

CALIFORNIA OCCUPATIONAL LICENSING: BARRIERS TO OPPORTUNITY IN THE GOLDEN STATE

Matthew D. Mitchell, PhD

Director and Senior Research Fellow, Equity Initiative, Mercatus Center at George Mason University

Senate Select Committee on Aerospace and Defense
Senate Standing Committee on Business, Professions, and Economic Development

August 13, 2019

Chair Allen, Chair Glazer, and distinguished members of the Senate Select Committee on Aerospace and Defense and the Senate Standing Committee on Business, Professions, and Economic Development:

My name is Matthew Mitchell. I am an economist and a senior research fellow at the Mercatus Center at George Mason University, where I direct the Equity Initiative. Mercatus scholars working on the Equity Initiative study public policies that favor particular firms, industries, or occupations. In recent years, my colleagues and I have been studying occupational licensing laws, and I am grateful for the opportunity to discuss our findings with you.

Attached is a report that my colleagues and I submitted to the Federal Trade Commission, “The Effects of Occupational Licensure on Competition, Consumers, and the Workforce.” The report details the now-voluminous economic literature on the deleterious effects of occupational licensure and suggests a blueprint for reform.

In my testimony, I wish to focus on three points:

1. Licensing is a substantial barrier to employment, particularly for certain populations such as lower-income Americans or the spouses of active-duty military personnel.
2. Licensing does little to enhance either consumer safety or the quality of services; it does, however, increase prices for consumers.
3. Successful reform is difficult, but not impossible. Policymakers must be able to cast conspicuous votes in the general interest while special interest power must be limited.

LICENSURE IS A SUBSTANTIAL BARRIER TO EMPLOYMENT, ESPECIALLY FOR CERTAIN POPULATIONS

Licensing represents a significant and growing barrier to work. Nationally, the share of the workforce that is required to have an occupational license has increased more than fourfold in the past 50 years. As of 2015, more than one in five working Californians—20.7 percent of the state’s workforce—was required to be licensed.¹ As licensing burdens have increased nationwide, they seem to have depressed interstate migration of those in licensed professions. Economists Janna Johnson and Morris Kleiner estimate that

¹ Morris M. Kleiner, *Reforming Occupational Licensing Policies* (Washington, DC: The Hamilton Project at the Brookings Institution, March 2015), 9.

between-state migration of those who are licensed is 36 percent lower than that of members of other professions.² And in separate research, Kleiner and Evgeny Vorotnikov estimate that licensure may cost between 1.8 and 1.9 million jobs, result in between \$6.2 billion and \$7.1 billion in lost output, and create a misallocation of resources that costs the economy between \$183.9 and \$197.3 billion each year.³ In California alone, they estimate that licensure has eliminated almost 196,000 jobs, has resulted in \$840.4 million in lost annual output, and has created a \$22.1 billion annual misallocation of resources. By their estimates, California’s licensing regime is costlier than that of any other state in the nation.

Aspiring entrants to a large number of professions—ranging from travel guide and door repair contractor to cosmetologist—are now required by the state of California to obtain a government-issued license to work. It can take months and hundreds or even thousands of dollars to obtain these licenses. Among 76 low- to moderate-income occupations licensed by California, the average aspiring worker is required to spend 827 days in training and pay \$486 in fees before he or she may obtain a license.⁴ This does not count either the cost of the education or the income that people forgo when they spend months in often-unnecessary training. According to the Institute for Justice, California’s licensing laws are the most broad and onerous in the country.

Licensure is often arbitrary. As shown in table 1, licensing requirements often don’t match the risk posed to the public by certain professions. Compared with emergency medical technicians, aspiring cosmetologists in California must undergo *10 times* as many months of training; would-be animal trainers (who are unlicensed in 41 states) must complete more than *30 times* as much training; and commercial door repair contractors (unlicensed in 26 states) must complete more than *39 times* as much training.

TABLE 1. OCCUPATIONAL TRAINING MISMATCHES IN CALIFORNIA

Occupation	States That License This Profession	Fees	Days of Education/Experience
Commercial drywall installation contractor	25	\$579	1,460
Commercial floor sander contractor	22	\$579	1,460
Commercial painting contractor	22	\$579	1,460
Residential painting contractor	28	\$579	1,460
Commercial door repair contractor	24	\$579	1,460
Tree trimmer	7	\$529	1,460
Animal trainer	9	\$250	1,095
Psychiatric technician	5	\$349	357
Cosmetologist	51	\$125	373
Emergency medical technician	51	\$129	37

Source: Dick M. Carpenter II et al., *License to Work: A National Study of Burdens from Occupational Licensing*, 2nd ed. (Arlington, VA: Institute for Justice, November 14, 2017), 52–3.

² Janna E. Johnson and Morris M. Kleiner, “Is Occupational Licensing a Barrier to Interstate Migration?,” (NBER Working Paper No. 24107, National Bureau of Economic Research, Cambridge, MA, December 2017).

³ Morris M. Kleiner and Evgeny S. Vorotnikov, *At What Cost? State and National Estimates of the Economic Costs of Occupational Licensing* (Arlington, VA: Institute for Justice, November 2018), 5.

⁴ Dick M. Carpenter II et al., *License to Work: A National Study of Burdens from Occupational Licensing*, 2nd ed. (Arlington, VA: Institute for Justice, November 14, 2017), 52.

Licensing boards are often dominated by members of the professions they oversee. About half of California occupational licensure boards are required by law to have a majority of their members work in the professions they oversee.⁵ See table 2 for board composition data in a sample of California boards. Owing to vacancies or a lack of specificity, some boards may be composed entirely of industry insiders, while on other boards, industry insiders have a governing majority. This presents a legal concern in light of the US Supreme Court’s decision in *North Carolina State Board of Dental Examiners v. FTC*, which held that states may be liable for antitrust violations when boards are dominated by members of the professions they oversee and when elected officials fail to actively supervise these boards.⁶ It also creates a practical concern that boards will tend to act as industry cartels, controlling entry of new members rather than ensuring public safety.

TABLE 2. COMPOSITION OF SELECT CALIFORNIA BOARDS

Board or Council	Occupations Covered	Industry Members	Total Members	Percent Industry
Board of Accountancy ^a	Accountants	7	15	47%
Veterinary Medical Board ^b	Veterinarians, veterinary technicians	5	8	63%
Dental Assisting Council ^c	Dentists, dental hygienists, dental assistants	10	15	67%
Structural Pest Control Board ^d	Pest control professionals	unspecified	7	potentially 100%
Landscape Architects Technical Committee ^e	Landscape architects	unspecified	5	potentially 100%

^A Cal. Bus. & Prof. Code § 5000 (Lexis 2019).

^B Cal. Bus. & Prof. Code § 4800 (Lexis 2019).

