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# The efficiency of occupational licensing during the Gilded and Progressive eras: Evidence from judicial reviews

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# *The efficiency of occupational licensing during the Gilded and Progressive eras: Evidence from judicial reviews*

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## Introduction

Scholars of U.S. history have long been interested in understanding government policy creation in the late 19th- and early 20th-centuries because this was the formative period in the development of policies that regulate so many areas of the modern U.S. economy. A key feature of this period was the emergence of policies that regulated labor markets in a variety of ways, including minimum wages, maximum hours, child labor laws, workplace safety regulation, worker's compensation, and occupational licensing. Prior to the emergence of these policies, labor markets were largely unregulated, or "unfettered," as Price Fishback has put it.[1] Many economists have tried to understand how and why these policies emerged when they did, why they took the form they did, and their practical effect on labor market outcomes.[2]

An important interpretive issue concerns the extent to which these policies promoted efficient labor market outcomes. The evidence is mixed. Studies have shown that in some cases, competition among employers raised wages and improved working conditions, but that market failure was endemic to many labor markets, which moderated the salutary effects of competition.[3] Given these findings, one interpretation of labor market regulation is that it served, albeit imperfectly, to correct market failures, though its success might vary depending upon the particular form of regulation or the particular circumstances. However, another possibility is that labor market regulation serviced the narrow interests of politically influential groups, such as certain employers, workers, occupations, or labor unions. Under this interpretation, regulation

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[1] Fishback(1998).

[2] *Minimum wages*: Prasch(1999), Fishback and Seltzer(2021); *Child labor laws*: Brown et al.(1992); *Workplace health and safety regulation*: Aldrich(1982), Fishback(1987), Fishback and Kantor(1992), Stern(2003), Butler and Worrall((2008); *Worker's compensation*: Fishback and Kantor(1998); *Occupational licensing*: Law and Kim(2005), Law and Marks (2009)

[3] See, for example, Rosenbloom(1996); Fishback(1998); Butler and Worrall(2008).

may have actually promoted market failure in various ways, including by erecting barriers into labor markets. Economists have found it challenging to devise convincing tests of these competing hypotheses, which has impeded our efforts to understand the actual effects of these early labor policies.[4]

This paper proposes a novel approach to assessing the efficiency and distributional consequences of one important type of early labor policy – occupational licensing – based upon the practice of judicial review. Beginning in the late 19th century, many states enacted statutes that called for licensing of practitioners in a wide range of occupations.[5] These licensing statutes were exercises of police power by the states, which raised issues of constitutionality concerning the nature, extent, and scope of the police power. Many statutes were challenged on various constitutional grounds, particularly under the due process and equal protection clauses of the 14th amendment.[6] Well into the 20th century, state courts around the country were still deciding a number of issues regarding the proper police power role embodied in these licensing statutes.

Traditional police power jurisprudence permitted state legislatures to enact policies to protect public health, safety, and morals, a mandate that was extended over time to encompass a

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[4] See Olsen(2000); Law and Kim(2005), p. 725. Carroll and Gaston note, for example, "enormous" difficulties in measuring the quality of services received by consumers, which would permit a clean, market-based test of public vs. special interests[Carroll and Gaston(1981), p. 973. See also Kleiner(2000), pp. 197-98]; For attempts to distinguish between the two hypotheses using political supply and demand variables, see Smith(1987), Graddy(1991). The challenges of using standard methods are exacerbated during this early period because of limited data availability.

[5] Occupational licensing for certain occupations dates from the Revolutionary Era, but became widespread toward the end of the 19th century. See Friedman(1965); Zhou(1993); Law and Kim(2005); Law and Marks(2009).

