-making process.¹⁵¹ Stigler epitomized the political relationship between industry group and regulatory agencies, noting:

The industry which seeks regulation must be prepared to pay with the two things a party needs: votes and resources. The resources may be provided by campaign contributions, contributed services (the businessman heads a fund-raising committee), and more indirect methods such as the employment of party workers. The votes in support of the measure are rallied, and the votes in opposition are dispersed, by expensive programs to educate (or uneducate) members of the industry and of other concerned industries. These costs of legislation probably increase with the size of the industry seeking the legislation. Larger industries seek programs which cost the society more and arouse more opposition from substantially affected groups. The tasks of persuasion, both within and without the industry, also increase with its size.¹⁵²

While Stigler focused on the power of larger firms, this Article adds to the equation the influence of entities possessing experience through age and scope. Regardless of their size, old-timers that have frequent interactions with regulatory agencies benefit significantly. Their market familiarity affords them opportunities to promote regulation that can place heavier burdens on competitors as a strategy to attain market dominance.¹⁵³ Even if this type of maneuvering is unsuccessful, they may inflict substantial costs on newcomers by delaying their entry into the market. In the case of disruptive technologies, when financial stakes are

¹⁵⁰ Jean-Jacques Laffont & Jean Tirole, *The Politics of Government Decision-Making: A Theory of Regulatory Capture*, 106 Q. J. OF ECON. 1089, 1091 (1991) (arguing interest group has more power when its interest lies in inefficient rather than efficient regulation).

¹⁵¹ DANIEL C. L. HARDY, *REGULATORY CAPTURE IN BANKING* 5 (2006) (noting that “regulatory capture” in may result in tight, costly prudential requirements to reduce negative spillovers of risk-taking by weaker banks.).

¹⁵² Stigler, *supra* note 148, at 12.

¹⁵³ Kelly, *supra* note 39 at 1645 (describing “strategic spillover” as when parties employ externalities opportunistically as a type of extortion); Stacey L. Dogan & Mark A. Lemley, *Antitrust and Regulatory Gaming*, 87 TEX. L. REV. 685 (2009) (“Complex regulatory systems - particularly those requiring government approval for market entry - can create opportunities for such gaming by enabling dominant parties to dictate industry standards while delaying entry of competing products.”).

high, delays of even a few months can substantially impact the ability of newcomers to compete.

The story of Preston Tucker, an American automobile designer and entrepreneur, exemplifies this truism.¹⁵⁴ Tucker dreamed of making the world's best car. He teamed up with Abe Karatz, a capitalist, to produce the Tucker '48, also known as the Tucker Torpedo.¹⁵⁵ Tucker's innovative business model included an Accessories Program, which raised funds by selling accessories before the car was even in production. Potential buyers who purchased Tucker accessories were guaranteed a spot on the dealer waiting list for a Tucker '48 car. Yet, a year later the government shut down production of the Tucker '48 amidst allegations of stock fraud made by other American car manufacturers at that time. In an open letter to the automobile industry, Tucker accused its members of fraud and regulatory pressure:

... a very powerful group—which for two years has carried on a carefully organized campaign to prevent the motoring public from ever getting their hands on the wheel of a Tucker. These people have tried to introduce spies into our plant. They have endeavored to bribe and corrupt loyal Tucker employees. Such curiosity about what goes on in the Tucker plant should be highly flattering, I suppose. But they haven't stopped there.

They even have their spokesmen in high places in Washington. As a direct result of their influence, Tucker dealers all over the country—men of character and standing in their communities—have been harassed and grilled by agents of the government and Congressional Investigating Committees.¹⁵⁶

In 1948 Tucker sought to manufacture a vehicle of the future.¹⁵⁷ His was an innovative product that was never mass-produced as a result of a regulatory manipulation. He did not have the financial resources to effectively combat the auto companies' legal tactics. In this David and Goliath story, old-timers won by using regulatory influence and litigation to stifle new market entrants. The Securities and Exchange Commission investigated his innovative marketing techniques and tried him for fraud. He was acquitted in 1950, the year he sought bankruptcy. He passed

¹⁵⁴ See STEVE LEHTO & JAY LENO, PRESTON TUCKER AND HIS BATTLE TO BUILD THE CAR OF TOMORROW 2 (2016).

¹⁵⁵ Larry E. Ribstein, *How Movies Created the Financial Crisis*, 2009 MICH. ST. L. REV. 1171, 1185 (2009) ("Tucker's competitors and their allies in government combined to bring him down, but only after he had been vindicated in principle."); TUCKER: THE MAN AND HIS DREAM (Lucas Film Ltd. 1988).

¹⁵⁶ Preston Tucker, *An Open Letter to the Automobile Industry, Interests of the American Motorist*, WASH. POST, Jun 13, 1948, at M23.

¹⁵⁷ Abigail Tucker, *The Tucker Was the 1940s Car of the Future*, SMITHSONIAN MAGAZINE, Dec. 2012, <http://www.smithsonianmag.com/history/the-tucker-was-the-1940s-car-of-the-future-135008742/>.

away shortly after his financial debacle while still working on new car designs.¹⁵⁸

The case of *City of Columbia*, goes further and illustrates the ability of old-timers, not only to apply, but to create rules that stifle competition. In this case, Omni Outdoor Advertising (“Omni”), a newcomer Georgia corporation, began erecting billboards in and around the city of Columbia, SC.¹⁵⁹ Columbia Outdoor Advertising (“Columbia Outdoor”) was a local company that had been in the billboard business for 40 years. It controlled the relevant market in the Columbia area and sought to block Omni from entering its market.

Columbia Outdoor was owned by a family with close relations to city’s political leaders. The family met with city officials, seeking the enactment of zoning ordinances that would restrict billboard construction. The company’s efforts prevailed, when the Columbia city council imposed a moratorium period on billboard construction in the city, except as specifically authorized by the council. After this ordinance was invalidated by a state court, the city council passed a new ordinance that restricted the size, location, and spacing of billboards. Omni sued the city and Columbia Outdoor for violation of the Sherman Act and for engaging in unfair trade practices. Omni argued that there was an anticompetitive conspiracy between city officials and Columbia Outdoor.

The District Court ruled that the alleged activities were outside the scope of federal antitrust laws.¹⁶⁰ The Court of Appeals reversed, reinstating the verdict in favor of Omni, and the case went before the Supreme Court.¹⁶¹ The Supreme Court ruled that the city’s actions, which were an implementation of state policy, were immune from federal antitrust liability. The Court’s reasoning for this holding is of much importance. The Court explained that it is both inevitable and desirable that public officials consider private citizens’ pleas.¹⁶² It interpreted the antitrust laws to condemn trade restraints, not political activity. This case appears to provide old-timers a pass to utilize political connections to seek legislation that may result in anticompetitive action.¹⁶³

Lastly, the case of *Radiant Burners* illustrates the ability of old-timers to utilize their market connections to bar the entrance of innovative products.¹⁶⁴ The American Gas Association (“AGA”) operated testing laboratories to determine the safety, utility, and durability of gas burners. It adopted a “seal of approval,” that it affixed on gas burners found to have passed its tests. Nevertheless, its tests were

¹⁵⁸ *Id.*

¹⁵⁹ *City of Columbia v. Omni Outdoor Advertising, Inc.*, 499 U.S. 365 (1991).

¹⁶⁰ *Omni Outdoor Advertising, Inc. v. City of Columbia*, 566 F. Supp. 1444 (S.C.C.D. 1983).

¹⁶¹ *Omni Outdoor Advertising, Inc. v. City of Columbia*, 891 F. 2d 1127 (4th Cir. 1989).

¹⁶² 499 U.S. at 374.

¹⁶³ HERBERT HOVENKAMP, *FEDERAL ANTITRUST POLICY, THE LAW OF COMPETITION AND ITS PRACTICE* n9 (2015).

¹⁶⁴ *Radiant Burners, Inc. v. Peoples Gas, Light & Coke Co.*, 364 U.S. 656 (1961).

not based on “objective standards,” but were influenced by other market players, such as utility companies that also sold gas burners.