^C Cal. Bus. & Prof. Code § 1601.1 (Lexis 2019).

^D Cal. Bus. & Prof. Code § 8520 (Lexis 2019).

^E Cal. Bus. & Prof. Code §§ 5620, 5510 (Lexis 2019).

Licensing reduces employment opportunities, especially among certain communities. High barriers to employment pose particular difficulties to lower-skilled, lower-educated populations, to immigrants, to those with criminal records, and to those who move frequently, such as military spouses. Eighty percent of the studies Mercatus scholars reviewed found that licensure has a disparate impact on minorities.⁷ Recent research suggests that barriers to entry are associated with greater income inequality and that licensure is negatively associated with absolute income mobility.⁸

Licensure presents an especially steep employment barrier for military spouses. About 35 percent of working military spouses are either licensed or certified.⁹ And compared with the broader population,

⁵ Rebecca Haw Allensworth, “Foxes at the Henhouse: Occupational Licensing Boards Up Close,” *California Law Review* 105, no. 6 (December 2017): 1609.

⁶ *North Carolina State Board of Dental Examiners v. Federal Trade Commission*, 135 S. Ct. 1101 (2015).

⁷ Patrick A. McLaughlin, Matthew D. Mitchell, and Anne Philpot, “The Effects of Occupational Licensure on Competition, Consumers, and the Workforce” (Mercatus on Policy, Mercatus Center at George Mason University, Arlington, VA, November 2017), 7.

⁸ On income inequality, see Patrick A. McLaughlin and Laura Stanley, “Regulation and Income Inequality: The Regressive Effects of Entry Regulations” (Mercatus Working Paper, Mercatus Center at George Mason University, Arlington, VA, 2016). On absolute income mobility, see Brian Meehan, Edward Timmons, and Andrew Meehan, *Barriers to Mobility: Understanding the Relationship between Growth in Occupational Licensing and Economic Mobility* (Washington, DC: Archbridge Institute, 2017).

⁹ US Department of the Treasury and US Department of Defense, *Supporting Our Military Families: Best Practices for Streamlining Occupational Licensing Across State Lines*, February 2012, 3.

military spouses are 10 times more likely to have moved across a state line in the past year.¹⁰ When military spouses were asked to name the biggest challenges to employment, 22 percent identified the inability to transfer their professional licenses from one state to another.¹¹ This helps to explain why, in 2017, the military spouse unemployment rate was 16 percent, nearly four times the national average.¹²

LICENSURE DOES NOT SEEM TO INCREASE QUALITY OR SAFETY, BUT IT DOES RAISE PRICES

There is little evidence that licensure increases either the quality of services or the public's safety.

Theoretically, licensure might increase quality if it acts as a well-designed screening system. On the other hand, it might decrease quality by limiting competition. Reviews of the academic literature by scholars at the Mercatus Center and by officials in the Obama administration suggest that the two effects roughly cancel each other out (though more studies find that licensure reduces quality than find that it enhances it).¹³

There is abundant evidence that licensure raises prices. Economic theory is unambiguous: supply restrictions such as licensure tend to raise prices. And the evidence supports this theory. A Mercatus assessment of 19 peer-reviewed studies found that licensure was associated with higher prices in all 19.¹⁴ Reviewing many of the same studies, Obama administration officials similarly concluded that the association between licensing and higher prices is “unequivocal.”¹⁵

SUCCESSFUL REFORM IS DIFFICULT BUT NOT IMPOSSIBLE

Licensing reform efforts are difficult to implement successfully. The consumers and the aspiring professionals who suffer from anticompetitive licensing regimes are numerous and typically politically unorganized. On the other hand, the industry insiders who benefit from these regimes are comparatively few in number and typically well organized. Economists and political scientists have long blamed this pattern of diffuse costs and concentrated benefits for the persistence of inefficient and inequitable policy.¹⁶ And this pattern has made licensing reform an uphill battle, even though experts across the political spectrum tend to agree that current licensing laws are inefficient and anticompetitive.

Drawing lessons from successful reform. Despite the advantages enjoyed by special interests, history affords a number of examples in which the general interest has prevailed.¹⁷ In areas as varied as trade, race-based policies, and airline policy, special interests have occasionally lost their privileges while general and diffuse interests have benefitted from a more level and open playing field.

¹⁰ US Department of the Treasury and US Department of Defense, *Supporting Our Military Families*.

¹¹ US Chamber of Commerce Foundation, *Military Spouses in the Workplace: Understanding the Impacts of Spouse Unemployment on Military Recruitment, Retention, and Readiness*, June 2017, 10.

¹² US Chamber of Commerce Foundation, *Military Spouses in the Workplace*, 7. There are other explanations too. For example, 41 percent of military spouses believe that employers are reluctant to hire workers who might move.

¹³ US Department of the Treasury, Council of Economic Advisers, and US Department of Labor, *Occupational Licensing: A Framework for Policymakers*, July 2015, 13; McLaughlin, Mitchell, and Philpot, “The Effects of Occupational Licensure,” 4.

¹⁴ McLaughlin, Mitchell, and Philpot, 5.

¹⁵ Department of the Treasury et al., *Occupational Licensing: A Framework*, 14.

¹⁶ See, for example, Mancur Olson, *The Logic of Collective Action: Public Goods and the Theory of Groups, Second Printing with New Preface and Appendix*, Revised (Cambridge, MA: Harvard University Press, 1971); Theodore J. Lowi, *The End of Liberalism: The Second Republic of the United States*, 40th anniversary ed. (New York: W. W. Norton & Company, 1969); James Wilson, *Bureaucracy: What Government Agencies Do And Why They Do It* (New York: Basic Books, 1991).

¹⁷ See Matthew D. Mitchell, “Overcoming the Special Interests That Have Ruined Our Tax Code,” in *For Your Own Good: Taxes, Paternalism, and Fiscal Discrimination in the Twenty-First Century*, ed. Adam Hoffer and Todd Nesbit (Arlington, VA: Mercatus Center at George Mason University, 2018), 327–50.

There are a number of important lessons to draw from these cases.¹⁸ But perhaps the most important is that institutional reforms must permit policymakers to cast conspicuous votes in the general interest and limit the power of special interests to dominate the process.

In the case of occupational licensing, some potential reforms follow this pattern:

1. *An independent commission.* One potential reform would be to establish an independent commission. It should be comprised of experts familiar with the economic literature on licensure and with no financial stake in the current regime. It should be charged with identifying and eliminating burdensome and anticompetitive licensing laws. And, ideally, lawmakers should be bound to take its advice in whole or not at all. This type of structure can ensure that state licensing regimes serve the general interests of the public and not the special interests of protected industries. More details on this approach can be found in the attached report.
2. *Requiring less restrictive means of regulation.* The state of Nebraska recently adopted a reform that highlights a different approach.¹⁹ There, the Occupational Board Reform Act of 2018 requires legislative committees to review 20 percent of licenses under their jurisdiction each year and all licenses under their jurisdiction every five years. The review process requires committees to gather information on the number of licenses boards have “issued, revoked, denied, or assessed penalties against” and the reasons for these actions. It also requires committees to review board composition, assess board activities, and to compare these activities with the way other states regulate occupations.