[6] As we shall see shortly, challenges on Article 1, Section 10 contract clause grounds were infrequent. And challenges based on the privileges and immunities clause were largely neutered by the *Slaughterhouse* cases and *Bradford v. Illinois*. See, for example, Barnett(2016), pp. 116-17.

wide range of activities, including economic ones.[7] Broadly speaking, there were various bases for constitutional challenges to police powers legislation, but a key set of challenges to labor legislation involved interference with private rights to liberty and property, including rights to contract for labor. There were three important conditions for police powers legislation to be upheld by the courts. First, legislation could not unnecessarily or arbitrarily interfere with private rights, under the doctrine of *vested rights*.[8] Second, states were forbidden from enacting *class legislation*: treating one class of individuals differently from other classes.[9] Finally, legislation had to be rational, meaning that the policy needed to be appropriately targeted to legitimate police power objectives, especially protection of public health, safety, morals and economic welfare.[10]

A practical implication of applying these criteria was to strongly militate against laws exercising the police power that engaged in redistribution across individuals or classes, unless the public welfare was served.[11] Depending upon the type of labor legislation, redistribution could take a variety of forms, and during this period judges were keenly aware of this danger. For example, in the famous 1905 case of *Lochner v. New York*, the Supreme Court overturned a maximum hours statute that was enacted ostensibly to protect the health of bakers. In doing so, the majority of judges expressed concern that legislators harbored "other motives," likely view-

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[7] See, for example, Burdick(1921); McCurdy (1975), p. 974; Katz(2013), p. 280.

[8] Nourse(2009), p. 765.

[9] Many legal scholars have cited class legislation as an important factor for the courts of this era. See, for example, Gillman(1993); Saunders(1997); Nourse and Maguire(2009); Bernstein(2011), pp. 9, 14-16.

[10] Nachbar points out that so-called *rational basis review*, which requires appropriate tying of policy means to policy ends, dates from no later than 1877 with *Mugler v. Kansas*, 123 US 623(1887). See Nachbar(2016), p. 1632.

[11] See, for example, Gillman(1993); Sunstein(1987), p. 877.

ing the statute as anti-competitive, favoring certain bakeries over others.[12] Other forms of labor legislation received close scrutiny to see if they favored workers over employers, union workers over non-union workers, workers in one ethnic group over workers in another, male workers over female workers, and certain practitioners of an occupation over other practitioners.[13]

To the extent that judges overturned laws that engaged in redistribution, we may use the practice of judicial review to assess the distributional impacts of occupational licensing, which will shed light on the political determinants of occupational licensing. This strategy requires a set of comparable court rulings that exhibit variation in their police power treatment by the courts. In addition, we require comparable statutes subjected to judicial review that are distinguishable a priori in terms of their distributional effects. Court cases that review occupational licensing statutes satisfy both requirements. Focusing only on occupational licensing statutes allows us to control for a variety of factors that would otherwise have muddied the interpretation of the court rulings.[14] A sufficient number of court challenges to licensing statutes permits an econometric analysis of the determinants of court rulings, which is developed later in the paper.

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[12] Traditional accounts of this ruling have viewed it as a pure liberty of contract case, but a number of scholars have pointed out its redistributive aspects. See, for example, Gillman (1993), pp. 126-30; Amar(2005), p. 475; Bernstein(2011), pp. 26-7; Barnett(2016), p. 138. Randy Barnett points out that the two interpretations are not necessarily in conflict. Barnett (2014), pp. 224-25.

[13] The cases reviewing labor legislation during this period are numerous. For some of the more important cases prior to 1910, see *Ex parte Westerfield*(1880); *Barbier v. Connolly*(1884); *In re Jacobs*(1885); *Yick Wo v. Hopkins*(1886); *Millett v. People*(1886); *State v. Goodwill*(1889); *Ritchie v. People*(1895); *Holden v. Hardy*(1898); *Lochner v. New York*(1905); and *Muller v. Oregon*(1908).

[14] As will be discussed further below, much early labor legislation has been viewed by legal scholars through the lens of corporate interests vs. workers and especially, trade unions, which has complicated our interpretation of judicial rule-making. See, for example, Friedman (2001); Nourse(2009), pp. 775-79. Focusing on occupational licensing simplifies the interpretation of the rulings.

The other main reason to focus on occupational licensing statutes is to exploit a vast scholarly literature that essentially distills occupational licensing down to two possible competing interpretations. One is that it addresses an information asymmetry regarding the competence of practitioners. The other is that it serves to erect barriers to entry into an occupation, protecting incumbent practitioners and coincidentally, benefiting incumbent practitioners at the expense of others.[15] These two possibilities correspond neatly to public interest and special interest models of regulation. This study will exploit differences across occupations regarding the likely degree of information asymmetry, to permit examination of the connection between judicial review and the likely redistributional effects of occupational licensing.

