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REGULATORY REFORM IN FLORIDA
An Opportunity for Greater Competitiveness and Economic Efficiency

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Abstract

As the quantity and scope of regulations in Florida grow, so does the degree to which they affect the economy. In these circumstances, a little reform to the process of creating regulations can go a long way toward crafting an environment that fosters competitiveness and economic efficiency. This paper proposes two simple yet effective regulatory reforms that Florida could adopt to make new regulations more economically efficient. First, before designing a regulation, regulators should define the problem the regulation is supposed to address, which should include determining whether a widespread and systemic problem exists and identifying its causes. Second, once a problem has been identified, regulators should consider a wide range of alternatives before selecting a course of action. Both suggested reforms could be usefully applied to all regulatory actions, thereby improving Florida's competitiveness and helping to prevent unnecessary regulatory burdens to its economy.

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Regulatory Reform in Florida:

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I. Introduction

Regulation often seems like the neglected stepchild of government. Yet, while politicians and pundits focus on headline-making topics like taxes and entitlements, the regulatory bureaucracies keep adding more and more pages of regulatory code. Regulations already affect every business and every individual in so many ways that the quantification of regulation alone poses a daunting task for economists.[1] And as the quantity and scope of regulations grow, so does the degree to which they affect the economy. In such circumstances, a little reform to the process of creating regulations can go a long way toward crafting an environment that fosters competitiveness and economic efficiency without sacrificing the outcomes that regulations are intended to achieve.

This paper proposes two simple yet effective regulatory reforms that Florida could adopt to make new regulations more economically efficient. First, prior to designing a regulation, regulators should make every effort to understand the problem the regulation is supposed to address. This effort should include determining whether a widespread and systemic problem exists and, if one does, identifying its causes. The second reform reflects a basic tenet of problem-solving: once a problem has been identified, regulators should consider a wide range of alternatives before selecting a course of action. Both suggested reforms are general in scope, meaning that they could be usefully applied to all regulatory actions. That is, whenever a change

[1] Omar Al-Ubaydli and Patrick A. McLaughlin, "RegData: A Numerical Database on Industry-Specific Regulations for All U.S. Industries and Federal Regulations, 1997–2010" (Mercatus Working Paper, Arlington, VA: Mercatus Center at George Mason University, July 2012).

to the regulatory code is made, Florida could benefit from first assessing the nature of the problem and then considering alternatives.

To show how these broad proposals could be applied in a specific regulatory context, this paper uses examples of a type of regulation that is very relevant to Florida: occupational licensing. Occupational licensing regulations have been hotly debated in the state since at least 1991, when the Florida legislature passed the Sunrise Act.[2]

The Sunrise Act attempted to reform the procedure for adopting occupational licensing regulations for professions not expressly subject to state regulation. The act includes elements that are similar to our proposals, including a requirement that "in determining whether to regulate a profession or occupation, the Legislature shall consider . . . whether the unregulated practice of the profession or occupation will substantially harm or endanger the public health, safety, or welfare, and whether the potential for harm is recognizable and not remote."[3] This requirement is similar, but not identical, to our proposal that, prior to regulating, regulators should determine whether a widespread and systemic problem exists, and if one does, identify its causes. A similar provision of the Sunrise Act requires that "proponents of legislation that provides for the regulation of a profession or occupation . . . provide, upon request . . . [d]ocumentation of the nature and extent of the harm to the public caused by the unregulated practice of the profession or occupation . . . and an explanation of the reasons why other types of less restrictive regulation would not effectively protect the public."[4] Other provisions of the statute direct the legislature to consider cost-effectiveness and economic impact and direct proponents of the legislation to provide cost estimates upon request. Finally, the Sunrise Act

[2] For the text of the Sunrise Act, see http://law.onecle.com/florida/legislative-branch-commissions/11.62.html.
[3] Legislative Review of Proposed Regulation of Unregulated Functions ("Sunrise Act"), Florida Statute, Title III, Section 11.62 (3)(a), 2011.
[4] Ibid., Section 11.62 (4)(c) and 11.62 (4)(h).

requires the agency that would implement the regulation to provide the legislature with "any alternatives to the proposed regulation which may result in a less restrictive or more cost-effective regulatory scheme."[5]

Thus, the Sunrise Act can be characterized as attempting to inject analysis into the legislative process, at least when the proposed legislation would create more occupational licensing regulations. The existence of this statute highlights the importance of occupational licensing regulations in the first place. It also demonstrates that the legislature apparently believes that it could make better decisions if it had more and better information regarding proposed regulations.

Our proposal differs from the Sunrise Act in several ways. First, the Sunrise Act's language directs the legislature and, specifically, proponents of proposed legislation to provide information about the proposed legislation. This direction is like requiring a defense lawyer to provide an alibi for his client: any impartial observer should be skeptical because the lawyer has an obvious incentive to make his client's alibi appear as airtight as possible, regardless of reality. Second, it is doubtful that proponents of legislation have economists with expertise on the subject on staff and ready to provide impartial analyses of a proposal. Instead, if necessary, a proponent might hire a consultant to perform an analysis that supports the position the proponent has already decided to take. The Sunrise Act does not task anyone with providing comprehensive, objective analysis.

In contrast, this paper proposes that a somewhat more neutral party—the regulatory agency—should perform a preliminary set of analyses and provide them to both the legislature and the public prior to moving forward with a regulation. Our proposal contains multiple

[5] Ibid., Section 11.62 (5)(c).

differences from the Sunrise Act's provisions. First, we propose that the regulating agency be required to provide these analyses; in contrast, much of the information listed in the Sunrise Act is required only "upon request" and would come from proponents of the legislation. Second, we propose that the analyses be performed by regulatory agencies, rather than legislators, their staffs, or their chosen proxies. Regulatory agencies are typically staffed by career civil servants. Although career civil servants may be somewhat influenced by election cycles and lobbying, they are still one step removed from the direct influence of voters and lobbyists that may affect legislators. Furthermore, regulatory agencies are likely to possess more expertise in both economics and the subject matter covered by a proposed regulation. Finally, while the Sunrise Act focuses only on occupational licensing, we propose that the same logic—that better analysis leads to smarter rulemaking—can be successfully applied to all types of regulations.

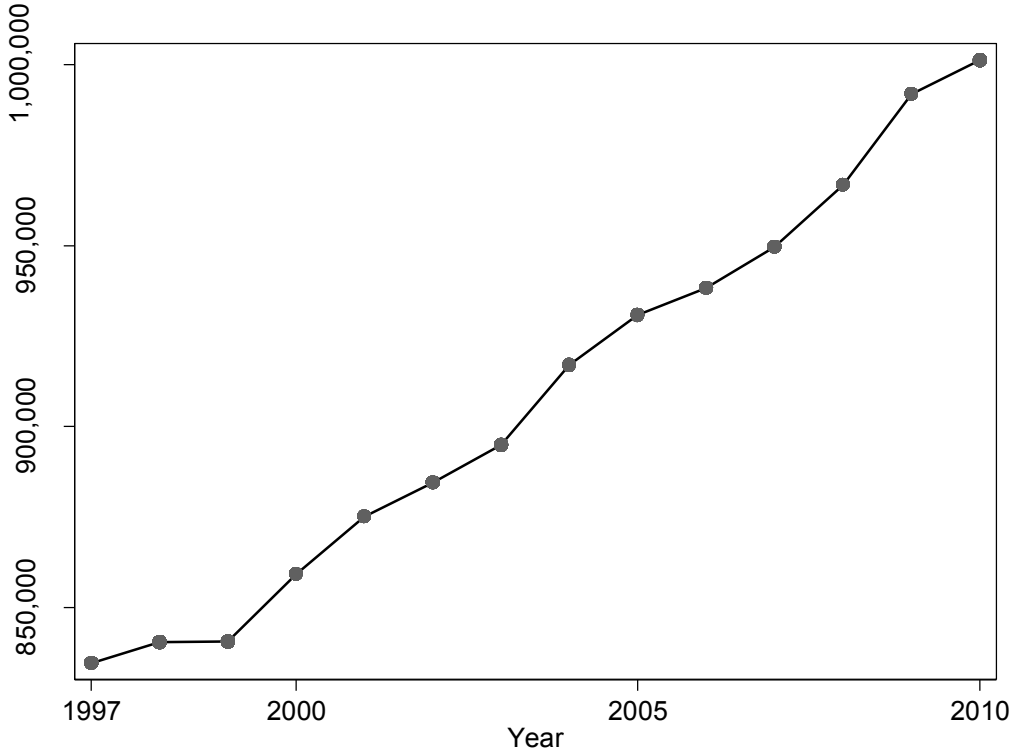
Given the pervasiveness of regulations and the likelihood that regulations will continue to grow (recent reductions in Florida notwithstanding), the adoption of these commonsense reforms could put Florida in the vanguard of the growing number of governments considering smarter regulatory systems.[6] Although we follow the Florida legislature's lead by focusing on occupational licensing regulations, citing examples from the scholarly literature that demonstrate our points, we propose that the same requirements of analysis be applied to other types of rulemaking. After all, occupational licensing regulations only account for a small fraction of Florida regulations, and regulations of almost all types have proliferated in recent years.