Most importantly, the act stipulates that licenses are warranted only when they address “present, significant, and substantiated harms,” and if such a harm is found to exist, the legislation requires policymakers to use the “least restrictive” regulation necessary to protect consumers from undue risk. Finally, the act establishes the following hierarchy of regulations, from least restrictive to most restrictive:

1. Market competition
 2. Third-party or consumer-created ratings and reviews
 3. Private certification
 4. Specific private civil cause of action to remedy consumer harms
 5. Deceptive trade practices under the Uniform Deceptive Trade Practices Act
 6. Mandatory disclosure of attributes of the specific goods or services
 7. Regulation of the process of providing the specific goods or services to consumers
 8. Inspection
 9. Bonding or insurance
 10. Registration
 11. Government certification
 12. Occupational licensure
3. *Reversing the burden of proof.* Arizona has taken a third approach.²⁰ There, the recently-passed Right to Earn a Living Act strengthens existing law, which had declared that “the right of individuals to pursue a chosen business or profession, free from arbitrary or excessive government

¹⁸ Again, see Mitchell, “Overcoming the Special Interests.” But briefly, these lessons are (1) ideas matter, especially in the long run, (2) institutions matter too, (3) go for the “grand bargain,” (4) reform requires good leaders, (5) sometimes it takes a special interest to beat a special interest, (6) never let a crisis go to waste, and (7) embrace permissionless innovation.

¹⁹ Legis. B. 299, 105th Leg., 2nd Sess. (Neb. 2018).

²⁰ S. B. 1437, 53rd Leg., 1st Sess. (Ariz. 2017).

interference, is a fundamental civil right,” and had directed courts to “apply heightened judicial scrutiny to cases involving occupational licenses and the right to earn a living.”

The new act stipulates that “any person may file an action in a court of general jurisdiction to challenge an occupational regulation” and creates a presumption *against* a state agency’s authority unless the regulation is “demonstrated to be necessary to specifically fulfill a public health, safety, or welfare concern.” The law clarifies that “health, safety or welfare . . . does not include the protection of existing businesses . . . against competition.” These new provisions provide an avenue of relief to individuals harmed by occupational licensing and create a new accountability mechanism for regulators.

4. *Recognition of out-of-state licensure for active duty and military spouses.* Because licensure imposes particularly steep burdens for peripatetic military personnel and their spouses, a number of states have moved to recognize the out-of-state licenses of these individuals. Utah, for example, recently permitted active duty military and their spouses to operate without a Utah license so long as they hold a current license from another state or jurisdiction and are in good standing with that other state or jurisdiction.²¹ While this approach is certainly beneficial for this population, it fails to alleviate the burden borne by most licensed workers.²²
5. *Universal licensing recognition.* Another approach—also pioneered in Arizona—allows any state resident who is currently licensed by another state to obtain an occupational license in their state of residence.²³ While economists and antitrust officials have long recommended licensure portability, this proposal takes the idea a few steps further than other proposals.²⁴ Typically, licensure portability reforms have focused on particular professions, such as nursing, and have required multiple states to agree to an interstate compact. That type of reform may still be susceptible to the sort of regulatory capture problems that have long dominated state-level licensure.²⁵ Universal licensure recognition, however, would allow legislators to serve the general public by easing licensure burdens while it would mitigate the sort of special-interest pleading that so often dominates regulatory reform. Interestingly, the previously-mentioned reform may be a stepping-stone to this reform. In Arizona, the universal recognition bill simply amended previous statutory language that had recognized the out-of-state licenses of active duty military and their spouses so that all Arizona residents with out-of-state licenses could operate.

None of these approaches are mutually exclusive. Indeed, they all reinforce one another and aim to correct for a natural imbalance that tends to favor concentrated and organized interests over diffuse and unorganized interests. Policymakers who value consumer protection, lower prices, and greater opportunities for employment—especially among lower-skilled and lower-educated populations—would do well to consider these reforms.

²¹ S. B. 227, 62nd Leg., 1st Reg. Sess. (Utah 2018).

²² Since both equity and freedom are worthy goals, there is a philosophical tradeoff here. When burdens are especially steep, piecemeal reforms may be desirable even if they increase inequity. On the other hand, when policy is especially inequitable, more equity may be worthwhile, even if it raises burdens. Beyond the philosophical tradeoffs, there may be political economy tradeoffs. For example, inequitable policy may lead to higher burdens by reducing the political pressure for reform. For a general discussion of nondiscriminatory policy, see James M. Buchanan and Roger D. Congleton, *Politics by Principle, Not Interest: Toward Nondiscriminatory Democracy* (Cambridge, MA: Cambridge University Press, 1998).

²³ H. B. 2569, 54th Leg., 1st Reg. Sess. (Ariz. 2019).

²⁴ Bilal Sayyed, Tara Isa Koslov, and Karen A. Goldman, *Options to Enhance Occupational License Portability* (Washington, DC: Federal Trade Commission, 2018).

²⁵ George J. Stigler, “The Theory of Economic Regulation,” *Bell Journal of Economics and Management Science* 2, no. 1 (1971): 3–21; Brink Lindsey and Steven Teles, *The Captured Economy: How the Powerful Enrich Themselves, Slow Down Growth, and Increase Inequality* (New York: Oxford University Press, 2017). See chapter 5 of Lindsey and Teles in particular.

Thank you for the opportunity to share my research with you today. I look forward to answering any questions you may have.

Sincerely,

Matthew D. Mitchell, PhD

Director and Senior Research Fellow, Equity Initiative, Mercatus Center at George Mason University

ATTACHMENT

“The Effects of Occupational Licensure on Competition, Consumers, and the Workforce” (Mercatus on Policy)

MERCATUS ON POLICY

The Effects of Occupational Licensure on Competition, Consumers, and the Workforce

Patrick A. McLaughlin, Matthew D.
Mitchell, and Anne Philpot

November 2017



MERCATUS CENTER
George Mason University

3434 Washington Blvd., 4th Floor
Arlington, Virginia 22201
www.mercatus.org

THE MERCATUS CENTER AT GEORGE MASON

University is dedicated to advancing knowledge about the impact of regulation on society. As part of its mission, the Mercatus Center conducts careful and independent analyses employing contemporary economic scholarship to assess rulemaking proposals from the perspective of the public interest. Thus, this Mercatus on Policy piece in response to questions from the Federal Trade Commission (FTC)¹ does not represent the views of any particular affected party or special interest group. Rather, it is designed to assist the commission as it weighs the costs and benefits of occupational licensing regulations. Our comments to the commission are derived from our recent state-specific occupational licensing studies.²

OCCUPATIONAL LICENSING REQUIREMENTS ACROSS TIME AND ACROSS STATES

The commission asks, “What is the state of empirical knowledge about the extent, growth, and stringency of state licensing requirements? To what extent are such requirements uniform or varied across the states? To what extent do they vary by occupation?”