**Occupational licensing in historical context**

Occupational licensing in the U.S. has existed since colonial times, but until late in the 19th century, the practice was largely confined to innkeepers and the medical and legal professions.[16] Toward the end of the 19th century and well into the 20th century, we witnessed a dramatic increase in state laws licensing a variety of occupations. The trend continued over time: by the mid-20th century, the number of state occupational licensing statutes totaled over 1,200, governing more than seventy-five different occupations.[17] Figure 1 shows the annual number of licensing statutes in five-year increments from 1886 through 1950. Since then, the expansion of occupational licensing has continued unabated.[18]

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[15] There is a vast economic literature on occupational licensing. See, for example, Adams et al.(2003); Carroll and Gaston(1981); Smith(1982); Graddy(1991); Kleiner(2000); Kleiner and Kudrle(2000); Law and Kim(2005); Law and Marks(2009); Kleiner and Krueger(2013); Peterson et al.(2014); Thornton and Timmons(2013).

[16] Friedman(1965), p. 494; *Virginia Law Review*(1973); Law and Kim(2005), p. 731; Spinden(2015), p. 642.

[17] Law and Kim(2005), pp. 725-26. See also Smith(1982), p. 119.

[18] By the turn of the 21st century, roughly 18% of all U.S. workers were directly affected by occupational licensing (See Kleiner(2000), p. 190). When Kleiner and Krueger conducted a

The initial increase in licensing statutes beginning in the 1880s was associated with both the emergence of new professional occupations and the increasing professionalization of many existing occupations. Economic studies of the era have concluded that the rise of occupational licensing addressed the pervasive issue of asymmetric information in occupational markets, as consumers found it costly to assess practitioner quality for the evolving occupations in the rapidly changing environment.[19] Under this view, licensing played an important efficiency-enhancing role, by signaling practitioner quality to consumers, allowing them to make informed decisions, and keeping competent practitioners from being driven from the market through adverse selection.

This interpretation stands in stark contrast to the findings of most economists who have examined occupational licensing in mostly contemporary settings and concluded that its main effect is to erect barriers to entry into occupations, allowing incumbent practitioners to monopolize the occupation. The evidence for this conclusion has primarily centered on effects on the prices of practitioner services, output of practitioner services, quality of those services, practitioner wages, and practitioner mobility.[20] In addition, a substantial public choice literature has attempted to connect licensing statutes to various political variables, including measures of the political power of occupational groups. The conclusions of this literature are broadly consistent with the special interest hypothesis.[21]

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survey for their study in 2008, almost 29% of their respondents were licensed(Kleiner and Krueger(2013)). Currently, the percentage might be closer to 33%(Edlin and Haw(2014)).

[19] See, for example, Smith(1982); Law(2004); Law and Kim(2005); Law and Marks(2009).

[20] *Prices*: Shepard(1978); Kleiner and Kudrle(2000); *Output*: Thornton and Weintraub (1979); Adams et al(2003); *Quality*: Carroll and Gaston(1981); Kugler and Sauer(2005); *Wages*: Shepard(1978); Paul(1982); Thornton and Timmons(2013); Kleiner and Krueger(2013); Gittleman and Kleiner(2016); *Mobility*: Pashigian(1979); Peterson et al.(2014).

[21] See, for example, Smith(1982); Graddy(1991); Howard(1998); McMichael(2017).

The conclusion that occupational licensing during the period in question was largely efficiency-enhancing probably obscures important differences across licensed occupations, which varied dramatically in terms of the potential efficiency gains from licensing. Some occupations are subject to greater information asymmetries, both because of greater inherent challenges in ascertaining practitioner competence and because having an incompetent practitioner is more consequential. To put it concretely, one worries a lot more about the competence of a neurosurgeon than about the competence of a barber. And this is both because the competence of a neurosurgeon is harder to gauge a priori and because the consequences could be devastating if you guess wrong. This means that in principle, there is more room for licensing to play an efficiency role in occupations like neurosurgery than in occupations like barbering.