[6] For examples of other governments that may adopt regulatory reform, the OECD has produced reviews on regulatory reform for thirty-one OECD member countries, plus six non-OECD member countries. See OECD, "OECD Regulatory Policy by Country," http://www.oecd.org/gov/regulatorypolicy/oecdregulatorypolicybycountry.htm.

Trends in Regulation

By most measures, regulation has been increasing in recent decades. This pattern can be clearly seen at both the federal and state levels. Figure 1 shows the growth of federal regulations from 1997 to 2010 as measured by counting restricting words such as "shall," "must," or "required" that are printed in the *Code of Federal Regulations* each year.[7]

Figure 1. The Trend of Federal Regulation, 1997–2010

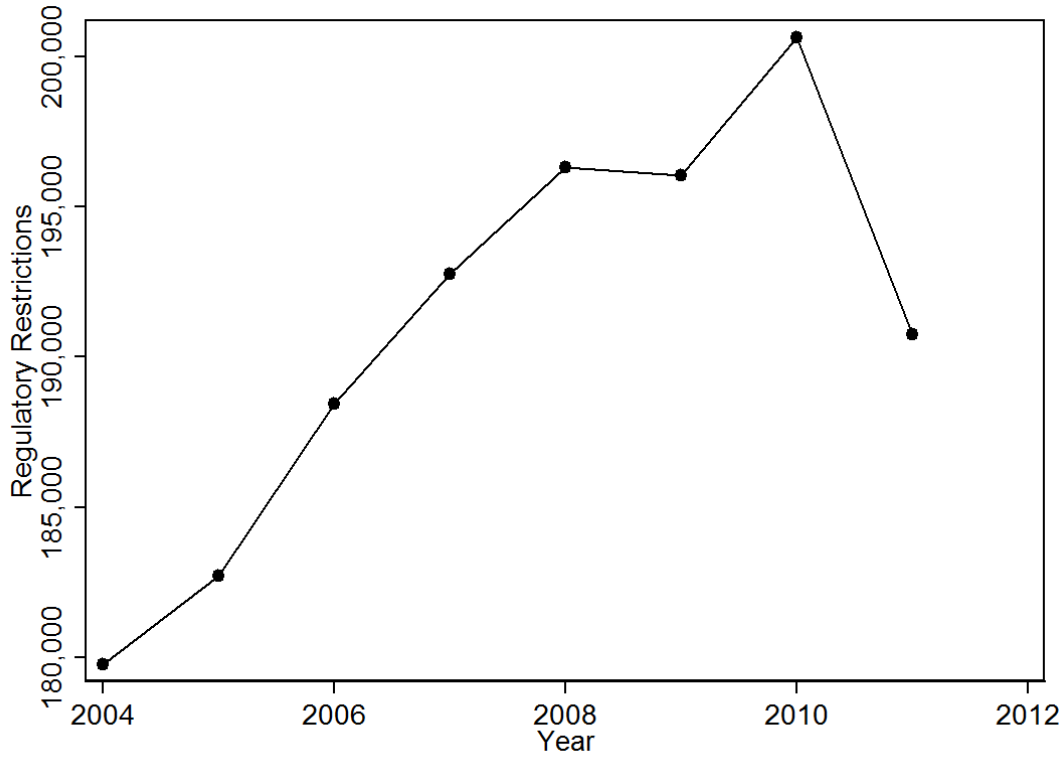


Source: Omar Al-Ubaydli and Patrick A. McLaughlin, "RegData: A Numerical Database on Industry-Specific Regulations for All U.S. Industries and Federal Regulations, 1997–2010" (Mercatus Working Paper, Arlington, VA: Mercatus Center at George Mason University, July 2012).

Similarly, the number and nature of regulations in a state tend to change from year to year. For example, as figure 2 shows, Florida regulations increased by about 10 percent between 2004 and 2010.

[7] Al-Ubaydli and McLaughlin, "RegData."

Figure 2. The Trend of Regulation in Florida, 2004–2011



Source: Authors' calculation using the method proposed by Al-Ubaydli and McLaughlin in "RegData."

That trend was reversed, however, between 2010 and 2011, when about 5 percent of the restrictions were removed from Florida's administrative code. This reduction in restrictions had two main causes. First, the Florida legislature passed a bill that restructured the Department of Community Affairs and a large portion of its regulations.[8] This agency oversaw land development plans, and now most such planning will occur at a more local level. Although some of the agency's mission and regulations were shifted to other agencies, this restructuring explains about 20 percent of the decrease in regulatory restrictions from 2010 to 2011. Second, the Florida legislature passed a law that gave the Board of Governors the authority to work with state universities to identify and repeal any education regulation that was duplicative of, or superseded

[8] Florida law 2011-139, House Bill 7207, http://laws.flrules.org/2011/139.

by, a regulation adopted by the Board of Governors or the university board of trustees.[9] As a result, a significant portion of Title 6 of the Florida Administrative Code was repealed, and the resulting reduction in Title 6 restrictions explains most of the remaining decrease in regulatory restrictions seen between 2010 and 2011. Such reductions are unlikely to be repeated unless the legislature passes similar acts in the future.

In both cases—the addition or the subtraction of regulatory text to the administrative codes—careful analysis can improve the outcomes of the government action. The process leading to the modification of regulatory codes can and should accomplish three important goals: first, unnecessary regulations should be avoided; second, regulations should be optimized to achieve the outcomes intended; and, third, the burden of regulations on the economy should be minimized. Achieving each of these goals would not only help a state's economy, but also its competitiveness in the race to attract both individuals and businesses.

Regulations Affect the Economy Directly and Indirectly

Regulations are usually designed in response to a social problem, real or perceived. Some regulations achieve their goals, while others do not. In all cases, however, regulatory intervention in the market is not without its trade-offs and consequences. The cost of compliance with federal regulations alone—that is, the cost that regulations directly impose on regulated entities—likely totals in the tens of billions of dollars annually.[10] Simple examples of direct compliance costs are the fees regulated professionals, such as real estate agents and lawyers, pay to obtain licenses, plus the additional money they spend each year for the continuing education required to keep

[9] Florida law 2010-78, House Bill 7273, http://laws.flrules.org/2010/78.
[10] Office of Management and Budget, "Draft 2012 Report to Congress on the Benefits and Costs of Federal Regulation and Unfunded Mandates on State, Local, and Tribal Entities," March 2012, http://www.whitehouse .gov/sites/default/files/omb/oira/draft_2012_cost_benefit_report.pdf.

their licenses. But some compliance costs are surprising. For example, restaurants sometimes must pay to have food inspectors perform inspections in the evening, when the restaurant is open, instead of during the day when food inspectors typically work.[11]

In addition to money outlays to pay compliance costs, regulation necessarily creates what economists call "opportunity costs"—productive activity forgone because scarce resources get devoted to regulatory compliance. If a restaurant owner has to spend an evening showing the food inspector around, the owner cannot spend that same time greeting customers and ensuring that they have a quality dining experience.

Licensing delays also create opportunity costs. In Miami, for example, it can take up to one year for entrepreneurs to get the required government permits to open a business. In the meantime, the entrepreneur may have to pay rent on an idle business location. Licensing delays also create opportunity costs for home businesses. Before an entrepreneur can open a home business, she must first apply for Class II Special Permit. Operating a home business without such a permit is punishable by a $500 fine and up to two months in jail. One attorney who wanted to open a home-based business had to go through a cumbersome process that included "acquiring the original building plan for her condominium, taking photos of both the building's exterior and her home office, and sending certified letters to neighbors and local homeowners associations to give them the opportunity to object to her home law practice, even though she never sees clients at her home . . . mailing the letters alone cost nearly $150."[12] The value of the lost business opportunities while the entrepreneur waits for a license is an opportunity cost of licensing. The entrepreneur is worse off, and so are the customers he or she could have served.

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[11] See "Regulation Nightmares," *CNN Money*, September 22, 2011, http://money.cnn.com/galleries/2011/small business/1109/gallery.regulation_nightmares/4.html.