Radiant Burners (“Radiant”) developed new ceramic gas burners that were safer, durable, and more efficient. Yet, the AGA repeatedly refused to give Radiant’s product seal of approval. Moreover, the AGA and its utility members (such as Peoples Gas and Northern Gas) refused to provide gas service to Radiant’s products. By doing so, they effectively excluded Radiant’s new product from the market. Potential customers abstained from installing a product for which they could not obtain gas service.

The District Court dismissed Radiant’s complaint, and the Court of Appeals for the Seventh Circuit affirmed, finding no evidence of a boycott or conspiracy.¹⁶⁵ The Supreme Court reversed, holding that there was, in fact, a trade restraint and a public harm.¹⁶⁶ It took an elongated regulatory process and legal persistence for Radiant, a newcomer, to enter the market of gas burners. Today, ceramic gas burners are a standard. This case demonstrates the power of old-timers have to conspire and prevent newcomers from selling their products. It shows that by bundling their own products, old-timers gain an advantage of scope and can block service to newcomers’ products.

4. Regulatory Spillovers

Regulation is often a result of bargaining and compromise between regulators and old-timers. These compromises may increase the regulatory costs on newcomers. This may be an unintended result of devising rules that rely on old-timers’ production and business models.¹⁶⁷ It may also be the result of strategic attempts by old-timers to create high entry barriers. Either way newcomer often times have to serve as regulatory entrepreneurs in order to spur change.¹⁶⁸ They may need to join others or act independently to push for regulatory change in order to overcome entrenched rules created under old models.

The recent *Aereo* litigation saga verified once more the advantages of economies of experience in thwarting ingress of regulatory change of

¹⁶⁵ *Radiant Burners, Inc. v. Peoples Gas, Light & Coke Co.*, 273 F.2d 196 (7th Cir. 1959).

¹⁶⁶ 364 U.S. at 658-659.

¹⁶⁷ See *infra* notes 169-173 and accompanying text.

¹⁶⁸ See Pollman & Berry, *infra* note 181 and accompanying text. The hotel and taxi industries are good examples of industries that were shaken by the recent emergence of the sharing economy that required regulatory change. Newcomers like Airbnb, that enable people to turn their homes into small hotels, and Uber or Lyft, that enable people to use their cars as taxi services, have managed to benefit from the regulatory vacuum. See generally Henry Ross, *Ridesharing’s House of Cards: O’Connor v. Uber technologies Inc. and the Viability of Uber’s Labor Model in Washington*, 90 WASH. L. REV. 1431, 1431 (2015) (describing the immense popularity of Uber, as the most successful Silicon Valley startup ever, which after just six years had a network of over 160,000 drivers in the United States alone). See also Roberta A. Kaplan, *Perspective, Regulation and the Sharing Economy*, 252 N.Y. L. J. 6 (2014) (discussing challenges in regulating a sharing economy).

disruptive technology by innovative newcomers.¹⁶⁹ The Aereo litigation involved the Copyright Act, which extensively regulates TV broadcasting services.¹⁷⁰ Using new technology, Aereo created an innovative broadcasting platform that picked up free, over-the-air broadcast signals, using antennae. It then retransmitted the underlying content on the internet to its subscribers. Its product did not look like standard cable TV services.¹⁷¹ It used thousands of dime-sized antennae, each assigned to an individual subscriber, that received near-live show streaming. Nevertheless, established TV broadcasters, such as Fox, CBS, NBC, and Disney, were outraged and sought to place controls on this new platform. Shortly after Aereo launched, these broadcasters filed for an injunction, arguing that because Aereo acted like a cable company it needed to pay them retransmission fees.¹⁷² Aereo refused to pay these fees arguing that it did not provide cable or satellite services. Aereo's argument prevailed in both the District and Appellate courts.¹⁷³

For a moment, it seemed like an original technology was able to spur a change in the regulatory landscape, a spillover effect that might have advantaged other players in the market. Regulated broadcasters could have benefitted by empowering consumers to manage their programming according to their choice. Small and independent broadcasters would have advanced from expanding viewership in their respective markets. Customers would have profited from low-rate access to television content through à la carte channels and mobile viewing.¹⁷⁴

Yet, American broadcasting companies appealed the case to the Supreme Court.¹⁷⁵ In a striking 6-3 decision, the Supreme Court decided that despite using differing technology, Aereo effectively functioned as a cable TV provider. The Court held that Aereo's actions infringed upon the content of network television providers under the Copyright Act.¹⁷⁶

¹⁶⁹ *Am. Broad. Cos. v. Aereo, Inc.*, 134 S. Ct. 2498, 2503 (2014). See also Andrew Tutt, *Textualism and the Equity of the Copyright Act: Reflections Inspired by American Broadcasting Companies, Inc. v. Aereo, Inc.*, 89 N.Y.U. L. REV. ONLINE (2014) (discussing the implications of the Aereo litigation).

¹⁷⁰ For the history of regulatory debates over copyright issues of video programming, see Timothy Wu, *Copyright's Communications Policy*, 103 MICH. L. REV. 278, 311-24 (2004) (outlining FCC and industry debates in the context of broadcasting and cable television).

¹⁷¹ Aereo's legal rationale relied on a Second Circuit decision, *Cablevision*, where Cablevision offered its subscribers what it described as "remote DVR," accessible through Internet connection. *Cartoon Network LP v. CSC Holdings, Inc.*, 536 F.3d 121, 123 (2d Cir. 2008).

¹⁷² *Complaint Am. Broad. Cos., Inc. v. Aereo, Inc.*, 874 F. Supp. 2d 373 (S.D.N.Y. 2012) (No. 12 Civ. 1540).

¹⁷³ See *ABC v. Aereo, Inc.*, 2013 U.S. Dist. LEXIS 5316 (S.D.N.Y., Jan. 11, 2013); *aff'd* by *WNET v. Aereo, Inc.*, 712 F.3d 676, 2013 U.S. App. LEXIS 6578 (2013); *Application denied* by *ABC v. Aereo, Inc.*, 2013 U.S. Dist. LEXIS 144851 (S.D.N.Y., Oct. 7, 2013); *WNET v. Aereo, Inc.*, 871 F. Supp. 2d 281, 2012 U.S. Dist. LEXIS 70749 (S.D.N.Y., 2012).

¹⁷⁴ Brief for the Consumer Fed'n of Am. and Consumers Union as Amici Curiae Supporting Appellees at 9--10, *WNET v. Aereo, Inc.*, 712 F.3d 676 (2d Cir. 2013).

¹⁷⁵ See Adam Liptak & Emily Steeljune, *Aereo Loses at Supreme Court, in Victory for TV Broadcasters*, N.Y. Times, June 25, 2014.

¹⁷⁶ 134 S. Ct. at 2502-03. *The Supreme Court 2013 Term, ABC, Inc. v. Aereo, Inc.*,

In light of this determination Aereo applied for a compulsory cable license. Ironically, it was denied because it was considered an internet provider outside of the regulatory purview of the cable provider regulation.¹⁷⁷ Following this litigation, the company declared bankruptcy.¹⁷⁸ Although too late for Aereo, the FCC recently proposed a new rule that legalizes online video providers like Aereo.¹⁷⁹

While some saw Aereo as a copyright evader,¹⁸⁰ others commended it as a regulatory entrepreneur.¹⁸¹ Aereo did not fit into existing regulatory framework designed to accommodate standing technologies. The influence and power of the broadcasting companies led to the exclusion of innovative newcomers like Aereo. There is no doubt that, as a newcomer, Aereo did not benefit from the same experience and ability to affect its regulatory environment as the cable and broadcast industry did. In her Article *the Law of the Platform*, Professor Orly Lobel epitomized newcomers' regulatory dilemma while discussing the case of Aereo:

Aereo was put in a no-win situation. The Supreme Court told Aereo it needed a license as a cable provider in order to help transmit content to end users, yet Aereo was unable to obtain a compulsory license because it was an internet provider not regulated by the FCC. Thus, Aereo is a striking example of a disruptive platform business facing protective regulations, outdated legal definitions, and strong industry foes.¹⁸²

To summarize, the distributional effects of regulatory costs differ greatly among regulated entities. Newcomers lacking regulatory experience are disproportionally effected in a regressive manner. Having no prior experience with regulation and a limited ability to mitigate the

128 HARV. L. REV. 371 (2014) (“[Aereo] violated the Transmit Clause... even though each user had a dedicated antenna that produced a “personal” copy of the broadcast.”).