For our purposes, the other important thing to keep in mind about occupational licensing is that it entails a wealth transfer, in at least two ways. First, it is a transfer of wealth among sets of practitioners; namely, between incumbent practitioners and those whose entry into the profession has been blockaded, even if for good reasons. It is this wealth transfer that may generate political support for licensing among incumbent practitioners: the benefited group. Second, it entails a potential wealth transfer between practitioners and consumers of those services. Both consequences are implicit in all studies of occupational licensing but in general are not directly addressed and certainly not quantified by those studies, likely for lack of data. This redistributional feature will be central to our later analysis of judicial review of licensing.

**Late-19th century judicial review**

In the late 19th-century, regulation of labor markets by states was based upon the police power, which originated in the federalist design of the new American republic and in particular,

the residual sovereignty enjoyed by states to regulate activities within their borders.[22] At the same time, the exercise of police power by the states was circumscribed by various provisions of the federal Constitution. These included the Contract Clause, which forbade states from enacting laws "impairing the Obligation of Contracts," and the Commerce Clause, which gave Congress the power to regulate interstate commerce.[23] In addition, the Constitution enumerated certain protected individual liberties in the first ten amendments (later known as the Bill of Rights) and in other amendments added over time, especially the 13th and 14th amendments that were passed in the years shortly after the Civil War. Section one of the 14th amendment forbade states from enacting or enforcing any laws that abridged the "privileges and immunities" of citizens, that deprived any person of life, liberty, or property without due process of law, or that denied any person "equal protection" under the law. These provisions came to impose potentially binding constraints on the exercise of the police power by the states.

The result was a system of judicial review that weighed the protection of individual liberties against the use by states of police power regulation to promote clear public purposes. Under 19th century jurisprudence, legislative acts were to be accorded strong deference by the courts. However, state courts consistently imposed two important limitations on police powers legislation: that it could not arbitrarily interfere with certain fundamental rights of liberty and property(so-called *vested rights*), and that it could not constitute *special* (or *partial*) legislation. The doctrine of vested rights stated that individuals who had acquired rights, under the law, to

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[22] Denny(1921), p. 173; Barnett(2016), p. 189-92; see also *Federalist*, no. 39, p. 285.

[23] Article 1, Section 10; Article 1, Section 8. The powers of Congress under both the Contract Clause and the Commerce Clause were upheld by the Supreme Court in the early part of the 19th century. Early important cases here were *Fletcher v. Peck*, 10 US 87(1810); *Dartmouth College v. Woodward*, 17 U.S. 481(1819); and *Gibbons v. Ogden*, 22 U.S. 1(1824), all of which imposed limits on the power of states.

present or prospective enjoyment of property – that is, whose rights had vested – could not be arbitrarily deprived of that property by legislative action.[24] This doctrine derived from Lockean views of natural rights and the so-called *law of the land*, which were both precepts of English common law.[25] Under the dominant Lockean view, depriving individuals of their natural rights – rights that pre-existed government – was considered a violation of the social compact.[26] Under the law of the land, rights could not be seized without a legal process, a precursor to the more familiar phrase "due process of law".

The limitation on special legislation meant that police powers could not single out any person or group of persons for special benefits or special burdens, or what was known at the time as *class legislation*. Aversion to class legislation also had its roots in English common law, as reflected in two related traditions: the opposition of English courts to royal grants of monopolies and other special trade privileges, and Lockean notions of equality under the law.[27] Of importance for our discussion, an important basis for opposition to the royal granting of privileges was that English common law considered a man's labor – specifically, freedom to practice a trade – to be a property right, which the royal granting of special privileges interfered with.[28] All of this played a central role in the Founders' debates over the political structure of the new Republic and

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[24] Haines(1924), p. 275; Howe(1930), p. 590; Saunders(1997), p. 262; Wood(1999), pp. 1440-42.

[25] See Corwin(1914), p. 247; Saunders(1997), p. 263. The expression "law of the land" appears in the Magna Carta, for protecting individual rights from expropriation by the Crown without a legal procedure, including a hearing and judgment. See Howe(1920), p. 586.

[26] Howe(1930), p. 590; Saunders(1997), p. 253.

[27] By the early 17th century, strong opposition to royal grants of monopolies were seen in both Parliament and the English courts(Benedict(1985), pp. 314-16). Equality under the law was famously stated by Locke as "one rule for rich and poor, for the favourite at court, and the country man at plough." See Locke, *Second Treatise*, "On the extent of the legislative power," S. 142. See also Saunders(1997), p. 255-56; Nourse and Maguire(2009), p. 963-64.