[12] Paul Sherman, *Miami's Vice: Overregulating Entrepreneurs*, City Study Series (Arlington, VA: Institute for Justice, November 2010), 9.

Regulation Affects State Competitiveness

In 2013, Florida ranked 23rd, down 12 places from 2011, in the *Freedom in the 50 States* index, which ranks the American states on their public policies that affect individual freedoms.[13] Broadly speaking, the index comprises three components: fiscal policy, regulatory policy, and paternalism. The creators of the index point out that "overall, Florida does relatively well, especially in personal freedom, although its economic policies leave room for improvement." Indeed, the same index ranks Florida twenty-first in terms of its regulatory policy. Increasingly, research shows that individuals and businesses respond to state policies by "voting with their feet," or locating in those states where public policies and other local factors create the most attractive environment. Ultimately, states compete with each other to attract residents and businesses, and reform of the regulatory process can help a state position itself to be more attractive.

Improving the Regulatory Process Leads to Better Outcomes and Less Waste

Researchers in economics, public policy, and management have identified several principles that can improve both the quality and usefulness of regulations.[14] This report highlights two foundational principles: first, identify whether there is a significant, systemic problem, and second, consider the baseline and various alternative approaches before selecting a course of action. On the federal level, these principles are expressed in Executive Orders 12866 and 13563, which instruct executive branch agencies in how they shall assess potential regulations.[15] This

[13] Jason Sorens and William Ruger, *Freedom in the 50 States*, 3rd ed. (Arlington, VA: Mercatus Center at George Mason University, 2013), http://freedominthe50states.org/download/Freedom_50_States_2013_summary.pdf.
[14] Jerry Brito and Jerry Ellig, "Toward a More Perfect Union: Regulatory Analysis and Performance Management," *Florida State University Business Review* 8, no. 1 (Summer 2009): 1–55.
[15] Executive Order 12866, *Federal Register* 58, no. 190 (October 4, 1993): 51736; Executive Order 13563, *Federal Register* 76, no. 14 (January 21, 2011): 3821.

paper proposes to modify Florida's regulatory process so that these two principles are applied before agencies take any regulatory actions.

The application of these principles conveys two important and related benefits. First, by performing a systemic problem analysis prior to regulating, scarce resources—including state funds and public employees' time—can be directed at the most pressing problems and not misdirected in cases where economic research has shown that a systemic problem is unlikely to exist. Second, a preliminary analysis of alternatives involves positing a wide range of possibilities and identifying the ones that are well tailored to address the problem. Such an analysis may find that the optimal solution to the problem is entirely different from what lawmakers or regulators originally conceived. For example, an alternatives analysis may find that occupational licensing may be necessary where consumers lack adequate information to assess the quality of a professional service, but that the original design of a proposed occupational licensing regulation was more restrictive than necessary due to the influence of the regulated professions that benefit from licensing's restriction on competition. A good analysis of alternatives recognizes that different forms of regulation and levels of stringency offer different bundles of costs and benefits, facilitating a decision that is informed by the trade-offs offered by each alternative.

In fact, occupational licensing regulations stand out as an example of state regulations that, when considered using our proposed framework, often either may not solve a legitimate social problem or may not do so in the least costly manner. Various states have taken different approaches to occupational licensing. Different state experiments have allowed researchers to test whether these regulations achieve their stated goals and at what cost. For example, one study found that states that require an oral exam in the process of licensing electricians had fewer

electricians and a lower quality of service for consumers.[16] Those are almost surely not the outcomes the legislature intended to achieve.[17] Licensing also had another, more shocking, effect. Economists Sidney Carroll and Robert Gaston found that more stringent entry requirements for electricians are correlated with an increase in the death rate from accidental electrocution. Since more stringent licensing tends to increase the price of electricians' services, some customers switch to cheaper substitutes. In this case, one cheaper substitute was "do it yourself" work—which increases the risk of accidental electrocution.[18]

Although we focus on occupational regulation because it is timely and relevant, the principles behind our proposals are applicable to all regulatory actions (as the federal government's executive orders recognize). If a regulatory action does not address a clear problem, then the action is unlikely to fix any problem (and may create more problems). And if alternatives are not formally considered, it is difficult to conclude that the chosen regulatory approach will accomplish the intended outcome and will do so at the least cost.

Better Outcomes for Florida Consumers

Table 1 lists more than a dozen studies of occupational licensing regulations and their effects on price. In nearly all of these studies, the prices of goods or services supplied by the profession increase as a direct result of regulation of the providing profession, sometimes by as much as 100 percent.

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[16] Carolyn Cox and Susan Foster, *The Costs and Benefits of Occupational Regulation*, Economic Issues (Bureau of Economics of the Federal Trade Commission, October 1990).
[17] A reduction in the number of electricians may have benefited licensed electricians in that state.
[18] Sidney Carroll and Robert Gaston, "Occupational Restrictions and the Quality of Service Received: Some Evidence," *Southern Economic Journal* 47, no. 4 (April 1981): 959–976.

Table 1. Effect of Licensing Regulation on Prices

Profession	Restriction[a]	Impact on price	Increase in price	Source
Optometry	Advertising	Increase	25%–100%	Benham 1972
Optometry	Advertising	Increase	25%–40%	Benham 1975
Optometry	Advertising	Increase	9%–16%	Feldman and Begun 1978 and 1980
Optometry	Commercial practice, advertising	Increase	33%	Bond 1980
Optometry	Commercial practice, advertising	Increase	20%	Kwoka 1984
Optometry	Commercial practice	Increase	5%–13%	Haas-Wilson 1986
Pharmacy	Advertising	Increase	5%	Cady 1976
Law	Advertising	Increase	$33 more for legal service for an uncontested divorce[b]	Muris and McChesney 1978
Law	Advertising	Increase	Greater price dispersion[c]	Cox, DeSerpa, and Canby 1982
Law	Advertising	Increase	5%–11%	Staff Report by the FTC's Bureau of Economics and Cleveland Regional Office 1984
Law	Advertising	Increase	Prices more closely reflect costs[d]	Schroeter et al. 1987
Dentistry	Reciprocity	Increase	15%	Shepard 1978
Dentistry	Commercial practice, use of auxiliaries	Increase	4%	Conrad and Sheldon 1982
Dentistry	Use of auxiliaries	Increase	11%	Liang and Ogur 1987
20, including law and architecture	Direct entry, mandatory fees, advertising	Increased income (fees & ads)	10.4% (fees) 32.8% (ads)	Muzondo and Pazderka 1980
Cosmetologists	Increasing hours of training by 100 without education mandates	Increase	$0.69 more per average beauty salon visit	Adams, Ekelund, and Jackson 2002
Cosmetologists	Increasing hours of training by 100 with high school education mandates	Increase	$0.09 more per average beauty salon visit	Adams, Ekelund, and Jackson 2002

Profession	Restriction[(a)]	Impact on price	Increase in price	Source
Cosmetologists	Education requirement without training requirement	Increase	$8.68 more per average beauty salon visit	Adams, Ekelund, and Jackson 2002
Cosmetologists	Each 100 hours of training in states with regulation requirement relative to states without	Increase	$2.15 more per average beauty salon visit	Adams, Ekelund, and Jackson 2002

(a) If the type of restriction for a certain occupation is repeated in the table, then there are several studies estimating the effect on prices of that restriction in that occupation.

(b) Timothy Muris and Fred McChesney find that "the price of legal services for an uncontested divorce, for example, averaged $33 more in cities with restrictive advertising regulations." "Advertising, Consumer Welfare, and the Quality of Legal Services: The Case of Legal Clinics" (Law and Economics Center, University of Miami, Working Paper 78-5, 1978). See Organisation for Economic Co-operation and Development, *OECD Policy Roundtables Competition in Professional Services 1999* (Paris: OECD, February 23, 2000), 20, http://www.oecd.org/regreform/liberalisationandcompetitioninterventioninregulatedsectors/1920231.pdf.

(c) When surveying lawyers' fees for routine legal services, the authors also collected information on whether the lawyers advertise or plan to advertise their fees, and if so, what medium they chose or will choose for their advertisement. Even though the authors found significant price differentials between the lawyers who advertise (or plan to advertise) and those that do not, they were reluctant to draw conclusions. As they describe their findings, "In virtually every instance, the mean or standard deviation for those who had advertised or would advertise was significantly lower than that for the other attorneys surveyed. No inferences, however, concerning the likely effect of attorney advertising on routine legal service fees can be drawn from the differences these data show. Our findings provide a snap shot picture of the Phoenix routine legal service market at one point in time only. Thus, it is probable that the data capture the tendency for those seeking additional clients both to advertise and to charge lower fees." See Steven Cox, Allan DeSerpa, and William Canby, "Consumer Information and the Pricing of Legal Services," *Journal of Industrial Economics* 30, no. 3 (March 1982): 315.