¹⁷⁷ 17 U.S.C. § 111 (2016); Letter from Jacqueline C. Charlesworth, Gen. Counsel & Assoc. Register of Copyrights, to Matthew Calabro, Aereo, Inc. (July 16, 2014).

¹⁷⁸ Emily Steel, *Aereo Concedes Defeat and Files for Bankruptcy*, N.Y. TIMES, Nov. 21, 2014. A similar result happened in the case of iCraveTV in Canada. Tivo, who bought Aereo's patent, is in pending litigation.

¹⁷⁹ See Promoting Innovation and Competition in the Provision of Multichannel Video Programming Distribution Services, 80 Fed. Reg. 2078, 2080 (proposed Jan. 15, 2015) (to be codified at 47 C.F.R. pt. 76).

¹⁸⁰ WNET, *Thirteen v. Aereo, Inc. (Aereo II)*, 710 F.3d 676, 697 (2d Cir. 2013) (Chin, J., dissenting); Mark Rogowsky, *Myth-Busting The Aereo Decision: No, The Supreme Court Didn't Kill It... Nor Did They Kill Dropbox*, FORBES, Jun 26, 2014 (claiming Aereo can choose between several options to continue its services).

¹⁸¹ Elizabeth Pollman & Jordan M. Berry, *Regulatory Entrepreneurship*, 90 S. CAL. L. REV. (forthcoming 2017) (describing regulatory entrepreneurs as individuals and firms that pursue a business strategy in which changing the law is a significant part of the business plan.); Matthew Schruers, *Symposium: Aereo copyright decision creates uncertainty for the Cloud*, SCOTUSBLOG, (June 26, 2014), <http://www.scotusblog.com/2014/06/symposium-aereo-copyright-decision-creates-uncertainty-for-the-cloud/> (“While other uncertainty-inducing constructions are also possible, this would be the interpretation of Aereo that does the least violence to innovation.”).

¹⁸² Orly Lobel, *The Law of the Platform*, 101 MINN. L. REV. 87, 140-141 (2016).

costs of obtaining such knowledge, new, apprenticing, or “green” entities face larger regulatory hurdles, impeding their development. Consequently, although a regulation may be efficient in correcting a certain market failure, its distributional effects may create another. The government *de facto* creates bigger obstacles and controls for newcomers. The government may even discourage innovations and the breakthrough of new products into the market.

B. Unregulated Parties

Costs are not solely borne by a regulated entity; they can affect other constituents.¹⁸³ The ability to mitigate regulatory transaction costs has significant implications. “Incidence theory” identifies which citizens are impacted by systemic shifts due to new costs.¹⁸⁴ It seeks to determine whom and to what extent a person pays for costs.¹⁸⁵ For example, firm managers can pass regulatory transaction costs backward on to stakeholders, vendors, and employees, or they can pass the costs forward onto customers.¹⁸⁶ Although cost allocation is part of the private dealings between parties, the government plays a key role in determining aggregate distribution.

Despite many efforts devoted to studying the costs and benefits of various rules, we know surprisingly little about the incidence of particular regulations. There are several conceptual issues that inhibit attempts to establish incidence effects. Naturally, it is challenging to measure the effect of an entire regulatory system, due to its voluminous and convoluted rules. Measuring one regulation effectively assumes that all other relative outputs, performances, and procedures would remain unchanged if the government were to eliminate that rule.¹⁸⁷ Nevertheless, it is worthwhile to consider the *potential* incidence of regulation on a cohort of regulated and unregulated affiliates, even if measuring it is cumbersome.

Labor may endure regulatory costs in the form of lower wages and poorer working conditions.¹⁸⁸ Shareholders may withstand a similar

¹⁸³ See Alan J. Auerbach, *Who Bears the Corporate Tax? A Review of What We Know*, 20 TAX POLICY AND THE ECON. 1 (2006) (discussing the incidence of corporate taxation); William A. Klein, *The Incidence of the Corporation Income Tax: A Lawyer's View of a Problem in Economics*, 1965 WIS. L. REV. 576, 580-87 (1965) (same).

¹⁸⁴ See Robin Cooper Feldman, *Consumption Taxes and the Theory of General and Individual Taxation*, 21 VA. TAX REV. 293, 302 (2002).

¹⁸⁵ See MARIAN KRZYZANIAK & RICHARD A. MUSGRAVE, *THE SHIFTING OF THE CORPORATION INCOME TAX* 8-9 (1963) (outlining the differences between shifting and incidence theories in corporate tax theory).

¹⁸⁶ See *supra* note 113. See also IAN W.H. PARRY ET AL., *THE INCIDENCE OF POLLUTION CONTROL POLICIES*, IN *THE INTERNATIONAL YEARBOOK OF ENVIRONMENTAL AND RESOURCE ECONOMICS 2006/2007*, 19 (Tom Tietenberg & Henk Folmer eds., 2006) (arguing that low-income households bear a disproportionate share of the costs of environmental regulation).

¹⁸⁷ See, e.g., Richard M. Bird & Eric M. Zolt, *Redistribution via Taxation: The Limited Role of the Personal Income Tax in Developing Countries*, 52 UCLA L. REV. 1627, 1640 (Criticizing incidence studies as relying on opposite and unrealistic assumptions).

¹⁸⁸ For the incidence of corporate tax on labor see, e.g., Arnold C. Harberger,

effect via scarce dividends and lower returns on investment.¹⁸⁹ Consumers could bear regulatory costs in the form of higher prices and inferior service.¹⁹⁰ Vendors might receive lower demands or poorer payment schedules.¹⁹¹ Lastly, regulatory transaction costs may be transferred to society as a whole when businesses forgo actions that cultivate social responsibility.¹⁹²

Assume an entity is facing a new regulation; can it pass on its cost to other markets or players? Contingent upon supply and demand elasticities, entities may be able to mitigate a portion of their regulatory costs by transferring some or all of these costs onward to consumers. Consider the Entities C and D from the example above. Both entities developed a new product, X. Entity C has already produced related product Z. If the government issues a new regulation affecting both entities, Entity C will be in a better position to pass regulatory costs on to its captive customers of *both* of its products. This is compared to Entity D, who can only pass the costs onto a single product. Entity D depends heavily on the sale of its single product, X, and thus has a higher price sensitivity and a lower ability to pass costs onward. Similarly, entities with fewer products have less ability to negotiate prices of labor and supplies, so that they cannot charge the same values for their products, as successful veteran firms do.¹⁹³

When regulatory action alters normal business incentives, it does not reflect market efficiency.¹⁹⁴ Although there are ordinary costs of doing

Monetary and Fiscal Policy for Equitable Economic Growth, in INCOME DISTRIBUTION AND HIGH-QUALITY GROWTH 203 (1998) (advocating the view that some or all of the burden is borne by capital and labor.). See also Roger H. Gordon & Jeffrey K. Mackie-Mason, *Why Is There Corporate Taxation in a Small Open Economy? The Role of Transfer Pricing and Income Shifting*, in THE EFFECTS OF TAXATION ON MULTINATIONAL CORPORATIONS 88 (1995) (the incidence of tax in a small open economy falls on labor); Edward J. McCaffery, *A New Understanding of Tax*, 103 MICH. L. REV. 807, 918 (2005) (finding that the real incidence of payroll tax is on the employee).

¹⁸⁹ See Arnold C. Harberger, *The Incidence of the Corporation Income Tax*, 70 J. POL. ECON. 215 (1962) (discussing the incidence of corporate tax).

¹⁹⁰ Bird & Zolt, *supra* note 187, at 1641 (“The conventional wisdom was originally that corporate taxes were borne by some combination of owners of corporate capital, employees, and consumers of products and services produced by the corporate sector.”).