[28] Benedict(1985), pp. 315-16.

was cemented in the early 19th century by the decline of the Federalists and the rise of the Jacksonian Democrats.[29] By the time of the Civil War, it had become a part of the constitutional law of virtually every state in the Union.[30] Both vested rights and prohibitions on class legislation ultimately became fundamental components of 19th-century constitutional jurisprudence.[31] And both were ultimately enshrined in the federal constitution with the enactment of the 14th amendment in 1868 with its provisions for "due process of law" and "equal protection of the laws".[32]

Scholars have noted a common standard employed by 19th century courts for upholding statutes that interfered with vested rights and ones that constituted class legislation: whether that statute served some legitimate public purpose. By the end of the 19th century, judges had merged the two doctrines into a single one that prohibited legislation that promoted the interests of a particular class, rather than the interests of the public. Scholars have noted that the class legislation doctrine had two related but distinct meanings for state judges: it proscribed monopolies, and it protected minorities.[33] These meanings were originally interpreted as the perceived danger of

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[29] See Gillman(1993), pp. 32-3; Nourse and Maguire(2009), pp. 963-64.

[30] See Benedict(1985), pp. 321-22; Gillman(1993), p. 55; Saunders(1997), pp. 251-64.

[31] In 1924, constitutional scholar Edward Corwin called protection of vested rights "the basic doctrine of American constitutional law." Corwin(1914), p. 247. See also Haines(1924), p. 275. Mark Yudof has called the emergence of class legislation doctrine one of "chief constitutional development(s) of pre-Civil War America, while Howard Gillman has called it the "master principle of nineteenth-century American constitutionalism." See Yudof(1990), p. 1375, Gillman(1993), p. 125. See also Horwitz(1992), pp. 19-20, Bernstein(2011), p. 14. In practice, the principle was less-than-universal, generally applying only to adult white males. See Nourse and Maguire(2009), p. 959, and the cases cited there.

[32] Saunders points out that prior to the Civil War, judges viewed the doctrine of vested rights and prohibitions on special legislation as separate and distinct limitations on legislative power. See Saunders(1997), pp. 263-64. The due process of law and equal protection clauses in the 14th amendment reflect this distinction.

[33] See Nourse and Maguire(2009), p. 1006.

tyranny by the majority over minorities, but a number of scholars have suggested that it came to refer to abuse of the state political process by interest groups seeking political favors.[34]

**Judicial review of occupational licensing statutes**

Because the new occupational licensing statutes raised a number of constitutional issues, many became subject to legal challenge. Hundreds of challenges were brought in state courts during the period of this study, beginning in the 1880s. The court response was mixed, with most statutes being upheld on police power grounds, but a significant fraction being overturned. The overall court response likely reflects two factors. First, late-19th and early 20th-century courts operated under a powerful norm of judicial deference to legislative decision-making, making them reluctant to overturn unless there was clear evidence of unconstitutionality.[35] This principle was forcefully stated by Justice Harlan in the 1903 case of *Atkin v. Kansas*:

> "The public interests imperatively demand … that legislative enactments should be recognized and enforced by the courts as embodying the will of the people, unless they are plain and palpably, beyond all question, in violation of the fundamental law of the Constitution."[36]

Second, of specific relevance to occupational licensing, a dominant strain of 19th century jurisprudence clearly held that it was a legitimate exercise of police power, in occupations that required "technical knowledge and professional skill," to prohibit practitioners from practicing

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[34] McCurdy(1975); Sunstein(1988), pp. 878-79; Gillman(1993), pp. 7-8; Bernstein(2011), pp. 14-16.

[35] The precise timing of the emergence of this norm, reflecting what has come to be known as the *counter-majoritarian difficulty*[Bickel(1986)] has been the subject of scholarly debate, with most scholars agreeing that it grew in influence after the Lochner decision. See Friedman(2001), p. 1441; Bernstein (2011), p. 42; Barnett(2016), p. 129-34. However, there seems to be little doubt that it enjoyed much currency as early as the 1890s, if not before. See, for example, Friedman(2001), pp. 1436-47.