(d) John Schroeter, Scott Smith, and Steven Cox estimate a market-wide advertising intensity distribution with a mean of 0.14 and a standard deviation of 0.087. Also, they estimate the advertising intensity of price to cost ratio, evaluated at the mean value of market-wide advertising intensity, to be −0.224. If advertising intensity increases by one half of a standard deviation from the mean (a change of 31% = [0.5(0.87)/0.14] × 100%), then the price to cost ratio would fall by 7% (31% of −0.224). Using a 1968 study by Norman Collins and Lee Preston, which estimated price–cost ratios for 288 four-digit SIC manufacturing industries to have a median of 1.172, the authors estimate that the latter figure would decrease to 1.09 [1.172 − 1.172(7%)]. In other words, increasing advertising intensity modestly (by one half of one standard deviation) can reduce price premiums over cost by 8.2% [100(1.172 − 1.09)]. See "Advertising and Competition in Routine Legal Service Markets: An Empirical Investigation," *Journal of Industrial Economics* 36, no. 1 (September 1987): 49–60.

Sources: See the list of references at the end of this paper.

The lesson of Table 1 is clear: consumers have a lot at stake in occupational licensing regulation. Indeed, generally speaking, some kinds of regulation clearly and directly increase prices, and it is the government's responsibility to ensure that consumers get something of value in exchange for the increased price.

Another feature of occupational licensing regulations is that they disproportionately reduce the prevalence of minority practitioners in regulated occupations. According to one study, for example, for every 100 hours of training required to be a licensed manicurist, the proportion of manicurists that are Vietnamese falls by 17.6 percent.[19] Similarly, another study shows that licensing laws requiring new teachers to pass an examination reduce the proportion of new teachers who are Hispanic by 2 percent.[20] These and other studies showing the effects of occupational licensing regulation on minority participation in regulated industries are summarized in Table 2. They exemplify the unintended consequences of an incomplete regulatory analysis. Occupational licensing is only one example demonstrating the necessity for complete regulatory analysis, especially when the regulation is being considered in a state where the likelihood of adverse effects is greater.

Table 2. Empirical Studies of the Effects of Licensing on Minorities

Occupation	Type of licensing restriction	Effect on minorities	Source
Cosmetology	Written licensing examination	Blacks are 30% less likely to pass a written license examination than whites with the same education and training levels. Applicants for a cosmetology license who received their education from outside the US are 26% less likely to pass the written examinations than others.	Dorsey 1980
Barbers	Licensing	Licensing of barbers reduces the probability of a black individual working as a barber by 17.3%.	Law and Marks 2009

[19] Maya Federman, David Harrington, and Kathy Krynski, "The Impact of State Licensing Regulations on Low-Skilled Immigrants: The Case of Vietnamese Manicurists," *American Economic Review* 96, no. 2 (May 2006): 237–41.
[20] Joshua Angrist and Jonathan Guryan, "Does Teacher Testing Raise Teacher Quality? Evidence from State Certification Requirements," *Economics of Education Review* 27, no. 5 (2008): 483–503.

A range of nonagricultural occupations	Licensing	Except in the case of barbers, there is little evidence that licensing reduces the likelihood that a minority will practice the licensed occupation. Occupations studied include barber, beautician, midwife, plumber, practical nurse, and registered nurse.	Law and Marks 2009
Manicurists	Training and English proficiency test requirements	For every additional 100 hours of training, the number of Vietnamese manicurists decreased by 17.6% relative to the sample mean. Vietnamese with less English proficiency are more likely to become manicurists than those who speak English well. States that require an English proficiency test eliminate the possibility for those in the former group to become manicurists.	Federman, Harrington, and Krynski 2006
Interior design	Educational requirements	Black or Hispanic interior designers are 30% less likely to hold a college degree compared to white designers. Therefore, licensing requirements requiring a college degree disproportionately exclude minorities from this occupation.	Harrington and Treber 2009
Teachers	Testing requirement	Licensing laws requiring new teachers to pass an examination reduce the proportion of new teachers who are Hispanic by 2%.	Angrist and Guryan 2008

Sources: See the list of references at the end of this paper.

Tables 1 and 2 demonstrate that regulations require trade-offs. Table 1 suggests that price increases for consumers must be weighed against whatever benefits the regulations might achieve. Table 2 suggests that decision makers should consider the disproportionate effects of regulations on minority workers in regulated occupations. Analyzing whether a problem exists and examining a wide range of alternative actions can help ensure that the trade-offs involved with regulation are recognized and considered prior to making a choice. Regulators may decide that increased consumer prices or other negative impacts are acceptable if the regulation achieves its intended effects. But in other cases, regulators may discover that there is no systemic problem; the regulation would be "all pain for no gain." In yet other cases, an alternatives analysis may show ways of achieving the desired outcome that minimize the negative impacts.

II. Understand the Systemic Problem

A regulation changes the fundamental "rules of the game" that govern people's interactions. Consequently, regulation cannot be expected to have beneficial effects unless a significant, *systemic* problem exists that can be alleviated by a change in the rules of the game.

The process of designing a regulation should begin with an understanding of the problem the regulation is supposed to address. Understanding the problem is important for two reasons. First, if evidence shows that no systemic problem exists, then decision makers would do well not to regulate at all; regulation would do more harm than good.[21] Second, if a systemic problem does exist, analysis of the problem allows rule-writers to tailor an effective solution.

Step 1: Develop a Coherent Theory

Regulations address three types of systemic problems: market failures, government failures, and overriding social needs. Remedying the first two types of failures improves economic efficiency: it allows markets or government to produce the mix of goods and services that consumers value most. The third type of problem, an overriding social need, usually involves some aspect of fairness or justice that may or may not have an explicit efficiency rationale.

All three types of problems have specific definitions in economic theory; they are not merely labels that can be applied to any situation that someone dislikes. Fundamental to economic theory is the notion that individuals respond to incentives. Systemic problems are no exception to this notion; they develop as a result of individuals making choices in response to incentives. Where systemic problems arise, those choices happen to differ from a theoretical, optimal set of choices that would lead to greater economic efficiency. The first step in

[21] Susan E. Dudley and Jerry Brito, *Regulation: A Primer* (Arlington, VA and Washington, DC: Mercatus Center at George Mason University and Regulatory Studies Center, George Washington University, 2012): 91–93.

understanding the systemic problem, then, is having a coherent, logical theory that explains the incentives that cause the problem to exist.

Market failure. There are four primary forms of market failure: externalities, market power, public goods, and information asymmetry. Each of the four misallocates resources; that is, market failures prevent society from getting as much as possible out of its available resources because they prevent some resources from moving to uses that consumers value more highly.

1. Externality. An externality occurs when a person's or firm's actions have significant effects on others' welfare that the decision maker does not take into account. Many environmental policies seek to correct negative externalities that arise when people pollute the air or water without regard for how this pollution affects others' welfare. Occasional examples of externalities arise in the case of regulated professions. One example would be an individual with a contagious disease who consults a low-quality doctor unable to prevent the disease from spreading, or a father who elects not to vaccinate his children against whooping cough. In each case, the costs of contagion are not necessarily considered in the decision of whether and how to seek treatment. A higher number of patients may end up contracting illnesses than would be the case if the first individual had fully considered the contagion costs, or externalities, his choices imposed on others.[22]

2. Public good. A public good is a special case of a positive externality: someone's decision to purchase a good or service confers benefits on everyone else in society, but the decision maker does not take these benefits into account. Knowing that others' purchases create spillover benefits, many individuals may decide to "free ride" instead of purchasing the good or

[22] Cox and Foster, *Costs and Benefits of Occupational Regulation*.

service themselves. As a result, these goods or services may be underprovided. Police patrols are a classic example of a public good; state and local governments usually provide police service through tax revenues because many believe individuals would not pay for enough police service on their own. In general, governments tend to address public goods problems by funding or directly providing the underprovided service rather than through regulation.

3. Market power. A firm has market power when the absence of competition allows it to profitably increase price above the level (or degrade service below the level) that would exist under competition. Economists consider market power to be inefficient because the gains to the firm with market power are smaller than the losses to other parties. In extreme cases of absolute monopoly (such as electric power distribution), states often directly control prices. In markets where competition is possible but not as strong as it could be, governments often adopt policies intended to remove barriers to competition.