Occupational licensing has expanded significantly over the last 50 years. In 1950, 5 percent of the workforce was licensed through state laws,³ and in 2000 that number approached 20 percent. When federal licenses are also accounted for, one estimate for 2006 is that 29 percent of the workforce was licensed.⁴ This growth in licensure arises primarily from the growth in the number of occupations for which a license is required by the state, not from people switching from jobs that do not require occupational licenses to jobs that do.⁵ While there is a great deal of variation across states in the number of occupations for which a license

is required as well as in the requirements to obtain a license, every state has seen an increase in both.

Patterns in occupational licensing requirements contradict the idea that licensure is primarily used to protect public safety. Occupations that are less likely to involve risk to the public are often more highly controlled than riskier occupations. Moreover, inconsistencies across state lines undermine the argument that certain occupations pose inherent safety risks.

On average, emergency medical technicians (EMTs) in the United States must complete 33 days of training and pass two exams before being licensed to work on an ambulance team.⁶ By contrast, the average interior designer must complete 2,190 days of education and experience—66 times the amount of training required of EMTs. Cosmetologists, too, are subject to a full 11 months more training than EMTs—averaging 372 days in total.⁷ Additional regulatory mismatches for particular states are listed in table 1.

Beyond the variation across occupations, there is also significant variation in licensing requirements for the same jobs across states. For example, the average HVAC contractor must complete 891 days of education and training.⁸ In Michigan, however, these contractors face even higher barriers

Table 1. Occupational Training Mismatches, Select States		
OCCUPATION	EDUCATION/ EXPERIENCE (DAYS)	EXAMS
ARKANSAS		
Emergency medical technician	28	2
Message therapist	117	2
Makeup artist	140	2
Psychiatric technician	210	1
Cosmetologist	350	2
Teacher assistant	730	0
Fire alarm installer	1,095	1
Painting contractor	1,825	1
Preschool teacher	1,825	3

Table 1 (continued)		
OCCUPATION	EDUCATION/ EXPERIENCE (DAYS)	EXAMS
MICHIGAN		
Emergency medical technician	26	2
Cosmetologist	350	2
Barber	467	2
Veterinary technologist	730	2
Security guard	1,095	0
Athletic trainer	1,460	1
Security alarm installer	1,460	1
Preschool teacher	1,825	2
MISSOURI		
Emergency medical technician	23	2
Skin care specialist	175	2
Psychiatric aide	210	0
Barber	350	2
Pest control applicator	730	2
Athletic trainer	1,460	1
Preschool teacher	1,825	1
WISCONSIN		
Emergency medical technician	28	2
Manicurist	70	2
Makeup artist or skincare specialist	105	2
Message therapist	140	2
Cosmetologist or barber	420	2
Earth driller	730	1
Midwife	730	1
Veterinary technologist	730	3
Athletic trainer	1,460	1
Preschool teacher	1,825	2

Source: Dick M. Carpenter II et al., License to Work: A National Study of Burdens from Occupational Licensing (Arlington, VA: Institute for Justice, April 24, 2012).

Patterns in occupational licensing requirements contradict the idea that licensure is primarily used to protect public safety.

to entry. Prospective HVAC contractors in Detroit must undergo nearly *seven months more training* than the national average—a total of 1,095 days—before beginning work. By comparison, their counterparts in Indianapolis can get to work much sooner, since Indiana does not require a license for HVAC contractors at all.⁹ The same is true of fire alarm installers in Arkansas: while they must accumulate 1,095 days of education and experience prior to being licensed, the rest of the country averages just 486 days, and 18 states have no experience or education minimums at all.¹⁰ In other words, aspiring fire alarm contractors in Tulsa can get to work three years sooner than their counterparts in Little Rock.

Regarding the differences in licensing across state lines, the commission asks, “Can the theoretical models help explain why some occupations are licensed in nearly every state while others are rarely licensed?”

If occupational licensing were governed solely by the logic of promoting public safety, the same types of activities would be regulated in similar ways across states. In reality, there is wide variation across states in terms of occupations regulated and the stringency of those regulations. Regulatory privilege accounts for some of these differences.

Writing in the *Harvard Journal of Law & Public Policy*, Paul Larkin Jr. notes a “curious and stubborn fact: Private individuals rarely urge governments to adopt licensing regimes, but private firms often do.”¹¹ This fact conforms with the economic theory of regulation, which suggests that incumbent providers may use licensure to limit competition.¹² By limiting supply and raising prices, these rules allow incumbent providers to earn artificially high profits—what economists refer to as *rent*. Indeed, the latest

research suggests that licensure raises the wages of licensees by about 14 percent.¹³ Occupational licensing is a privilege granted by a regulatory agency to incumbent providers.¹⁴

The social costs of this privilege are shouldered, in part, by consumers who have to pay higher prices than they would pay in more competitive markets. But the social costs also include the wages not earned by potential providers who are effectively excluded from the market by these regulations. With both the high prices for consumers and the forgone wages of would-be competitors, society is likely to experience a net loss from occupational licensing—what economists call *deadweight loss*. What’s more, incumbent professionals are willing to expend scarce resources convincing policymakers to contrive and maintain these privileges, a socially wasteful endeavor known as *rent-seeking*.¹⁵ Being few in number and established in their fields, these license holders generally find it easier to get politically organized than the large number of consumers and would-be competitors who are harmed by licensure.¹⁶

EMPIRICAL EVIDENCE ON OCCUPATIONAL LICENSING

The commission asks, “What is the best available evidence upon which policymakers might rely in deciding whether to adopt a new licensing regime? What is the best available evidence upon which policymakers might rely in deciding whether to reform or eliminate an existing licensing regime?”

Occupational licensing is ostensibly intended to protect the public from unsafe and low-quality service,

but there is little evidence this intention is realized. Rather, there is a growing consensus among economists that these rules serve to protect incumbent providers from competition by creating barriers for new entrants that lead to higher prices for consumers. We discuss this literature in the following sections.

The commission asks, “What is known about the effect of licensing restrictions on price, quality, access, and innovation for services and goods associated with licensed occupations?”