¹⁹¹ See, e.g., Kul B. Bhatia, *Intermediate Goods and the Incidence of the Corporation Income Tax*, 16 J. PUB. ECON. 93 (1981) (noting some intermediate suppliers may bear the corporate income tax through lower prices); Adam H. Rosenzweig, *A Proposal for A Dynamic, Self-Adjusting Corporate Tax Rate*, 108 NW. U.L. REV. 1029, 1036 (2014) (“[The incidence of corporate tax] simply means that the corporation transfers wealth to the government instead of to one of its constituencies - shareholders, employees, suppliers, or consumers”).

¹⁹² See generally D. Bruce La Pierre, *Political Accountability in the National Political Process—The Alternative to Judicial Review of Federalism Issues*, 80 NW. U. L. REV. 577, 648 (1985) (utilizing an empirical determination of the actual incidence of a national regulation, including society).

¹⁹³ Except in cases of diseconomies of experience, veteran airline companies that are saddled with oppressive labor contracts, as opposed to low cost airline companies. See, e.g., Bailey & Panzar, *The Contestability of Airline Markets During the Transition to Deregulation*, LAW & CONTEMP. PROBS., 125, 129 (1981). See also *supra* notes 81, 106-111 and accompanying text.

¹⁹⁴ Posner, *supra* note 35, at 26-27.

business, government regulations often impose costs that create deadweight losses to firms and to society.¹⁹⁵ Certain entities are able to pass these costs onwards to customers and backwards to employees, shareholders or suppliers. Others entities that cannot easily mitigate these regulatory outlays, are forced to sell at suboptimal prices, leading either to growth or death in the long run.¹⁹⁶ These entities may be innovative newcomers generating imperative spillovers. They are discouraged solely by the government action creating deadweight loss on regulated newcomers and their unregulated affiliates.

Entities that lack economies of experience are more likely to face higher obstacles in mitigating regulatory costs. Granted, some will be able to overcome these barriers because of their unique values, but most will lack the opportunity to do so.¹⁹⁷ Entities that are veterans in a market can sustain super-competitive prices for longer, effectively deterring new market entrants and establishing long-term dominance.¹⁹⁸ The next Part proposes ways to remedy the distributional asymmetries of regulatory costs. Thereafter, it reflects on future research on the efficiency of government regulation.

V. MITIGATING REGULATORY DISTRIBUTIONAL EFFECTS

This Article does not take a normative position on the appropriateness of regulation.¹⁹⁹ Previous literature on cost-benefit analysis and other methodologies have attempted to answer this inquiry.²⁰⁰ Rather, this Article takes a different approach. It assumes that a rule is efficient in fixing a certain market failure. Yet, once imposed, that rule's distributional effects disadvantage newcomers.

A. Deregulation

¹⁹⁵ See Erin Ann O'Hara, *Opting Out of Regulation: A Public Choice Analysis of Contractual Choice of Law*, 53 VAND. L. REV. 1551, 1587 (2000) (finding that franchise contracts provide a useful example of how contractual choice of law can sometimes be used to minimize the continuing dead weight losses associated with regulation); Scott Andrew Shepard, *Negative Externality by Any Other Name: Using Emissions Caps as Models for Constraining Dead-Weight Costs of Regulation*, 66 ADMIN. L. REV. 345, 346 (2014) (suggesting a regulatory "Compliance-Cost Cap" system derived from emissions-cap models to convince regulatory agencies to constrain the deadweight costs of their environmental regulations.).

¹⁹⁶ See, e.g., Herbert Hovenkamp, *Antitrust Policy After Chicago*, 84 MICH. L. REV. 213, 254 (1985) (Defining "Competition" within antitrust law to refer not to a state of affairs in which prices are driven to marginal cost, but a regime in which small businesses have a chance to compete against larger, more efficient rivals.).

¹⁹⁷ See John D. Graham, *Saving Lives Through Administrative Law and Economics*, 157 U. PA. L. REV. 395, 445 (2008) ("If the rules will act as a form of protection against import competition or raise entry barriers in the industry, making it harder for smaller businesses to form and grow."). See also *Section 257 Report to Congress: Identifying and Eliminating Market Entry Barriers for Entrepreneurs and Other Small Businesses*, 15 F.C.C.R. 15,376, para. 98, 100 (2000).

¹⁹⁸ Posner, *supra* note 35, at 28.

¹⁹⁹ See, e.g., Robert W. Hahn & John A. Hird, *The Costs and Benefits of Regulation: Review and Synthesis*, 8 YALE J. REG. 233, 261-278 (1991) (reviewing studies of the costs and benefits of regulation).

²⁰⁰ See *supra* note 43 and accompanying text.

One solution to the problems faced by newcomers may lie in the form of deregulation. If regulatory action provides a competitive disadvantage to newcomers, the government may exclude them from its purview. For instance, at present, the government provides numerous regulatory exemptions to people who operate or own stocks in small firms.²⁰¹ Relief from registration and reporting requirements under SEC rules,²⁰² exemptions from labor and employment rules,²⁰³ and exclusions from health and safety guidelines,²⁰⁴ are just a few examples of current sized-based deregulation. Moreover, for each regulation, regulating agencies must prepare an “initial regulatory flexibility analysis,” describing the effect of the proposed rule on small entities.²⁰⁵ These regulatory exemptions have been rooted in the U.S. legal system since early 20th century, when the typical business enterprise was minor, local, and personal. Small-business enterprises, Americans believe, epitomize independence and liberty, and a counterpoint to large corporations, thus, they deserve regulatory favoritism.²⁰⁶

Nevertheless, exclusions do not solve the problem of regulatory costs. They exacerbate it. Exclusions do not eliminate regulatory costs altogether, because they impose an additional, indirect cost of learning secondary exclusionary rules. Incumbents still must determine whether regulatory exemptions apply and plan for the best course of action to stay within their purview.²⁰⁷ They must stay informed about new or revised

²⁰¹ See generally, Mirit Eyal-Cohen, *Down-Sizing the "Little Guy" Myth in Legal Definitions*, 98 IOWA L. REV. 1041 (2013) (outlining small business deregulation in various areas of the law).

²⁰² See, e.g., Securities Exchange Act of 1934, 15 U.S.C. § 78(a) et. seq., 17 C.F.R. §§ 210, 228, 229, 230, 239, 240, 249, 260, & 269 (2012) (offering scaled disclosure requirements under regulation S-K.); Small entities under the Securities Act for purposes of the Regulatory Flexibility Act, 17 C.F.R. § 230.157.

²⁰³ To name a few, The Family and Medical Leave Act, 29 U.S.C. § 2611(2)(B) (1993) (excluding from its ambit employers with fewer than fifty employees.); The Worker Adjustment and Retraining Notification Act, 29 U.S.C. § 2101(a) (1988) (exempting firms with fewer than 100 employees from notifying their employees in a case of mass layoffs); The Fair Labor Standards Act, 29 U.S.C. § 203(s)(1)(A)(ii) (2012) (exempting small firms from minimum wage, overtime pay eligibility, and child labor standards).

²⁰⁴ See, e.g., Taxpayer Relief Act of 1997, Pub. L. No. 105-34, 111 Stat. 788 (provides relief from tax penalties and health insurance costs to small entities). The Americans with Disabilities Act of 1990, Pub. L. No. 101-336, § 12111, 104 Stat. 327 (1990) (excluding firms with less than 14 employees from requirements regarding discrimination in employment, public services, and accommodations for people with special needs or disabilities); Standards for Privacy of Individually Identifiable Health Information, 64 Fed. Reg. 60036 (date) (allowing special exclusions for small entities from common standards of privacy).

²⁰⁵ 5 U.S.C. § 602 (2017). See also Paul Verkuil, *A Critical Guide to the Regulatory Flexibility Act*, 1982 DUKE L.J. 213, 216-26 (1982).

²⁰⁶ See Mirit Eyal-Cohen, *Why is Small Business the Chief Business of Congress?*, *supra* note 21, at 14 (describing the historical consequences that allowed the proliferation of small business deregulation).