4. Information asymmetry. Information asymmetry occurs when one party to a transaction possesses significant information that would materially affect the other party's decision, but the information is concealed from or costly to convey to the other party. The classic asymmetric information problem occurs when it is difficult or impossible for consumers to assess the quality of a service. In severe cases, consumers may not be able to ascertain the quality of a good or service regardless of the time elapsed after the purchase.[23] Such goods or services are called credence goods.[24] For example, a plaintiff who loses his case in court may not be able to determine whether his loss was due to the poor quality of his lawyer or the lack of evidence in his case. Because consumers have trouble assessing the quality of the service,

[23] Ibid.
[24] Frank Adams III, Robert Ekelund, and John Jackson, "Occupational Licensing of a Credence Good: The Regulation of Midwifery," *Southern Economic Journal* 69, no. 3 (January 2003): 659–75.

providers of such services may have little incentive to maintain or improve the quality of their services, causing failure of "the market for 'high' quality services."[25]

The medical field contains some frequently cited instances. Doctors, for example, must all charge similar fees, reflecting the average doctor's quality, due to patients' difficulty in differentiating between the high- and low-quality physicians.[26] However, existing (or potential) high-quality physicians exit (or do not enter) the medical field because the depressed fees mean they can find better opportunities in other fields. As a result, consumers' choices are restricted to only the lower-quality physicians. Licensing is claimed to alleviate the informational asymmetry in such markets through minimum quality standards. These improved standards in turn increase wages and encourage the high-quality tier of suppliers to remain in (or to enter) the market.[27]

Even when licensing ensures high quality, information asymmetry can lead to conflicts of interest when professionals are both diagnosticians and treatment specialists. They then might have an incentive to bias their diagnosis to require certain treatments or more of the same treatment where none or less is actually needed.[28] Some markets are more susceptible to conflicts of interest:

- *Markets with third-party payers.* For example, individuals who have health insurance have less incentive to question the physician's diagnosis and suggested treatment since the insurer pays most of the bill.[29]

[25] Cox and Foster, *Costs and Benefits of Occupational Regulation*, 6.
[26] Hayne Leland, "Quacks, Lemons, and Licensing: A Theory of Minimum Quality Standards," *Journal of Political Economy* 87, no. 6 (December 1979): 1328–46.
[27] Ibid.
[28] Cox and Foster, *Costs and Benefits of Occupational Regulation*.
[29] Ibid.

- *Markets in which compensation for services is based on hours worked or amount of service provided.* Providers, in such cases, have an incentive to claim that additional work was needed when in fact it was unnecessary.[30]
- *Markets where the type of service provided is intricate and requires specialized knowledge that the consumers do not possess.* As a result, providers have more incentive to claim that certain services are necessary, since consumers do not know whether the service is necessary.[31]

Some markets, such as health care, may suffer from all three incentive problems.[32] Governments often step in with regulations that seek to curtail these conflicts.

Government failure. Governments can also fail to effectively or efficiently serve their citizens for several well-defined reasons detailed below. In some cases, regulations arise to correct prior government failures. In all cases, government failure is an unintended consequence that should be considered when analyzing regulatory approaches in order to create an accurate assessment of a regulation's likely effects. As one leading textbook on regulatory economics notes,

> In much the same way as markets may fail because some of the idealized assumptions fail to hold, the government too may fail. Our task is not always to replace a situation of market failure with government action, for governmental intervention may not yield a superior outcome. We should always assess whether the particular kinds of intervention that have been chosen will actually enhance market performance and improve our welfare to as great an extent as possible.[33]

1. Special interest capture. A common form of government failure is special interest capture, which occurs when particular interest groups use regulation to redistribute wealth to

[30] Ibid.
[31] Ibid.
[32] Ibid.
[33] W. Kip Viscusi, Joseph E. Harrington Jr., and John M. Vernon, *Economics of Regulation and Antitrust*, 4th ed. (Cambridge, MA: MIT Press, 2005), 10.

themselves. For example, government restraints on competition via licensing or "certificates of public convenience and necessity" can create monopolies or cartels, allowing businesses to raise prices to consumers. Current practitioners in an occupation may seek licensing to exclude competition and thus increase their compensation.[34] The practitioners lobby politicians in their state to impose licensing restrictions; the politicians provide and enforce licensing restrictions in exchange for political support and increased revenue through license fees.[35] Economists and political scientists have demonstrated that government-dispensed privileges (such as protection from competition via regulation) are more likely to occur when regulation confers benefits on a well-organized interest group while spreading the cost across all of society.[36] Regulation is just one in a long list of tools that governments can use to favor some groups and disfavor others.[37]

2. Problems created by prior regulation. Another form of government failure occurs when prior regulations actually inhibit efficiency or undermine other social goals. These failures may occur because the regulations were poorly designed to begin with, or because circumstances have changed and the old regulations have become outmoded. For example, during the past several decades, many states have moved from strict rate-of-return regulation for electric utilities to more flexible forms of "incentive" regulation that allow the utilities to profit when they find ways to cut costs, introduce new services, or innovate in other ways. This change arguably

[34] Dick Carpenter II and John Ross, "Designing Cartels through Censorship," *Regulation* (Summer 2008): 14–18; Morris Kleiner, "A License for Protection," *Regulation* (Fall 2006): 17–21; Sherman, *Miami's Vice*; Dick Carpenter II et al., *License to Work: A National Study of Burdens from Occupational Licensing* (Arlington, VA: Institute for Justice, May 2012), http://www.ij.org/LicenseToWork; Frank Adams III, John Jackson, and Robert Ekelund, "Occupational Licensing in a 'Competitive' Labor Market: The Case of Cosmetology," *Journal of Labor Research* 23, no. 2 (Spring 2002): 261–78; Adams, Ekelund, and Jackson, "Occupational Licensing of a Credence Good."
[35] Kleiner, "A License for Protection"; Carpenter and Ross, "Designing Cartels through Censorship"; Adams, Ekelund, and Jackson, "Occupational Licensing of a Credence Good"; Adams, Jackson, and Ekelund, "Occupational Licensing in a 'Competitive' Labor Market."
[36] George J. Stigler, "The Theory of Economic Regulation," *Bell Journal of Economics and Management Science* 2 (Spring 1971): 3–21.
[37] Matthew Mitchell, "The Pathology of Privilege: The Economic Consequences of Government Favoritism," Mercatus Research (Arlington, VA: Mercatus Center at George Mason University, July 2012).

reflects economists' and decision makers' improved understanding of how strict rate-of-return regulation undermined incentives for innovation.[38]

3. Administrative efficiency. Finally, sometimes regulations establish the government's own operating procedures and processes that affect the cost or quality of service to the public. When decision makers discover new, more efficient ways of running government agencies, they may need to change regulations to implement these improvements. For example, several recent federal regulations have done away with provisions that required regulated entities to send hard copies of compliance-related paperwork to regulators, instead allowing the electronic submission of such forms. On the state level, online driver's license and auto registration renewals are two examples.

Overriding social need. A final type of problem that may justify regulation is an overriding social need that often reflects some value other than efficiency. This kind of regulation may simply involve redistribution, as in the case of low-priced "lifeline rates" for basic telephone service. Lifeline rates for basic communications primarily reflect a social consensus that all households should have affordable access to basic communications. Alternatively, this type of regulation may secure a fundamental right—by prohibiting racial discrimination, for example.

These three distinct categories of problems—market failure, government failure, and overriding social need—are helpful for understanding the different incentives that underlie the problems governments seek to solve via regulation. In reality, a particular regulation might involve a blend of two or three of these factors. For example, occupational licensing may occur where genuine information asymmetries exist, but the primary political force in favor of licensing may be the licensed professions themselves. As a result, even "business-friendly"

[38] Viscusi, Harrington, and Vernon, *Economics of Regulation and Antitrust*, 430–42.

regulation may be more restrictive than necessary due to the influence of the regulated professions that benefit from the restriction on competition. Sound economic analysis of regulation can discover its less obvious effects on consumers and society as a whole, as opposed to the more obvious effects pointed out by organized interest groups.

Step 2: Assess Evidence That the Problem Is Real and Significant

A coherent theory explaining the incentives that may have caused a problem is just the first step in analyzing the problem. A theory may or may not describe reality. For this reason, it is necessary to have systematic evidence that the theory is correct—in other words, evidence that the problem is real, widespread, and substantial.

A well-known saying in national and state capitals is, "One anecdote makes a regulation; two anecdotes make a law." But anecdotes—that is, stories about one individual's misfortune—do not prove that a problem is real, widespread, or substantial. Anecdotes provide concrete examples that may help us understand the problem. They also get the emotional juices flowing and build support for government to do something. But more evidence is necessary to show that there is a systemic problem that requires a change in the rules of the game as a remedy.