The evidence suggests two things: First, licensing requirements do not improve the quality of the goods and services provided by licensed occupations, and second, they exclude potential service providers who find the hurdles too costly to overcome. These hurdles limit competition for the incumbents in these protected trades, producing a doubly negative effect: Occupational licensing requirements keep able people from entering trades they could otherwise learn quickly and perform sufficiently well, limiting employment opportunities for people without advanced skills or degrees. In addition, protected industries can charge their customers higher prices than competitive industries, requiring low-income families to pay higher bills for basic services. Low-income consumers lose in particular. In the absence of licensure, a barber, for example, might offer discounted haircuts with fewer frills to those who would otherwise not be able to afford a higher-end haircut.

Licensure and Quality

Licensure is justified by legislators and advocates as necessary to protect the public from low-quality services or potential health risks.¹⁷ It is theoretically possible that a well-designed quality screening system will ensure that only high-quality professionals join an occupation. However, limiting the supply of professionals undermines competition. Less competition means lower quality and higher prices. As Morris M. Kleiner put it, licensure ensures that “prices and wages will rise as a result of restricting the number of practitioners, which should tend to

reduce quality received by consumers.”¹⁸ High prices may even push consumers out of the market entirely, inducing them to resort to far more risky do-it-yourself behavior. For example, one study found that more restrictive electrician licensing regimes are associated with fewer electricians per capita and that this, in turn, is associated with more accidental electrocutions.¹⁹

The true effect of licensure on quality is an empirical question, since economic theory suggests that licensure can have opposing effects on quality. Licensing requirements can increase quality by restricting entry only to highly-qualified professionals, or it can decrease quality by causing less competition, higher prices, and more do-it-yourself activities. A number of studies have assessed the effect of licensure on quality and the weight of evidence suggests that the two effects roughly cancel each other out. As Kleiner summarized in his review of the literature,

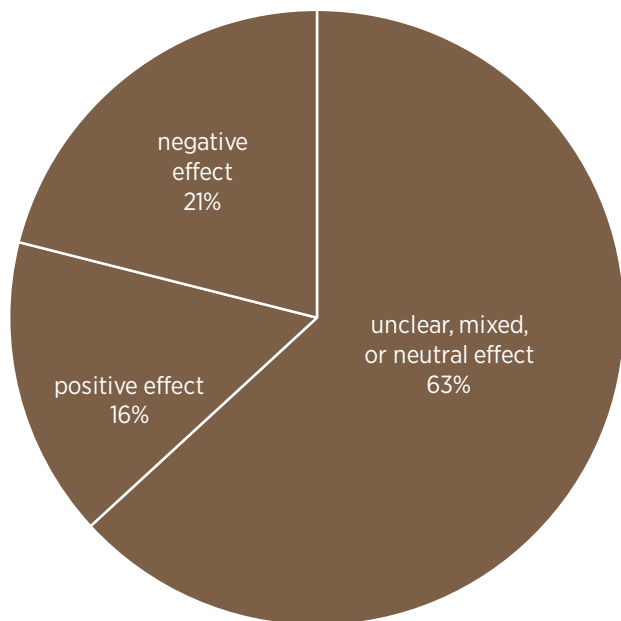
There is little to show that occupational licensure has a major effect on the quality of services received by consumers or on the demand for the services other than through potential price effects.²⁰

During the Obama administration, the Department of the Treasury, together with the Council of Economic Advisors and the Department of Labor, issued a report (henceforth referred to as the Treasury Department Report) including a review of the literature that concluded,

With the caveats that the literature focuses on specific examples and that quality is difficult to measure, most research does not find that licensing improves quality or public health and safety.²¹

Patrick McLaughlin, Jerry Ellig, and Dima Yazji Shamoun recently surveyed 19 studies assessing the effect of occupational licensure on quality.²² Figure 1 presents the results of their survey. As in the surveys by Kleiner and the Treasury Department Report, McLaughlin, Ellig, and Shamoun found that the

Figure 1. Studies Assessing the Effect of Occupational Licensure on Quality



Sources: **Positive:** Arlene Holen, *The Economics of Dental Licensing* (Washington, DC: Public Research Institute, Center for Naval Analysis, 1978); Samuel Claude Martin, "An Examination of the Economic Side Effects of the State Licensing of Pharmacists" (doctoral dissertation, University of Tennessee, 1982); Roger Feldman and James W. Begun, "The Effects of Advertising: Lessons from Optometry," *Journal of Human Resources* 13 supplement (1978): 247-62. **Unclear, mixed, or neutral:** Kathryn Healey, "The Effect of Licensure on Clinical Laboratory Effectiveness" (doctoral dissertation, University of California, Los Angeles, 1973); John J. Phelan, *Regulation of the Television Repair Industry in Louisiana and California: A Case Study*, *Federal Trade Commission*, 1974; John F. Cady, *Restricted Advertising and Competition: The Case of Retail Drugs* (Washington, DC: American Enterprise Institute, 1976); Robert J. Thornton and Andrew R. Weintraub, "Licensing in the Barbering Profession," *Industrial and Labor Relations Review* 32, no. 2 (1979): 242-49; Ronald Bond et al., *Effects of Restrictions of Advertising and Commercial Practice in the Professions: The Case of Optometry*, *Federal Trade Commission*, 1980; Chris Paul, "Physician Licensure Legislation and the Quality of Medical Care," *Atlantic Economic Journal* 12, no. 4 (1984): 18-30; David S. Young, *The Rule of Experts: Occupational Licensing in America* (Washington, DC: Cato Institute, 1987); Morris M. Kleiner and Daniel L. Petree, "Unionizing and Licensing of Public School Teachers: Impact on Wages and Educational Output," in *When Public Sector Workers Unionize*, ed. R. B. Freeman and C. Ichniowski (Chicago: University of Chicago Press, 1988), 305-19; D. D. Goldhaber and D. J. Brewer, "Does Teacher Certification Matter? High School Teacher Certification Status and Student Achievement," *Educational Evaluation and Policy Analysis* 22, no. 2 (2000): 129-45; Morris M. Kleiner and Robert T. Kudrle, "Does Regulation Affect Economic Outcomes? The Case of Dentistry," *Journal of Law and Economics* 43, no. 2 (2000): 547-82; David Blau, "Unintended Consequences of Child Care Regulations," *Labour Economics* 14, no. 3 (2007): 513-38; 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. **Negative:** Timothy Muris and Fred McChesney, "Advertising, Consumer Welfare, and the Quality of Legal Services: The Case of Legal Clinics" (Working Paper 78-5, Law and Economics Center, University of Miami, Miami, FL, 1978); Sidney Carroll and Robert Gaston, "Occupational Restrictions and the Quality of Service Received: Some Evidence," *Southern Economic Journal* 47, no. 4 (1981): 959-76; John E. Kwoka, "Advertising and the Price and Quality of Optometric Services," *American Economic Review* 74, no. 1 (1984): 211-16; Mark C. Berger and Eugenia F. Toma, "Variation in State Education Policies and Effects on Student Performance," *Journal of Policy Analysis and Management* 13, no. 3 (1994): 477.

most common finding was neutral, mixed, or unclear. Three studies found that occupational licensure positively affects quality while four found that it negatively affects quality.