²⁰⁷ *Small Business Perspectives on Mandates, Paperwork, and Regulations: Hearing Before the S. Comm. On Small Bus.*, 105th Cong. 66, at 61 (1997) (where small businessmen testified on the high amount that they pay each year to comply with regulatory paperwork requirements); Steven C. Bradford, *Securities and Small Business: Rule 504 and the Case for Unconditional Exemption*, 5 J. OF SMALL & EMERG. BUS. L. 1,

regulatory exclusions and must monitor and interpret exemption levels. Unregulated third parties suffer from similar informational costs in determining whether an entity considered small under each law, in order to reduce their risk of non-compliance or production delays.²⁰⁸

Lastly, scholars have long criticized that in striking a balance between public health, privacy, and the risk of defrauding the public, small-business politics have prevailed.²⁰⁹ Millions of employees, customers, and citizens are left unprotected by government regulation, due to the size of the business with which they interact.²¹⁰ Size-based regulatory exemptions prevent many from suing small firms for unpaid overtime, minimum wage, or child labor violations.²¹¹ There is no indication that this analysis and sentiment will change if deregulation will be based on economies of experience. Simply put, deregulation undermines the efficiency of government action and creates double standards.²¹²

B. Regulatory Information Sharing Networks

A straightforward solution to the distributional effects of regulation could be collaborative. At present, old-timers dominate trade associations, to which regulatory agencies defer in the rulemaking process. Newcomers may form cooperatives and networks to share regulatory information and strategies.²¹³ Data can be compiled based on

9 (2001) (“Many small business issuers and their advisers are totally unaware that they must comply with federal or state securities.”)

²⁰⁸ Bradford, *supra* note 47, at 25 (“exemptions sometimes increase the information costs of unregulated third parties who may need to distinguish between regulated and unregulated entities. Exemptions also encourage wasteful strategic behavior by entities seeking to avoid regulation.”).

²⁰⁹ See generally Jeffrey J. Hass, *Small Issue Public Offerings Conducted Over the Internet: Are they “Suitable” For The Retail Investor?*, 72 S. CAL. L. REV. 67, 87 (1998) (stating that “with the SEC’s adoption of simplified small business registration on Form S-18 in 1979, Regulation A temporarily became a ‘dead letter.’”); Thomas Lee Hazen, *Social Networks and the Securities Laws- Why the Specially Tailored Exemption Must Be Conditioned on Meaningful Disclosure*, 90 N.C.L. REV. 1735, 1745-1746 (2012) (criticizing the various small business exemptions in securities law).

²¹⁰ See Kathleen M. Nichols, *Labor and Employment Law - Determining Employee Status for Evolving Business Associations Under the Americans with Disabilities Act - Clackamas Gastroenterology Associates, P.C. v. Wells*, 538 U.S. 440 (2003), 38 SUFFOLK U. L. REV. 239 (2004) (“the ADA does not cover over twenty million employees due to the size of the business.”).

²¹¹ See Marc Linder, *The Small-Business Exemption Under the Fair Labor Standards Act: The “Original” Accumulation of Capital and the Inversion of Industrial Policy*, 6 J.L. & POL’Y 403, 444 (1998).

²¹² See, e.g., Ruben H. Arredondo, *Different Strokes for Different Folks: Balancing the Treatment of Employers and Employees in Employment Discrimination Cases in Courts within the Tenth Circuit Court of Appeals*, 16 BYU J. PUB. L. 261, 285 (2002) (criticizing small employer exemptions in anti-discrimination legislation).

²¹³ See, e.g., G. Mitu Gulati, William A. Klein & Eric M. Zolt, *Connected Contracts*, 47 UCLA L. REV. 887, 896 (2000) (describing a “connected contracts” model of collaborative economic activity); Dariam M. Ibrahim, *Financing The Next Silicon Valley*, 87 WASH. U. L. REV. 717, 726 (2010) (describing Stanford Research Park as a successful effort to foster academic-industrial cooperation); Kurt Matzler, Viktoria Veider & Wolfgang Kathan, *Adapting to the Sharing Economy*, 56 MIT SLOAN MGMT REV. 71 (Winter 2015) (discussing Uber, Zipcar, and Airbnb, as examples of successful startups).

information gathered by each newcomer. Thereafter, this data may be collected and delivered to network members for a participation fee. The network may also hire consultants and lawyers who will provide advice to its members at a reduced fee.

This is easier said than done. The case of *Northwest* is an example of the issues that collaborative networks may face.²¹⁴ Northwest Wholesale Stationers (“Northwest”) was a cooperative buying agency of office supply retailers. Northwest acted as a wholesaler to its members and provided warehousing facilities. The cooperative membership consisted of approximately 100 office supply retailers in the Pacific Northwest states that purchased supplies from the cooperative. At the end of the year, Northwest distributed profits to its members in the form of a percentage rebate. Northwest’s bylaws prohibited members from engaging in both retail and wholesale operations.

Twenty years after it joined the cooperative, Pacific Stationery was expelled without notice by a vote of Northwest cooperative members. Pacific Stationery became the leading office supplies retailer in the area. It also acted as a wholesaler, thus was voted out by the other members. Pacific Stationery sued, alleging that its expulsion constituted a group boycott that limited its ability to compete, and the expulsion should be considered a violation of the Sherman Act. The district court rejected this argument, finding no anticompetitive effect. On appeal, the Ninth Circuit Court sided with Pacific Stationery.²¹⁵ Northwest appealed that decision. The Supreme Court reversed and remanded, holding that Pacific was required to prove a group boycott or a concerted refusal to deal. The Court further held that when a party challenges expulsion from a joint buying cooperative, it is required to demonstrate that the cooperative possessed market power or unique access to a business element necessary for effective competition.²¹⁶ Regulatory knowledge could, in essence, be considered an important element of competition. Thus, it is hard to tell whether the sharing of regulatory information in networks will be able to withstand a similar legal attacks.

Consider media networks like internet discussion forums, as another example of an information sharing solution. Scholars recently investigated online interactions in Uber and Lyft drivers’ forums on the subject of taxation.²¹⁷ While these forums had some inaccurate or confusing information, they displayed general understanding of legal

built on collaborative consumption systems). Owners forums and networks can be a good example to regulatory-cost collaboration. See also Jan Schaffer, *The Future of Online Journalism: Innovations in the Delivery of Online Local News*, 8 ISJLP 543, 549 (2013) (discussing collaborative news networks).

²¹⁴ *Northwest Wholesale Stationers, Inc. v. Pacific Stationery & Printing Co.*, 472 U.S. 284 (1985).

²¹⁵ *Pacific Stationery & Printing Co., v. Northwest Wholesale Stationers, Inc.*, 715 F.2d 1393, 1395 (9th Cir. 1983).

²¹⁶ 472 U.S. at 290.

²¹⁷ Shu-Yi Oei & Diane M. Ring, *The Tax Lives of Uber Drivers: Evidence from Internet Discussion Forums*, SSRN, Feb. 10, 2016), <https://ssrn.com/abstract=2730893> or <http://dx.doi.org/10.2139/ssrn.2730893>.

issues. Forum participants also frequently discussed whether driving was profitable.²¹⁸ Participants exhibited a range of awareness of how certain tax rules affect them.²¹⁹ Still, internet forums contain uncertainty and an overall lack of substantiation. Accordingly, readers are not able to effectively differentiate between correct and incorrect advice dispensed in these forums.

There are other problems with information sharing. Some examples are collective action, free riding, and coordination issues.²²⁰ Moreover, regulatory costs may fluctuate for each entity, according to its founders' backgrounds, production progress, and its industrial and financial conditions.²²¹ There are various antitrust concerns regarding industry associations and coordination.²²² Lastly, regulatory information is a competitive advantage that many newcomers would prefer not to share once obtained.²²³

C. Compensatory Tax Instruments

Taxation and regulation have similar effects.²²⁴ They are both manifestations of sovereign power. Taxation is both doctrinal and metaphorical—a “tax” on behavior. It is simply a burden imposed in order to discourage behavior or to internalize its social costs. This

²¹⁸ *Id.* at 3.