Licensing of interior designers is one example of a regulation that lacks empirical evidence of a systemic problem. Only four states license interior designers: Alabama, Florida, Louisiana, and Nevada. The intensity of the requirements necessary to obtain a license, however, led the Institute for Justice to rank interior design as the most burdensome occupation in the nation to enter.[39] Advocates of licensing claim that it is necessary because "the unlicensed

[39] For the complete ranking of the 102 licensed occupations by average burden, see Carpenter et al., *License to Work*, 12–13.

practice of interior design threatens public health and safely."[40] The market failure rationale behind occupational licensing is to prevent public harm and promote consumer health and safety by improving service quality—a task the market is said to fail at due to asymmetric information.[41]

But in the case of interior designers, the market failure rationale is no more than an unsupported theory. Different state agencies have researched the subject of public harm caused by unregulated interior designers. No data demonstrating public harm were available from the Better Business Bureau, law enforcement agencies, other states, or the American Society for Interior Design (ASID), a trade organization that supports licensing.[42] The failure of even the ASID to provide evidence of public harm justifying the need for legislation casts doubt on whether such regulations are based on consumer protection. In fact, the governors of Indiana, New York, Colorado, California, New Jersey, and Ohio vetoed interior design regulations due to lack of evidence of public harm in the absence of the proposed regulation.[43] When Governor Mitch Daniels vetoed a bill that would have regulated interior designers in Indiana, he commented, "The marketplace serves as an effective check on poor performance; designers doing inadequate work are more likely to be penalized by negative customer reaction than by a government agency trying to enforce arbitrary and subjective qualification standards."[44]

Types of empirical studies. A reliable study of the systemic problem should cover a representative sample of the people or firms that could be subject to the regulation. It also needs

[40] Carpenter and Ross, "Designing Cartels through Censorship," 16.
[41] Leland, "Quacks, Lemons, and Licensing"; Adams, Jackson, and Ekelund, "Occupational Licensing in a 'Competitive' Labor Market"; Adams, Ekelund, and Jackson, "Occupational Licensing of a Credence Good."
[42] Carpenter and Ross, "Designing Cartels through Censorship."
[43] Ibid.
[44] Mitchell E. Daniels Jr., *Senate Enrolled Act No. 490 Veto* (Indianapolis: May 3, 2007), http://www.in.gov/gov/files/SEA_490_Veto_Message.pdf.

to control for other factors so that it is clear how much of the outcome can be attributed to the regulation or other policy. Four major types of empirical studies are randomized control trials, statistically controlled studies, before and after comparisons, and case studies. Each can be valuable if the reader understands its strengths and weaknesses.

1. Randomized control studies. The "gold standard" for evidence in policy research is randomized trial studies that have "treatment" and "control" groups. Such a study might randomly assign firms or customers to groups whose transactions are subject to price controls or occupational licensing, then observe the prices and quality of service received by each group.

In many cases relevant to regulation, randomized trial studies are not available—either because policymakers have decided that everyone must be subject to the same policy, or because the exemptions from the policy are not random.

2. Statistically controlled studies. The next most reliable type of study is one that statistically controls for other factors that might affect the results. One major advantage state decision makers have is that the other states provide an extensive laboratory to test different theories about the nature of systemic problems regulations might solve. Therefore, data are often available for studies that control statistically for other factors.

3. Before-and-after studies. Observers often seek to understand the effects of a policy simply by looking at prices, quality, or other outcomes before and after a regulation was implemented. This method may not be a reliable guide to the policy's effects, because some of the price or quality changes may have been caused by other factors that also changed. Before-and-after comparisons may be valid when the analyst is reasonably sure that no other major factors have changed at the same time. Such studies are called "natural experiments." For example, one study found that the elimination of Rhode Island's ban on liquor advertising

reduced the prices of advertised items.[45] Another found that Virginia's legalization of direct-to-consumer wine shipment from out-of-state sellers narrowed the price spread between online prices and prices charged in brick-and-mortar stores.[46] In both cases, the authors made a plausible case that no other significant changes occurred that would explain the observed changes in price behavior.

4. Case studies. In-depth case studies can provide significant insight, but if the chosen case is not typical or widespread, it does no more than an anecdote to demonstrate the existence of a systemic problem. A high-quality case study provides an in-depth look at how a problem or policy affects the individuals or organizations who are the subjects of the study. Case studies can thus be invaluable tools that help decision makers understand the incentives that created a problem. But a case study cannot demonstrate that a problem is widespread or significant unless it is accompanied by evidence that the people or organizations studied are somehow representative or typical of the people or organizations affected by the problem and that the number of affected entities is significant.

Results of empirical studies. One way of assessing whether a market failure might exist is to examine the results of regulations that were intended to remedy market failures. Numerous studies have indirectly tested the information asymmetry theories by assessing how various restrictions associated with occupational licensing affect the quality of service. If the regulation increases the quality of service, then it might have remedied a market failure that caused underprovision of quality. If the regulation reduces the quality of service or leaves it unchanged, then either there

[45] Jeffrey Milyo and Joel Waldfogel, "The Effect of Advertising on Prices: Evidence in the Wake of 44 Liquormart," *American Economic Review* 89, no. 5 (Dec. 1999): 1081–96.
[46] Alan E. Wiseman and Jerry Ellig, "The Politics of Wine: Trade Barriers, Interest Groups, and the Commerce Clause," *Journal of Politics* 69, no. 3 (July 2007): 859–75.

was no market failure to begin with, or the regulation failed to effectively address whatever market failure existed. Such regulations may be examples of government failure.

Table 3 summarizes the results of empirical studies of the effects of occupational licensing on quality. Licensing sometimes improves quality, but more often than not, it diminishes quality or leaves it unchanged. These results do not mean that information asymmetry never creates market failures. Rather, they suggest either that such failures are rare or that licensing regulation is not an effective remedy.

Table 3. Empirical Studies of the Effects of Licensing on Quality of Service

Occupation	Type of licensing restriction	Effect on quality[(a)]	Source
Optometry	Commercial practice, advertising, & continuing education	Positive: Occupational restriction in optometry increased the quality of eye exams (measured in length and quantity of eye exams)	Feldman and Begun 1985
Pharmacy	Reciprocal licensing (allowing professionals licensed in other states to practice in reciprocating states)	Positive: Issuance of reciprocal license is positively correlated with quality.	Martin 1982
Repairmen	Licensing	Unclear: Licensing of repairmen does not reduce the unnecessary replacement of parts or charging for parts not actually replaced (parts fraud). Authors compared fraud complaints between Washington, DC (no license laws), New Orleans (license law), and San Francisco (registration laws). Parts fraud incidents were 20% in San Francisco compared to 50% in New Orleans and Washington, DC.	Phelan 1974

Occupation	Type of licensing restriction	Effect on quality[(a)]	Source
Electricians	Oral exams & prior occupational experience	Negative: States requiring an oral exam reduced the supply of electricians and reduced the quality of service received by consumers. More stringent entry requirements for electricians are correlated with an increase in the rate of death from accidental electrocution. Since more stringent licensing requirements are associated with an increase in price of services, customers switch to cheaper substitutes, in this case doing work themselves.	Carroll and Gaston 1981
Dentistry	Gold foil restoration in the exam & other restrictions	Positive: Entry requirements for licensing of dentists increase the quality of dental services. More stringent requirements (such as a completion of a gold foil restoration in the licensure exam) were associated with a lower rate of dental neglect (the ratio of untreated dental disease to total dental disease). Study does not estimate net benefits of licensure and makes no conclusion regarding consumer welfare.	Holen 1978
Accounting, optometry, pharmacy, physicians	Advertising, branch office restrictions, and trade name restrictions	Neutral: Quality of services is unaffected by business practice restrictions associated with licensing.	Young 1987; Paul 1984; Bond 1980; Cady 1976
Laboratory personnel	Licensing	Neutral: Restrictions on the use of professionals in clinical labs do not affect the quality of services received by consumers.	Healey 1973
Legal	Advertising	Negative: Quality of services decreases with increasing licensing or business practice restrictions associated with licensing.	Muris and McChesney 1978
Optometry	Advertising	Negative: The average quality of eye care is lower in regions with advertising restrictions.	Kwoka 1984
Barbers	Licensing	Neutral: Licensing barbers has little impact on the number of entrants into the occupation.	Thornton 1979
Teachers	Licensing	Uncertain: Licensing teachers had no impact on wages and uncertain effects on quality (measured in student achievement scores). Licensing was found to reduce SAT scores, raise ACT scores, and increase graduation rates.[(b)]	Kleiner and Petree 1988
Teachers	Education requirement	Negative: States in which a master's degree is required for certification have 8-point lower verbal scores and 6-point lower math scores on SATs.	Berger and Toma 1994