Licensure and Prices

Economic theory predicts that a restriction in supply will result in higher prices. And, indeed, the empirical research consistently finds this to be the case. According to the Treasury Department Report,

The evidence on licensing's effects on prices is unequivocal: many studies find that more restrictive licensing laws lead to higher prices for consumers. In 9 of the 11 studies we reviewed . . . significantly higher prices accompanied stricter licensing.²³

Similarly, McLaughlin, Ellig, and Shamoun found that licensure increased prices in all 19 of the studies they surveyed, ranging from optometry and law to dentistry and cosmetology.²⁴

The effects of these increased prices are not trivial. For example, state nurse practitioner licensing is estimated to increase the price of a well-child checkup by 3 to 16 percent,²⁵ dental hygienist and dental assistant licensing is estimated to increase the price of a dental visit by 7 to 11 percent,²⁶ and optometry licensing is estimated to increase the price of eye care by 5 to 13 percent.²⁷ What's more, none of these studies found that licensing increased quality.

Licensing and Access to Employment

The commission asks, "What is known about the connection between labor market research and competition research?"

Industry domination of licensing boards creates high barriers to employment. Tables 2 and 3 provide a snapshot of Michigan and Wisconsin board composition. Boards in both states are required by statute to have a majority of members who are license holders.²⁸ When industry members create the standards for

entry into their professions, they have an incentive to implement burdensome entry requirements to protect themselves from competition. In effect, licensing makes entry into a profession more difficult without necessarily making the public safer.²⁹

On some boards, membership shrinks to the lowest statutorily-mandated number of professionals,

leaving public seats vacant. Wisconsin’s boards in particular demonstrate this problem.

Research suggests that these barriers built by occupational licensing boards impact particular communities. For example, military spouses are more likely to be in licensed professions and more likely to relocate from one licensing regime to another.³⁰

Table 2. Composition of Select Michigan Boards

BOARD	INDUSTRY MEMBERS	TOTAL	PERCENTAGE INDUSTRY
Michigan Board of Veterinary Medicine ^a	6	9	67%
Michigan Board of Cosmetology ^b	6	9	67%
Michigan Board of Barber Examiners ^c	6	9	67%
Michigan Board of Social Work ^d	6	9	67%
Michigan Board of Massage Therapy ^e	7	11	64%
Michigan Board of Athletic Trainers ^f	6	11	54%

Note: The Board of Cosmetology currently has only two public members, meaning 75 percent of its positions are filled by industry members. The Board of Barber Examiners currently has one vacant professional member position, meaning that 56 percent of the board is filled by industry members.

Sources: ^a Michigan Department of Licensing and Regulatory Affairs, “LARA—Michigan Board of Veterinary Medicine,” accessed October 6, 2017, http://www.michigan.gov/lara/0,4601,7-154-72600_72603_27529_27555-59195--,00.html.

^b Michigan.gov, “Board of Cosmetology,” accessed October 6, 2017, http://www.michigan.gov/snyder/0,4668,7-277-57738_57679_57726-250079--,00.html.

^c Michigan.gov, “Board of Barber Examiners,” accessed October 6, 2017, http://www.michigan.gov/snyder/0,4668,7-277-57738_57679_57726-249981--,00.html.

^d Michigan Department of Licensing and Regulatory Affairs, “LARA—Michigan Board of Social Work,” accessed October 6, 2017, http://www.michigan.gov/lara/0,4601,7-154-72600_72603_27529_27554-70397--,00.html.

^e Michigan.gov, “Michigan Board of Massage Therapy,” accessed October 6, 2017, http://www.michigan.gov/snyder/0,4668,7-277-57738_57679_57726-250624--,00.html.

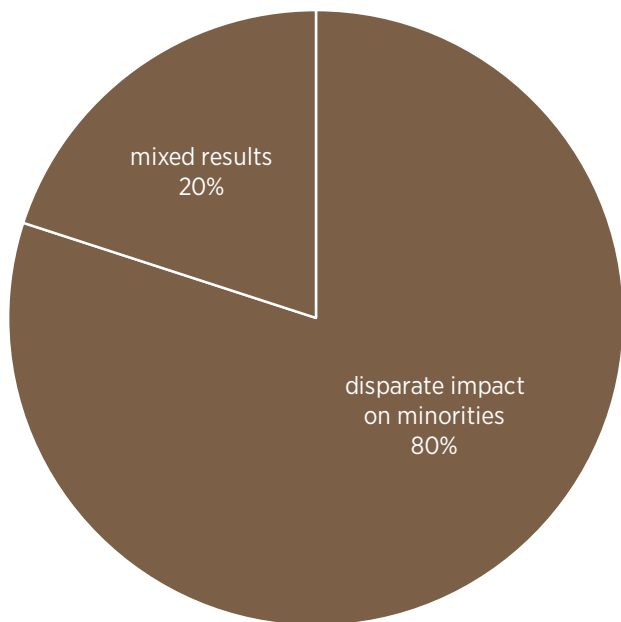
^f Michigan Department of Licensing and Regulatory Affairs, “LARA—Michigan Board of Athletic Trainers,” accessed October 6, 2017, http://www.michigan.gov/lara/0,4601,7-154-72600_72603_27529_45355-170067--,00.html.

Table 3. Composition of Select Wisconsin Boards

BOARD OR COUNCIL	STATUTORY BOARD COMPOSITION			ACTUAL BOARD COMPOSITION		
	INDUSTRY MEMBERS	TOTAL MEMBERS	PERCENTAGE INDUSTRY	INDUSTRY MEMBERS	TOTAL MEMBERS	PERCENTAGE INDUSTRY
Respiratory Care Practitioners Examining Council	3	5	60%	3	3	100%
Athletic Trainers Affiliated Credentialing Board	4	6	67%	4	4	100%
Occupational Therapists Affiliated Credentialing Board	5	7	71%	4	4	100%
Hearing and Speech Examining Board	8	10	80%	7	7	100%
Dentistry Examining Board	9	11	82%	9	9	100%

Source: Wisconsin Department of Safety and Professional Services, “License/Permit/Registrations,” accessed October 30, 2017, <http://dps.wi.gov/Licenses-Permits/Credentialing>.