²¹⁹ *Id.*

²²⁰ For a law and economics analysis of “network effects,” where a group of people use a particular good or service, *see generally* Amitai Aviram, *Regulation by Networks*, 2003 BYU L. REV. 1179 (2003) (arguing that networks are likely to be efficient regulators in markets characterized by significant network benefits and low concentration); Mark A. Lemley & David McGowan, *Legal Implications of Network Economic Effects*, 86 CALIF. L. REV. 479 (1998) (discussing compensatory institutions including regulatory competition through which there is choice between alternative regulatory regimes.); George J. Stigler, *Free Riders and Collective Action: An Appendix to Theories of Economic Regulation*, 5 BELL J. ECON. & MGMT. SCI. 359, 364-65 (1974).

²²¹ *See supra* Part II.

²²² *See, e.g.,* HERBERT HOVENKAMP, *THE ANTITRUST ENTERPRISE: PRINCIPLE AND EXECUTION* 286 (2005); David Audretsch, William J. Baumol & Andrew Burke, *Competition Policy in Dynamic Markets* 19 INT’L J. OF INDUS. ORG. 613 (2001) (developing a dynamic theory of industrial organization of hybrid network governance.); Thomas A. Lambert, *Tweaking Antitrust’s Business Model*, 85 TEX. L. REV. 153, 182-183 (2006) (reviewing *THE ANTITRUST ENTERPRISE: PRINCIPLE AND EXECUTION* BY HERBERT HOVENKAMP (2005) (describing collaborative networks as involving two types of anticompetitive arrangements: first, network participants may “agree to reduce their own collective output and raise price”; second, they might “agree to exclude competing firms from the network, either to facilitate a price increase or else to suppress rival technologies.”)).

²²³ *See, e.g.,* Robert P. Bartlett, III, *Venture Capital, Agency Costs, and the False Dichotomy of the Corporation*, 54 UCLA L. REV. 37, 115 (2006) (discussing the information flaws of the traditional model of VC investment); James A. Henderson, Jr., *Contracts Constitutive Core: Solving Problems by Making Deals*, 2012 U. ILL. L. REV. 89, 112 (2012) (describing takeover processes over small group collaborations by acquiring startup companies that employed collaborative models and solved product innovation problems, but lack financial resources).

²²⁴ *See* Alexander Wu, *U.S. International Taxation in Comparison with Other Regulatory Regimes*, 33 VA. TAX REV. 169, 171 (2013) (finding that taxation and regulation are not perfect substitutes and that there are different behavioral outcomes and legal justifications, depending on the context.).

parallelism rests on the notion that when a regulatory cost affects the value of property, it is appropriating a portion of it.²²⁵

Some courts have viewed taxation as an asset price adjustment in response to granting a tax benefit.²²⁶ They contended that taxation is reflected in the surplus sum that buyers will pay for an asset above the price that they would have paid were no tax benefit associated with owning that asset. On the other hand, regulation has been viewed as a form of “takings,” where the government affects specific property interests.²²⁷ Like taxation, regulations can potentially impose costs on certain constituents, or benefit others.²²⁸

Viewing regulation as taxation can be illuminating, because it provides compensatory tools to mitigate the effects of regulation.²²⁹ This analogy opens the door to new policies and solutions without compromising regulatory sovereignty. Altering the progressivity of the corporate income tax is one way of mitigating the effect of implicit taxation through regulation.²³⁰ Another solution may be to permit the

²²⁵ See David A. Weisbach, *Implications of Implicit Taxes*, 52 SMU L. REV. 373, 373 (1999) (discussing the importance of implicit tax in the context of the pre-tax profit requirement for tax shelters.).

²²⁶ See *Eastern Enterprises v. Apfel*, 524 U.S. 498, 539 (1998) (Kennedy, J., concurring) (payments to cover health costs of retired coal miners violated substantive due process).

²²⁷ See *Eastern Enterprises v. Apfel*, 524 U.S. 498, 556 (Breyer, J., dissenting) (“Application of the Takings Clause here bristles with conceptual difficulties. If the Clause applies when the government simply orders A to pay B, why does it not apply when the government simply orders A to pay the government, i.e., when it assesses a tax?”); Weisbach, *supra* note 225, at 374; Ronald J. Krotoszynski, Jr., *Expropriating Intent: Defining the Proper Boundries of Substantive Due Process and the Takings Clause*, 80 N. C. L. Rev. 713, 729 (2002) (discussing the Takings clause’s parallel effect to changing marginal tax rates); Barton H. Thompson, Jr., *When Does Retroactivity Cross the Line? Winstar, Eastern Enterprises and Beyond: The Allure of Consequential Fit*, 51 ALA. L. REV. 1261, 1263 (2000) (“All forms of property regulations and confiscations can be viewed as taxes.”).

²²⁸ See Richard A. Posner, *Taxation by Regulation*, 2 BELL J. ECON. & MGMT. SCI. 22, 23 (1971) (finding that some of the benefits of measuring the effect of taxation by regulation is the ability to discuss tax policy concepts such as delegation of authority to agencies, efficiency, equity, and enforcement in that context.). The idea that regulation and taxation are in some respects interchangeable dates back to the mid-19th and 20th century. See, e.g., Needham C. Collier, *The Federal Constitution and the Independence of the States – One of Its Cardinal Purposes*, 1 LAW, 615, 618 (1906) (discussing the interchangeability of liquor licenses and tax on liquor); Joseph R. Long, *Federal Police Regulation by Taxation*, 9 VA. L. REV. 81 (1922) (discussing the constitutionality of taxation by regulation). Professor Charlotte Crane advanced the view that taxes do, or should, affect prices. Charlotte Crane, *Some Explicit Thinking About Implicit Taxes*, 52 SMU L. REV. 339, 349 (1999).

²²⁹ See, e.g., James M. Poterba, *Tax Reform and the Market for Tax-Exempt Debt*, 19 REGIONAL SCI. & URB. ECON. 537 (1989) (using empirical data to test the relationship between implicit tax rate and tax policy changes).

²³⁰ On the link between the general concept of progressivity and economic activity, see Robert P. Inman, *Comments to Gilbert E. Metcalf, The Lifetime Incidence of State and Local Taxes: Measuring Changes During the 1980s*, in TAX PROGRESSIVITY AND INCOME INEQUALITY 89, 89 (Joel Slemrod, ed., 1994) (explaining how graduated tax schedules help societies efficiently allocate resources); Michael L. Robertsi & Peggy A. Hite, *Progressive Taxation, Fairness, and Compliance*, 16 L. & POL’Y 27, 27-30, 34 (1994) (discussing fairness and graduated measures in tax systems). But see James M.

deductibility of regulatory costs only to entities that lack economies of experience. Lastly, if evidently the government's regulatory actions disadvantage newcomers,²³¹ then providing a compensatory tax credit might be useful. Regulators can construct a Newcomers' Tax Credit that gradually decreases with experience and phases out, to counter the regressive effect of regulation.²³²

From both political and policy perspectives, the first two options seem less feasible. Not all newcomers are subject to the corporate income tax regime, so changes in its progressivity would not affect them.²³³ Those that are subject to the regime may present income levels that fluctuate greatly.²³⁴ Furthermore, focusing on newcomers' income misses the point. Income is not necessarily correlated with age and scope.²³⁵ Lastly, limiting the ability to deduct regulatory costs negates a deep-rooted policy of accounting for the cost of producing income.²³⁶ It would likely exacerbate the moral hazard of obtaining such a deduction.

A tax credit functions as a dollar-per-dollar reduction in tax liability. Many newcomers do not have positive income in their nascent years.²³⁷ Where there is no positive income, there is no tax liability. Thus, the

Snyder & Gerald H. Kramer, *Fairness, Self-Interest, and the Politics of the Progressive Income Tax*, 36 J. PUB. ECON. 197, 197 (1988) (contending that marginal-rate progression is not the result of society's desire to achieve a fairer distribution of income, but is instead the result of middle-income taxpayers wanting to reduce their own burden).