Occupation	Type of licensing restriction	Effect on quality[(a)]	Source
Teachers	Exam and experience requirements	Mixed: States that require teachers to pass a national teacher exam, acquire field experience before teaching students, and complete a certain number of full-time weeks before receiving a license have no effect on student achievement. Students of teachers with standard certification in states requiring an exam prior to licensure receive lower math scores on their 12th grade standardized exam than students of teachers in states not having this requirement.	Goldhaber and Brewer 2000
Teachers	Testing requirement	Neutral: No evidence that testing requirements affect the quality of teachers as measured by students' average SAT scores.	Angrist and Guryan 2008
Child care	Classroom, education, and experience requirements	Neutral: Stricter child care regulations in terms of staff–child ratio and group size mandates and increased educational and experience requirements have no effect on quality of childcare received as measured by the Early Childhood Environment Rating Scale and the Infant/Toddler Environment Rating Scale.	Blau 2007
Dentistry	Licensing	Neutral: More stringent licensing requirements for dentists have no effect on the quality of output. Dentists in the most regulated states earn 12% higher wages than those in less regulated states.	Kleiner and Kudrle 2000

(a) The labels neutral, negative, and positive reflect the effect of occupational licensing only on the quality of the licensed service and not the effect of occupational licensing on overall economic welfare.
(b) Richard B. Freeman and Casey Ichniowski, *When Public Sector Workers Unionize* (Chicago: University of Chicago Press, 1988).

Sources: See the list of references at the end of this paper.

Theories of government failure can also be tested with empirical evidence. Several studies have sought to determine whether licensing results from market failure or from government failure. If licensing alleviates information asymmetry and significantly increases the quality of the licensed service, consumers should be expected to buy more of the service even though the price is higher.[47] If consumers buy more even though the price is higher, we can presume licensing made many consumers better off despite the price increase.[48] If licensing

[47] Adams, Ekelund, and Jackson, "Occupational Licensing of a Credence Good."
[48] Consumers who would prefer lower quality combined with lower prices might still be worse off.

stems from government failure—capture by the regulated profession—its main effect is to increase the costs of entry into an occupation, decrease the supply, and thus increase consumer costs. In this case, consumers should be expected to buy less of the service.[49]

Adams III, Jackson, and Ekelund test these two hypotheses in the cases of occupational licensing of cosmetology and midwifery.[50] They estimate that for certified nurse-midwives, reducing regulatory constraints from the average level to a minimal level will "increase the percentage of CNM [certified nurse-midwife] births from approximately 5.76% to 11.12% of all births in the 50 states."[51] In addition, they calculate that certified nurse-midwives and consumers lose about $184 million annually due to regulations that exceed the minimum level.[52] For cosmetology services, they estimate that regulation above the minimal level reduces the number of beauty shop visits per capita per year by 14 percent.[53] These two types of regulations reduce the quantity of the regulated service sold. Thus, it appears that these two types of regulations more likely represent government failure than a correction of market failure.

Step 3: Assess Uncertainty about the Size and Significance of the Problem

Because theories can be mistaken, it is also crucial to assess the strength of the evidence, to consider evidence that the theory might be wrong, and to assess any uncertainties about the likelihood or size of the problem.

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[49] Adams, Ekelund, and Jackson, "Occupational Licensing of a Credence Good."
[50] Ibid.; Adams, Jackson, and Ekelund, "Occupational Licensing in a 'Competitive' Labor Market."
[51] The literature does not directly test for the existence of a market failure prior to occupational licensing, and therefore the authors infer whether a market failure exists by studying the effects of occupational licensing. Quantity is used as a proxy for quality in general; if quantity and price both increase, we can infer that quality must have increased, because consumers receive an improvement in quality that more than outweighs the price increase. Birth complications are a quality factor, so if the quantity of CNM births increases (or decreases), then that is taken to mean that quality has increased (or decreased), including birth complications and other related quality factors. See Adams, Ekelund, and Jackson, "Occupational Licensing of a Credence Good," 673.
[52] Adams, Jackson, and Ekelund, "Occupational Licensing in a 'Competitive' Labor Market," 272.
[53] Ibid., 272–73.

Consider, for example, the studies of optometry licensing listed in Table 2. One study finds a positive effect on service quality, whereas others find neutral or negative effects. These findings have different implications for whether regulation remedies a market failure. A responsible regulatory analysis would take all of the studies into account, not just cite the study or studies that help make the case for regulation or deregulation. Moreover, a responsible analysis would consider the quality of each study, giving more weight to those that are more carefully conducted, and properly control for other factors that affect the result.

III. Analyze Alternatives

If a problem can be successfully identified, the next step involves searching for a potential solution. In some cases, the best solution may involve regulatory intervention, while in other cases, intervention may actually cause more harm than good. A careful analysis of alternatives—that is, of different approaches to dealing with the problem—can help regulators pick the best option.

Step 1: Understand the Baseline

The relevant baseline for studying regulation is a projection of what is likely to happen in the future in the absence of new regulation. The baseline is important for two reasons. First, an accurate baseline helps establish whether a systemic problem that exists today is likely to exist in the future. If the problem will likely disappear or shrink in the absence of new regulation, then regulation may do more harm than good. Second, assuming the problem will not go away without intervention, the baseline is critical for accurately projecting the results that can be attributed to a proposed regulation, rather than other factors that might change in the future.

The baseline is not necessarily the same as what happened last year or last decade, unless the analyst has demonstrated that the future will be unchanged from the past. Over time, people and organizations often develop their own solutions to market failures. For example, a wide variety of private solutions has developed to mitigate information asymmetries and conflicts of interest:

- Labeling and advertising allow sellers to differentiate their goods by communicating information to consumers on a label and to charge different prices accordingly. If consumers can judge the quality of a good or service after the fact or observe some attribute that is correlated with quality, sellers offering high quality can profit by communicating that information to consumers.[54] The credibility of the sellers' claims is also subject to the rule of law; false advertising is punished and thus deterred.[55]
- Certification, like advertising, communicates information to consumers. Unlike advertising, it requires a third party to guarantee the credibility of the information. Thus, certification depends on the credibility of the third party rather than that of the advertiser.[56]
- Reputation applies to repeated interactions with customers of noncredence goods.[57] When the quality of a good or service can be determined after the purchase and when a sale is not a one-time sale, sellers have an incentive to build a reputation for good quality.[58]
- Internet research by consumers is helping to alleviate asymmetric information, especially in markets where the problem is severe. According to a study of the used car

[54] Sanford J. Grossman, "The Informational Role of Warranties and Private Disclosure About Product Quality," *Journal of Law and Economics* 24, no. 3 (December 1981): 461–83.
[55] Diego d'Andria, "The Economics of Professional Services: Lemon Markets, Credence Goods, and C2C Information Sharing," *Service Business* (April 8, 2012), http://www.springerlink.com/index/10.1007/s11628-012-0143-0.
[56] Ibid.
[57] The quality of credence goods, unlike experience and inspection goods, cannot be determined regardless of experience time.
[58] d'Andria, "The Economics of Professional Services."

> market conducted by Vandana Ramachandran, multisource information collected over the Internet is helping to bridge the gap between consumers and producers. Such information is influencing consumers' choices of online and offline purchases; at the same time, producers are also using the type of information searched for by consumers to learn more about buyers, their preferences, and how can they signal quality to those buyers. As a result, many producers voluntarily choose certification as the method to signal quality to customers.[59]

A careful regulatory analysis will consider whether such solutions exist or are likely to develop in the future for the particular problem the regulation seeks to address.

To assess a regulation's effects, the relevant baseline should identify what would have happened in the absence of the new regulation *and the specific provision of law requiring or authorizing the new regulation*. If analysts assume that the law requiring or authorizing the new regulation is part of the baseline, they will ignore many of the regulation's most significant effects. Assuming the new law is part of the baseline means that analysts will only identify the effects of decisions over which the regulatory agency has discretion.

Step 2: Consider a Broad Range of Alternatives

The range of possible alternatives includes several different dimensions. The most fundamentally different alternatives are whether to adopt a new regulation or not. The latter course may be preferred if the baseline analysis indicates that the problem is likely to diminish in the absence of new regulation.

[59] Vandana Ramachandran, "Understanding Consumers' Online Information Retrieval and Search: Implications for Firm Strategies" (dissertation, University of Maryland, College Park, 2010), http://search.proquest.com.mutex.gmu.edu/docview/762212478?accountid=14541.