Figure 2. Studies Assessing the Effect of Occupational Licensure on Minorities



Sources: **Disparate impact:** Stuart Dorsey, “The Occupational Licensing Queue,” *Journal of Human Resources* 15, no. 3 (1980): 424–34; 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 (2006): 237–41; 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; David E. Harrington and Jaret Treber, *Designed to Exclude* (Arlington, VA: Institute for Justice, February 2009). **Mixed results:** Marc Law and Mindy Marks, “Effects of Occupational Licensing Laws on Minorities: Evidence from the Progressive Era,” *Journal of Law and Economics* 52, no. 2 (2009): 351–66.

Licensure also presents a higher barrier to immigrants since many states require domestic work experience. For ex-offenders, occupational licensure is particularly burdensome as most states make it impossible for those with a past conviction to obtain an occupational license.

As shown in figure 2, McLaughlin, Ellig, and Shamoun’s survey of the literature shows that licensure was found to disparately affect ethnic minorities in four of five studies.³¹

REFORM

Lastly, the commission asks, “What are the alternatives to occupational licensure? Are there other

forms of government regulation—such as certification, registration, or mandatory bonding—that might serve some of the consumer protection goals of licensure? What types of private initiatives or market-based solutions might be adequate substitutes for licensure? What is known about the comparative advantages and disadvantages of such alternatives, either generally, for certain types of occupations, or for individual occupations?”

Licensure is not the only or the most effective way to ensure quality.³² While occupational licensure is intended to protect consumers from harm, there are many other less-burdensome mechanisms to promote public safety. For instance, liability law and civil and criminal laws against fraud protect consumers.³³ In addition, a host of private mechanisms ensure that market providers are accountable.³⁴ These include private certifications, insurance, bond-posting, brand reputation, customer review platforms like Yelp and Google reviews, and the third-party validation of organizations like Angie’s List, Consumer Reports, and Underwriters Laboratories. Competition itself may be the best alternative to licensure. As the economist Alfred Kahn put it after decades of extensive work as a regulator and researcher, “Whenever competition is feasible, it is, for all its imperfections, superior to regulation as a means of serving the public interest.”³⁵

Policymakers wishing to reduce the social costs of their state’s occupational licensure could take the following steps:

- 1) Pass legislation that sets an ambitious goal for the elimination of licenses and the reduction in licensing burdens.
- 2) Establish an independent commission charged with examining the state’s licensing laws. Its first task should be to identify each license the state requires as well as the burdens associated with each license (fees, exams, required training, education, experience, and other limitations). The

Table 4. Guiding Principles for Occupational Licensing Reform	
BEGIN WITH A BLANK SLATE	Tastes, technology, and prices change. So analysts should not be beholden to past practices and should approach their task as if they were starting anew.
DEFINE THE NATURE OF THE PROBLEM	Is there a systematic market failure that needs to be addressed? If not, occupational regulation is probably not the answer. Keep in mind that entrepreneurs have an incentive to come up with their own solutions to market failures.
IDENTIFY ALTERNATIVE SOLUTIONS TO OCCUPATIONAL REGULATION	This should include the alternative of deregulation. It should also include reliance on both private governance (competition, bond-posting, reputation feedback mechanisms, third-party evaluation, etc.) and public governance (deceptive trade practice law, registration, certification, etc.).
IDENTIFY THE POTENTIAL COSTS OF REGULATION	These include higher consumer prices; inconveniences such as diminished access to products and services; higher entrance fees, exam costs, education costs, etc.; rent-seeking waste; productive inefficiencies that arise when firms and providers are protected from competition; and dynamic losses that accrue over time as protected firms and providers are less likely to adapt and innovate.
IDENTIFY THE POTENTIAL BENEFITS OF REGULATION	What systematic market failure is the regulation intended to address? Remember that the profits of incumbent firms and their employees are not legitimate benefits of regulation since these gains come at the expense of consumers and would-be competitors.
MEASURE COSTS AND BENEFITS	Whenever possible, an objective measure of costs and benefits should be produced. When that is impossible, analysts should acknowledge that certain judgements are subjective.

commission should be charged with evaluating all licenses, should not be dominated by members of the licensed professions, should include consumer representatives and representatives from organizations devoted to assist job-seekers, and should include third-party experts such as academics who have no financial stake in licensure. Furthermore, the commission should be guided by a set of criteria for evaluating regulations, as listed in table 4.

- 3) The commission should be charged with performing a comprehensive review of all occupations, with the goal of identifying licensure requirements that can be eliminated or reformed. The authorizing legislation should commit elected officials to accepting the commission’s recommendations in their entirety or not at all.

The last provision is designed to overcome the public choice problems that plague licensure reform. In particular, whenever any individual license is evaluated,

concentrated members of the industry are typically able to organize in defense of the license, while diffuse consumers and would-be competitors are unable to organize in opposition. The institutional structure that we recommend borrows elements from other reforms that have succeeded in eliminating favoritism.³⁶ In particular, it allows elected officials to cast conspicuous votes in the public interest while giving them some degree of “cover” from the special interests that will inevitably be harmed by the elimination of their regulatory privilege.

NOTES

1. Federal Trade Commission, “The Effects of Occupational Licensure on Competition, Consumers, and the Workforce: Empirical Research and Results” (event, Federal Trade Commission), November 2017.
2. Patrick A. McLaughlin, Matthew D. Mitchell, Anne Philpot, and Thomas Snyder, “The State of Occupational Licensure in Arkansas” (Mercatus on Policy, Mercatus Center at George Mason University, Arlington, VA, September 2017); Patrick A. McLaughlin, Matthew D. Mitchell, Anne Philpot, and Tamara Winter, “The State of Occupational Licensure in Wisconsin” (Mercatus on Policy, Mercatus Center at George Mason University, Arlington, VA, August 2017); Patrick A. McLaughlin, Matthew D. Mitchell, and Andrew M. Baxter, “The State of Occupational Licensure in Illinois” (Mercatus on Policy, Mercatus