²³¹ BOOZ-ALLEN & HAMILTON, INC., U.S. SMALL BUS. ADMIN., IMPACT OF ENVIRONMENTAL REGULATIONS ON SMALL BUSINESSES 34 (1982) (finding that EPA regulations increase industry concentration and reduce new entrants). *See also* Section 257 Proceeding to Identify and Eliminate Market Entry Barriers for Small Businesses, Report, 12 F.C.C.R. 16,802, para. 215, 7 Comm. Reg. (P & F) 1112 (1997) (reviewing market entry barriers caused by FCC regulations places); Eric Biber & J.B. Ruhl, *The Permit Revisited: The Theory and Practice of Regulatory Permits in the Administrative State*, 64 DUKE L.J. 133, 229 (arguing that an environmental-specific permit model would place undesirably disproportionate entry barriers).

²³² *See* Edward D. Kleinbard, *The Lessons of Stateless Income*, 65 TAX L. REV. 99, 129 (2011) (showing that in the international tax context, unlike implicit taxes, some explicit taxes are creditable under the current foreign tax credit system).

²³³ Today, the main entity choices are a general or limited partnership, a Limited Liability Company, a Subchapter C Corporation, a Limited Partnership, a General Partnership, or a Subchapter S Corporation. While these are the main forms, there are other entity classifications, such as the LLP and LLLP. *See* Henry Hansmann et al., *Law and the Rise of the Firm*, 119 HARV. L. REV. 1333, 1392 (2006) (discussing entity choice considerations).

²³⁴ *See* Diego B. Avanzini, *Designing Composite Entrepreneurship Indicators*, in ENTREPRENEURSHIP AND ECONOMIC DEVELOPMENT 37, 39-40 (Wim Naude ed., 2011) (discussing several measures of entrepreneurship).

²³⁵ *See* Eyal-Cohen, *Legal Mirrors of Entrepreneurship*, *infra* note 254, at 729 (2014) (debunking the association of size of income or entity to entrepreneurship).

²³⁶ *See* 26 U.S.C. §162 (2017); *Forgeus v. Commissioner*, 6 B.T.A. 291 (1927) (attorney's charge for preparing income tax return was deductible as an ordinary and necessary business expense where taxpayer was engaged in a trade or business); Malcolm L. Morris, *Determining Deductions Deserves Deductibility*, 21 FLA. ST. U.L. REV. 75, 86-87 (1993) (noting that certain tax compliance costs are deductible under section 162 or section 212).

²³⁷ *See, e.g.*, Daniel J. Hemel and Lisa Larrimore Ouellette, *Beyond the Patents-Prizes Debate*, 92 TEX. L. REV. 303, 377 (2013) (describing the difficulties of measuring income and costs of cash trapped startups).

newcomers' tax credit could gradually phase out as experience increases. It could also be made refundable, providing a cash payment even to those newcomers with zero or negative tax liability. These features will help maintain the effectiveness of the new credit, regardless of the presence of net income.²³⁸ By multiplying a composite indicator of experience (the entity's scope and age) by a fixed credit amount, the regressive nature of a regulation may be offset.²³⁹ Naturally, a newcomer's tax credit involves a substantial revenue loss and may lead to new administrative costs or strategic planning. To remain revenue-neutral, introducing the credit alone would be ineffective unless combined with revenues from eliminating current size-based deregulation.²⁴⁰

Although these compensatory proposals may be instrumental in narrowing the distributional effects of regulations on certain incumbents, they may not entirely solve the problem. Scholars have long debated the use of the tax system and the choice between indirect tax credits and direct federal spending programs.²⁴¹ Taxation creates deadweight loss by increasing prices for consumers and lowering output.²⁴² It introduces new informational and strategic costs. It may be optimal where the government has a comparative advantage in obtaining and evaluating information.²⁴³ Hence, although a new credit may be a viable solution it remains to be seen whether its overall net effect on newcomers will be beneficial.

D. Regulatory Sandboxes

Currently, there are various measures that aim to protect parties affected by agency action. For example, agencies often publish advance notice of a proposed rule, to announce a new rule and request public input. At this point, the agency publishes the proposed rule along with

²³⁸ In the past, there have been proposals to grant newcomers partial refundable credits by allowing them to claim the credit against their employment taxes. *See, e.g.*, Startup Innovation Credit Act of 2013, S. 193, 113th Cong. (2013); Startup Innovation Credit Act of 2012, S. 3460, 112th Cong. (2012).

²³⁹ For a clarification of the use of the term "regressive" in this article see *supra* note 26. *See* MICHAELA SAISANA & STEFANO TARANTOLA, STATE-OF-THE-ART REPORT ON CURRENT METHODOLOGIES AND PRACTICES FOR COMPOSITE INDICATOR DEVELOPMENT 5 (2002) (defining a Composite Indicator as a mathematical combination of indicators and finding it to be a better way to represent different dimensions of a concept as the subject of examination).

²⁴⁰ *See supra* Part V.A.

²⁴¹ *See* Daniel J. Hemel and Lisa Larrimore Ouellette, *Beyond the Patents-Prizes Debate*, 92 TEX. L. REV. 303, 333 (2013); David A. Weisbach and Jacob Nussim, *The Integration of Tax and Spending Programs*, 113 YALE L. J. 955, 959 (2004) (finding that the decision whether to implement a "nontax" program or a "tax" program is a matter of institutional design and may be lacking if there are no benefits to coordinating the functions at issue with tax administration, or they are lower than the additional costs from requiring administrators to specialize in these relatively distinct functions.); George K. Yin, *Temporary-Effect Legislation, Political Accountability, and Fiscal Restraint*, 84 N.Y.U. L. REV. 174, 177, 255-57 (2009) (arguing that enactment of temporary-effect rather than permanent legislation would promote more political accountability and may result in greater fiscal restraint).

²⁴² *See* Weisbach & Nussim, *supra* note 241, at 959.

²⁴³ *Id.*, at 960.

the justification behind it and a response to any public comment on the advance notice. Thereafter, the Administrative Procedure Act imposes procedures, such as public notice and the opportunity for comment.²⁴⁴ The purpose of these measures is to improve fairness, encourage public participation, and increase consensus in the rulemaking process.²⁴⁵

This type of “regulatory negotiation” (reg neg) includes a broad range of methods used by agencies for soliciting public input. Methods can include public hearings, one-time workshops, occasional roundtables, and established advisory committees.²⁴⁶ Throughout the advance notice and the notice-and-comment periods, interested parties can create coalitions and bargain over rulemaking with the regulating agency. This may result in customized rules favoring old-timers that possess market influence and prior experience in this type of bargaining. How can newcomers achieve greater impact throughout the development of proposed rules?

One way to achieve such impact is for newcomers to assume a more predominant role in rulemaking process through “regulatory sandboxes.” This process was recently proposed by the Financial Conduct Authority (“FCA”) in the U.K.. According to the Authority, industry players come together to propose, discuss, and test innovations in the area of Fintech (denoting software technologies aimed at supporting banking financial services) without suffering the consequences of regulatory default.²⁴⁷ These regulatory sandboxes are currently being considered by other regulators such as the Australian Securities and Investment Commissions, Singapore’s Monetary Authority, and Abu Dhabi’s Financial Services Regulatory Authority.²⁴⁸

The idea of regulatory sandboxes originated from the acknowledgment of regulatory voids and uncertainties in the area of disruptive technological innovation. In this area, knowing how to structure regulatory interventions is difficult. Preserving the regulatory status quo however, is much worse, as it may hamper new technologies from reaching the market.²⁴⁹ Through participation in sandboxes, the

²⁴⁴ The Administrative Procedure Act, Pub. L. No. 79–404, 60 Stat. 237 (1946).

²⁴⁵ Kristin E. Hickman, *Coloring Outside the Lines: Examining Treasury’s (Lack of) Compliance with Administrative Procedure Act Rulemaking Requirements*, 82 NOTRE DAME L. REV. 1727, 1728 (2007) (criticizing Treasury’s position regarding the interpretative nature of most of its regulations, thus exempting them from the public notice and comment requirements).

²⁴⁶ Cary Coglianese, *Assessing Consensus: The Promise and Performance of Negotiated Rulemaking*, 46 DUKE L.J. 1255, 1256 (1997).