Some alternatives may involve additional government action even if they do not involve restrictive new regulations. For example, the regulatory analysis might reveal that private action could largely mitigate the problem if only the state took steps to facilitate or remove barriers to the action. Or perhaps some form of information provision or disclosure would give people sufficient information to solve the problem on their own. Alternatively, the regulator might opt for a "nudge" strategy to require individuals or businesses to explicitly consider certain types of information before making a decision, but refrain from compelling any particular decision.

Three alternatives to occupational licensing—registration, certification, and titling—illustrate some of these diverse approaches:

- Registration is the least restrictive form of occupational regulation. New entrants must register their information and qualifications with a government agency before starting their new occupation. Registration generally requires the payment of a fee or the filing of a bond.[60]
- Certification is more restrictive than registration but less severe than titling. A government agency (or in fewer cases a nonprofit agency) administers a certification test, which, upon its successful completion, certifies that a member of an occupation possesses a certain level of knowledge or other requirements.[61] Certification provides consumers with information about the provider's qualifications, and to the extent that consumers value the qualifications, certification creates an incentive for providers to acquire the qualifications in order to pass the test. Uncertified providers are free to offer their services, but consumers are likely to perceive certified providers as higher quality.

[60] Kleiner, "A License for Protection."
[61] Ibid.

- Titling laws are also more restrictive than registration, as they prohibit individuals from using the title associated with a certain profession without prior governmental approval.[62] Titling and certification are sometimes used interchangeably; however, the two terms are different. For example, an individual who can perform all the tasks associated with being an "interior designer" but who does not have governmental approval may not, under titling laws, use the label "interior designer" to advertise his services and must instead resort to labeling himself an "interior decorator."[63] Compared to certification, the exclusive use of a title may create a clearer signal to customers (and give a stronger incentive for providers to obtain government approval to use the title). But providers are still free to offer their services without using the title.

To illustrate the differences between alternatives to occupational licensing, consider the following example. Medical doctors must be licensed in order to practice medicine in a particular state. They must also register with their state every few years to keep their licenses current. While requirements for licensure differ from state to state, they generally include proof of education, continued education (a certain number of hours per year in attending medical conferences, subject to random auditing), and good medical standing (e.g., absence of medical malpractice cases). Medical doctors can then continue their education to receive a specialized degree, such as internal medicine, and further decide to become board certified in internal medicine, which requires taking an exam every few years. This certification is optional, however, and generally depends on the rules and standards set by the hospitals or other organizations where the doctors work. If no such standards are set, a medical doctor may choose not to become (or continue to be) board certified and still practice as a doctor of internal

[62] Carpenter and Ross, "Designing Cartels through Censorship."
[63] Ibid., 15.

medicine as long as he is still licensed to practice medicine in his state. A titling law would require doctors of internal medicine to be board certified if they wanted to claim that they are doctors of internal medicine.

Just because a regulatory solution may be appropriate does not mean that regulation at any level of government will do. Analysts developing alternatives should consider whether the agency issuing the regulation is really the best state agency to tackle the problem; whether a potential regulation is redundant with or overlaps other state, federal, or local regulations; or whether local regulation might be a more appropriate response.

Even overtly regulatory solutions can take a wide variety of forms:

- mandates or prohibitions of specific technologies or activities
- performance standards accompanied by flexibility in how to meet them
- creation of economic incentives, such as marketable permits
- explicit taxes, fees, or subsidies to encourage or discourage certain behaviors

Within a particular regulatory approach, there may also be room for smaller tweaks that could have a big impact on effectiveness or cost:

- different degrees of stringency
- different compliance dates
- different requirements by region
- different requirements based on firm size
- different monitoring and reporting requirements

Not every regulatory analysis will consider all of these options. But when analysts develop alternatives, they should consider whether alternatives in any of these categories might be worth fleshing out.

Step 3: Assess How Effectively the Alternatives Would Produce the Desired Outcome(s)

A thorough regulatory analysis includes not just a list or cursory discussion of alternatives, but also a fact-based assessment of how effectively each alternative would produce the outcomes the public cares about.

Step 4: Identify Which Alternatives Would Require Additional Changes in Law before They Could Be Implemented

Legislatures delegate rulemaking to expert agencies because legislators often lack the time and expertise to craft optimal rules. To fulfill their roles effectively, regulatory agencies owe the legislature a frank assessment of alternatives that are possible—not just of alternatives that are currently authorized under existing law. Only then can legislators make fully informed decisions based on the merits of alternative approaches. For this reason, a thorough regulatory analysis includes alternatives that may require a change in existing law, if the evidence suggests that these alternatives might accomplish the legislature's goals more effectively or at lower cost.

IV. Conclusion

Although they are often hidden to the casual observer, regulations seem likely to continue to be the primary vehicle of government intervention in individual and business actions. This paper has suggested two simple reforms to the regulatory process in Florida that could help ensure that new regulations do not inhibit, or perhaps even improve, Florida's attractiveness to individuals and businesses. First, prior to crafting a regulation, regulators in Florida should determine whether a systemic problem exists—as opposed to mere anecdotal evidence of a problem—and identify the causes of the problem. If the motivation for the regulation is an anecdote or two but

no widespread problem actually exists, then a regulation is more likely to do harm than good. Second, when the causes of a systemic problem have been identified, regulators should thoroughly consider alternative solutions before settling on a course of action.

While it may seem self-evident that the process of designing a regulation should begin with an understanding of the problem the regulation is supposed to address, researchers have recently shown that this step is not often performed or documented adequately, at least at the federal level.[64] It is important to understand the problem—if there is one—for a couple of reasons. First, if evidence shows that no systemic problem exists, then the best choice is likely to be to take no action at all. Regulations created despite the absence of a market failure or other systemic problem have little chance of achieving beneficial outcomes, but they will create costs and distortions in the economy. Second, if a systemic problem does exist, analysis of the problem allows regulators to tailor an effective solution. The logic here is simple: a thorough understanding of the problem's causes can help produce an intervention that is likely to eliminate the problem. This situation can be heuristically compared to the diagnosis and treatment of an illness in a person. Imagine a patient showing up for an appointment at his doctor's office, only to be given a prescription for antibiotics by the receptionist without even receiving an examination. Antibiotics are indeed good for treating many problems, but they could actually cause harm if, for example, the patient is suffering from pain caused by arthritis rather than a bacterial infection. If the doctor actually examines the patient and considers the problem's likely cause, she is more likely to prescribe an effective treatment instead of throwing out a standard intervention in the hope that, because it worked in other cases, it will work again here.

[64] Jerry Ellig and Patrick A. McLaughlin, "The Quality and Use of Regulatory Analysis in 2008," *Risk Analysis* 32, no. 5 (May 2012): 855–880; Jerry Ellig, John Morrall III, and Patrick A. McLaughlin, "Continuity, Change, and Priorities: The Quality and Use of Regulatory Analysis Across U.S. Administrations," *Regulation and Governance* 7, no. 2 (June 2013): 153–73.

It is similarly important for regulators to consider a wide range of alternative solutions before settling on a course of action. If they do not, how can they be certain that they have chosen the option that best addresses the problem, or that does so at the lowest cost? The consideration of various solutions should be a basic step in the regulatory process, as it is in other problem-solving activities.

In addition to helping regulators decide on the best course of action, these steps have the further benefit of creating greater transparency and actionable information for legislators and the public. Sometimes legislation requires regulatory agencies to fix a perceived problem, but upon closer examination, the problem was anecdotal rather than systemic. If this problem were reported back to the legislature prior to the agency taking action, then legislators would have a chance to modify or repeal the statute before regulation could harm the economy. Legislators could, of course, opt not to, but they would then have to explain to voters why they made such a choice despite a regulatory agency's analysis stating that there was no systemic problem. Other instances of regulation may not stem from new legislation, but analyzing whether a systemic problem exists and considering alternatives would still produce information that the legislature and public could act upon, in addition to improving the regulatory agencies' decision making process.

These proposals are modest steps and hardly offer a comprehensive list of the regulatory reform efforts that Florida could undertake. Despite their modesty, these reforms are necessary to the creation of a smart regulatory process, and they offer a low-risk, high-benefit starting point. In addition to these reforms, Florida's government could later decide whether to pursue further regulatory reform efforts, such as modifying how agencies perform benefit–cost analysis and examining the incentives of analysts who produce those analyses. However, the first steps

toward achieving a regulatory process that enhances Florida's competitiveness and economic efficiency are perhaps more easily taken if their utility is obvious to everyone. Anyone who has ever tried to solve a complex problem can likely recognize that examining the problem and evaluating a range of possible solutions can only help achieve a better outcome.

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