- Center at George Mason University, Arlington, VA, June 2017); Patrick A. McLaughlin, Matthew D. Mitchell, Anne Philpot, and Tamara Winter, "The State of Occupational Licensure in Missouri" (Mercatus on Policy, Mercatus Center at George Mason University, Arlington, VA, October 2017). Forthcoming "Mercatus on Policy" occupational licensing studies: Michigan, Nebraska.
3. Morris M. Kleiner and Alan B. Krueger, "The Prevalence and Effects of Occupational Licensing" (NBER Working Paper No. 14308, National Bureau of Economic Research, Cambridge, MA, September, 2008), 2.
 4. *Ibid.*, 3.
 5. *Ibid.*
 6. Dick M. Carpenter II et al., *License to Work: A National Study of Burdens from Occupational Licensing* (Arlington, VA: Institute for Justice, April 24, 2012), 13.
 7. *Ibid.*
 8. *Ibid.*, 16.
 9. *Ibid.*, 64.
 10. *Ibid.*, 153.
 11. Paul J. Larkin Jr., "Public Choice Theory and Occupational Licensing," *Harvard Journal of Law & Public Policy* 39, no. 1 (n.d.): 226.
 12. George J. Stigler, "The Theory of Economic Regulation," *Bell Journal of Economics and Management Science* 2, no. 1 (1971): 3-21; Sam Peltzman, "Toward a More General Theory of Regulation," *Journal of Law and Economics* 19, no. 2 (1976): 211-40.
 13. Kleiner and Krueger, "Prevalence and Effects."
 14. Matthew D. Mitchell, *The Pathology of Privilege: The Economic Consequences of Government Favoritism* (Arlington, VA: Mercatus Center at George Mason University); Patrick A. McLaughlin, Matthew Mitchell, and Ethan Roberts, "Regulatory Subsidies: How Regulations Can Become Privileges for Firms and Burdens for Consumers" (Mercatus Working Paper, Mercatus Center at George Mason University, Arlington, VA, forthcoming).
 15. Gordon Tullock, "The Welfare Costs of Tariffs, Monopolies, and Theft," *Western Economic Journal [Economic Inquiry]* 5, no. 3 (1967): 224-32; Anne O. Krueger, "The Political Economy of the Rent-Seeking Society," *American Economic Review* 64, no. 3 (1974): 291-303; Roger Congleton, Arye Hillman, and Kai Konrad, eds., *40 Years of Research on Rent Seeking 1—Theory of Rent Seeking* (Berlin, DE: Springer-Verlag GmbH, 2008).
 16. Mancur Olson, *The Logic of Collective Action: Public Goods and the Theory of Groups*, rev. ed. (1971; Cambridge, MA: Harvard University Press, 1965); Robert E. McCormick and Robert D. Tollison, *Politicians, Legislation, and the Economy: An Inquiry into the Interest-Group Theory of Government* (Boston, MA: Springer, 1981).
 17. Kleiner, *Reforming Occupational Licensing Policies*, 4.
 18. Morris M. Kleiner, "Occupational Licensing," *Journal of Economic Perspectives* 14, no. 4 (2000): 189-202.
 19. Sidney L. Carroll and Robert J. Gaston, "Occupational Restrictions and the Quality of Service Received: Some Evidence," *Southern Economic Journal* 47 (1981): 959-76.
 20. Morris M. Kleiner, *Licensing Occupations: Ensuring Quality or Restricting Competition?* (Kalamazoo, MI: W.E. Upjohn Institute, 2006), 56.
 21. US Department of the Treasury, Council of Economic Advisers, and US Department of Labor, *Occupational Licensing: A Framework*, July 2015, 13.
 22. Patrick A. McLaughlin, Jerry Ellig, and Dima Yazji Shamoun, "Regulatory Reform in Florida: An Opportunity for Greater Competitiveness and Economic Efficiency," *Florida State University Business Review* 13, no. 1 (Spring 2014): 95-130.
 23. Department of the Treasury et al., *Occupational Licensing: A Framework*, 14.
 24. McLaughlin, Ellig, and Shamoun, "Regulatory Reform in Florida," 14-15.
 25. Morris M. Kleiner et al., "Relaxing Occupational Licensing Requirements: Analyzing Wages and Prices for a Medical Service," (NBER Working Paper No. 19906, National Bureau of Economic Research, Cambridge, MA, February 2014).
 26. Federal Trade Commission, *Restrictions on Dental Auxiliaries: An Economic Policy Analysis*, 1987.
 27. Deborah Haas-Wilson, "The Effect of Commercial Practice Restrictions: The Case of Optometry," *Journal of Law and Economics* 29, no. 1 (1986): 165-68.
 28. Rebecca Haw Allensworth, "Foxes at the Henhouse: Occupational Licensing Boards Up Close," *California Law Review* 105, forthcoming 2017).
 29. Carroll and Gaston, "Occupational Restrictions and the Quality of Service Received."
 30. Department of the Treasury et al., *Occupational Licensing: A Framework*, 4-5.
 31. The fifth study, which only found a disparate effect of licensure in one profession (barbering), has been criticized. See Daniel Klein, Benjamin Powell, and Evgeny Vorotnikov, "Was Occupational Licensing Good for Minorities? A Critique of Marc Law and Mindy Marks," *Econ Journal Watch* 9, no. 3 (September 2012): 210-33.

32. For a hierarchy of alternatives to occupational licensure, see Thomas A. Hemphill and Dick M. Carpenter II, "Occupations: A Hierarchy of Regulatory Options," *Regulation* 39, no. 3 (Fall 2016): 20–24.
33. For the benefits of ex-post sanctions as opposed to ex-ante sanctions, see Adam Thierer, *Permissionless Innovation: The Continuing Case for Comprehensive Technological Freedom*, 2nd ed. (Arlington, VA: Mercatus Center at George Mason University, 2016).
34. Thierer et al., "How the Internet, the Sharing Economy, and Reputational Feedback Mechanisms Solve the 'Lemons Problem.'"
35. Quoted in Richard Adams, "Alfred Kahn Obituary," *Guardian*, January 12, 2011. See also Alfred Kahn, *The Economics of Regulation: Principles and Institutions* (Cambridge, MA: Massachusetts Institute of Technology, 1988).
36. Jerry Brito, "Running for Cover: The BRAC Commission as a Model for Federal Spending Reform," *Georgetown Journal of Law & Public Policy* 9 (2010): 131–56.

About the Authors*

Patrick A. McLaughlin is a senior research fellow and the director of the Program for Economic Research on Regulation at the Mercatus Center at George Mason University. He holds a PhD in economics from Clemson University.

Matthew D. Mitchell is a senior research fellow and director of the Project for the Study of American Capitalism at the Mercatus Center at George Mason University. Mitchell received his PhD in economics from George Mason University.

Anne Philpot is a research assistant for the Project for the Study of American Capitalism at the Mercatus Center at George Mason University.

**The authors would like to thank Tamara Winter for her excellent research assistance on this piece.*

About the Mercatus Center

The Mercatus Center at George Mason University is the world's premier university source for market-oriented ideas—bridging the gap between academic ideas and real-world problems.

A university-based research center, Mercatus advances knowledge about how markets work to improve people's lives by training graduate students, conducting research, and applying economics to offer solutions to society's most pressing problems.

Our mission is to generate knowledge and understanding of the institutions that affect the freedom to prosper and to find sustainable solutions that overcome the barriers preventing individuals from living free, prosperous, and peaceful lives.

Founded in 1980, the Mercatus Center is located on George Mason University's Arlington and Fairfax campuses.

Views and positions expressed in the Mercatus on Policy series are the authors' and do not represent official views or positions of the Mercatus Center or George Mason University.