²⁴⁷ Financial Conduct Authority, *Regulatory Sandbox*, SSRN (2015), <https://www.fca.org.uk/publication/research/regulatory-sandbox.pdf> (“This paper is a report to Her Majesty’s Treasury on the feasibility and practicalities of developing a regulatory sandbox that is a ‘safe space’ in which businesses can test innovative products, services, business models and delivery mechanisms without immediately incurring all the normal regulatory consequences of engaging in the activity in question.”).

²⁴⁸ Mark Fenwick, Wulf A. Kaal & Erik P. M. Vermeulen, *Regulation Tomorrow: What Happens When Technology is Faster than the Law?*, 27 SSRN (Sep. 4, 2016), <https://ssrn.com/abstract=2834531> (discussing the function of regulatory sandboxes in the FinTech industry).

²⁴⁹ *Id.*, at 15.

FSA is looking to reduce some of the existing regulatory barriers to firms that are testing innovative ideas. The function of the sandbox is to allow the FSA to maintain suitable regulatory safeguards while listening to the concerns of entrepreneurs.

Regulatory sandboxes could be implemented in the rulemaking process in the U.S. focused on including newcomers. Regulated agency officials can conduct open hearings or invite newcomers to participate in rule-making committees to examine the feasibility of regulation in key issues. It may look into the type of regulatory barriers newcomers face when entering the industry and ways to lower them. It could discuss the appropriate safeguards to protect public safety and welfare. Lastly, this type of sandboxes can deliberate on ways to maintain creativity and flexibility in rulemaking to assure regulatory arrangements continue to consider new solutions and remain current.

Through sandboxes regulators could become more proactive, dynamic, and responsive in their efforts to include entities that lack economies of experience. Congress might even compel newcomers' inclusion in the rulemaking process. For example, current government contracting laws require that 23% of procurement contracts originate from entities lacking economies of scale.²⁵⁰ Similarly, the government may require regulating agencies to obtain at least 23% of their input from newcomers in the industry.

Actively seeking the participation of newcomers in the rulemaking process will create more opportunities for them to become well-versed and leave their mark. It will allow all parties to a regulatory directive to exchange ideas in a quicker manner. Reduced delays driven by regulatory uncertainty will shorten innovative products' time-to-market. Improving the access of newcomers in this process will enable policymakers to receive more diverse considerations and will likely yield better regulation. It may restore trust and support of the regulatory authority among more constituents. Nevertheless, just because an agency invites participation by newcomers, does not mean that newcomers will follow. There remains the challenge of incentivizing newcomers to invest time and money (that they usually do not have) in participating in the regulatory process.

VI. CONCLUSION

The entry of newcomers into the market has long been a measure of economic wealth.²⁵¹ Young firms are the engine of innovative

²⁵⁰ See DUKE GENERAL SERVICES ADMINISTRATION FEDERAL PROCUREMENT DATA CENTER, FY 2007 AND SMALL BUSINESS GOALING REPORT FY 2015, https://www.fpbs.gov/fpdsng_cms/index.php/en/reports.html (reporting contract award rate to small businesses--based on dollars awarded).

²⁵¹ WILLIAM BAUMOL, *THE FREE MARKET INNOVATION MACHINE: ANALYZING THE GROWTH MIRACLE OF CAPITALISM* 10 (2002); See also Rajshree Agarwal, David Audretsch & M.B. Sarkar, *The Process of Creative Construction: Knowledge, Spillovers, Entrepreneurship, and Economic Growth*, 1 STRAT. ENTREPRENEURSHIP J. 263, 265 (2007) ("[I]nnovation of new entrants generate selection pressures on existing firms."); DUKE NIELS ET AL., *GLOBAL ENTREPRENEURSHIP MONITOR MANUAL, A REPORT ON THE*

discoveries and employment growth.²⁵² Since innovation and technological advances contribute to long-term economic growth more than capital accumulation, then entry barriers and restraints on innovation very likely produce far greater amount of economic harm.²⁵³ Yet, so far, the antitrust literature focused on price manipulation as the litmus paper to potential effects on competition. In my earlier work, I provided a model that evaluates the potential of young, innovative entities on economic development.²⁵⁴ This Article points out an asymmetrical distribution of regulatory costs that falls heavier on these same entities. It exposes the degree by which newcomers are disadvantaged when entering a regulated market or dealing with a new rule.

When government plays a prominent role in business, it has the potential of prefixing market “winners and losers.”²⁵⁵ Since the government has rulemaking power, old-timers will compete for its favor and engage in “rent-seeking.”²⁵⁶ They will attempt to secure competitive benefits for themselves and to prevent newcomers from accessing those benefits. Some regulatory gaming and manipulation have been declared antitrust violations.²⁵⁷ Nevertheless, monitoring and prohibiting attempts to influence regulatory and state action are difficult endeavors.²⁵⁸ Case law such as the *City of Columbia* even permits such activities.²⁵⁹

Greater inclusion of market players in “regulatory sandboxes” prior to promulgating rules will provide newcomers with a voice in the process of developing new regulations. Introducing a newcomers’ tax credit to compensate them for participating in rulemaking could mitigate some of the costs of their inexperience. Forming regulatory information

DESIGN, DATA, AND QUALITY CONTROL OF THE GLOBAL ENTREPRENEURSHIP MONITOR, Version 2012-9, <http://www.gemconsortium.org/docs/download/2375> (demonstrating the contribution of young entities to economic growth).

²⁵² John Haltiwanger, *Entrepreneurship and Job Growth*, in ZOLTÁN J. ÁCS, DAVID B. AUDRETSCH & ROBERT J. STROM, *ENTREPRENEURSHIP, GROWTH, AND PUBLIC POLICY* 119 (2006) (proving it is young entities that contribute the most to employment growth).

²⁵³ Hovenkamp, *supra* note 12, at 253.

²⁵⁴ Mirit Eyal-Cohen, *Legal Mirror of Entrepreneurship*, 55 B.C. L. REV. 719, 720 (2014) (defining the phenomenon of entrepreneurship).

²⁵⁵ See Robert Crandall, *Book Review: Who Wins the Regulatory Game? Who Profits: Winners, Losers, and Government Regulation*, 4 YALE J. ON REG. 495, 495-496 (1987) (describing the book as helping private decision makers and public policymakers cope with the fact that government policies create winners and losers.); Jonathan Baert Wiener, *Global Environmental Regulation: Instrument Choice in Legal Context*, 108 YALE L.J. 677, 700 (1999) (exemplifying net winners and losers from global environmental regulation).

²⁵⁶ Stigler, *supra* note 148, at 13.

²⁵⁷ Stacey L. Dogan & Mark A. Lemley, *Antitrust Law and Regulatory Gaming*, 87 TEX. L. REV. 685, 723 (2009) (defining “regulatory price squeeze” as involving “manipulation of the regulatory system for anticompetitive ends” and “behavior that regulators have specifically endorsed, that falls within their core regulatory ambit, and that requires detailed knowledge of both firm and industry economics.”).

²⁵⁸ See Keith A. Rowley, *Immunity from Regulatory Price Squeeze Claims: From Keogh, Parker, and Noerr to Town of Concord and Beyond*, 70 TEX. L. REV. 399, 416-18 (1991) (discussing a number of cases involving regulatory price squeeze allegations).

²⁵⁹ 499 U.S. at 375.

cooperatives can help share these costs with other newcomers. While these solutions may not resolve the regressive impact of regulations entirely, they may be instrumental in narrowing such effect. They have the potential of improving newcomers' survival and lowering entry barriers.

To avoid the concentration of power, anticompetitive behavior, and monopolized deadweight losses, it is important for policymakers to recognize and correct obstacles to entry, especially those created by government actions. Designing a regulatory framework that ensures social goals alongside not stifling disruptive innovations is not an easy task. This Article hopes to instigate further policy discussions, with the goal of attaining the ends of regulatory norms. Further research on the incidence of regulation on a cohort of regulated and unregulated affiliates will reveal how far the distributional asymmetries transport. This Article also hopes to spur experimentation with respect to the solutions proposed and other ways of alleviating the effects of the regulatory action on innovative newcomers. Responsible regulators should routinely consider other, more efficient methods, to mitigate the impact of regulation on society.

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