[36] 191 US 207(1903). For some examples of this reasoning in occupational licensing cases, see, for example, *Eastman v. State*, 109 IN 278(1887); *In re: Aubrey*, 36 WA 308(1904), p. 315; *State v. Evans*, 130 WI 385; Cooley, *Constitutional Limits*, p. 201.

without a license.[37] This principle was upheld by the Supreme Court in 1889 in *Dent v. West Virginia*.[38] And it was consistently acknowledged by the state courts as legitimizing occupational licensing statutes for various occupations, including physicians and dentists, which insulated those statutes from 14th amendment challenges.[39]

However, applying the principle in judicial review raised the important practical question for the courts of what constituted sufficient "technical knowledge and professional skill" that would justify a licensing law. While requisite technical knowledge and professional skill may have seemed obvious for physicians and dentists, the courts found it more challenging to apply the same principle to other occupations such as barbers, peddlers, and horseshoers. In these cases, the courts may have been less willing to uphold licensing statutes, both because such trades did not require obvious technical knowledge and professional skill and because the connection to public health and safety was less obvious.[40] Furthermore, the courts often voiced

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[37] See, for example, Tiedeman, *Limitations of Police Power*, section 87, p. 200:

> "Where the successful prosecution of a calling requires a certain amount of technical knowledge and professional skill, and the lack of them in the practitioner will result in material damage to one who employs him, it is a legitimate exercise of police power to prohibit any one from engaging in the calling who has not previously been examined by the lawfully constituted authority and received a certificate in testimony of his qualification to practice the profession."

[38] *Dent v. West Virginia*, 132 US 114(1889).

[39] For state rulings that invoked this principle, see, for example, *Eastman v. State*, 109 IN 278(1887)["It is… of high importance to the community that health, limb and life should not be left to the treatment of ignorant pretenders and charlatans", p. 279]; *Wilkins v. State*, 113 IN 514(1888) [citing *Tiedeman* verbatim, p. 515]; *State ex rel. Smith v. Board of Dental Examiners*, 31 WA 492(1903) ["It is of the highest importance to the state that suffering and afflicted humanity shall not be subjected to the care and treatment of unlearned and unskilled persons", p. 497]; *Ex parte v. Whitley*, 114 CA 167(1904)["This right of legislation is always recognized as a salutary and wise exercise of the police power of the state for the protection and safety of the public against unskillful and incompetent persons", p. 172]

[40] *People ex rel. Nechamcus*, 144 NY 529(1895)["the trade of the practical plumber is not one of the learned professions," Peckham dissent, p. 541]; *Wyeth v. Board of Health*, 200 MA 474(1909)["No argument has been addressed to us to show that the general embalming of dead

suspicion that the true motivation for the licensing statute was not to promote public health and safety but rather, to create an occupational monopoly.[41]

A close reading of court rulings and legal texts during this period thus suggests two basic judicial views of occupational licensing statutes, which varied across rulings and occupations. One is that they sometimes served an important welfare function by protecting public health and safety against incompetent and possibly unscrupulous practitioners. And in these cases, judges appeared to recognize that the need for licensing often arose because of asymmetric information in the practitioner labor market. The other view is that the statutes sometimes served to promote the monopolization of an occupation, which ran counter to public welfare. In the next section, we present empirical evidence that statutes were less likely to be upheld for occupations where licensing did not serve an important informational function. Thus, the courts' concern with sniffing out laws engaging in monopolization and redistribution may have translated into improved efficiencies in occupational markets overall.

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bodies is necessary for the preservation of the public health", p. 479]; *Bessette v. People*, 193 IL 334 (1901) ["It is impossible to conceive how the health, comfort, safety or welfare of society is to be promoted by requiring a horse-shoer to practice the business of horse-shoeing for four years, and submit to an examination by a board of examiners, and pay a license fee for the privilege of exercising his calling", p. 346]

[41] *Territory v. Newman*, 13 NM 98(1905) ["the right to regulate should be exercised only in the public interest and not to create monopolies." p. 103]; *State ex rel. Richey v. Smith*, 42 WA 237 (1906) ["We are not permitted to inquire into the motives of the legislature, and yet, why should a court blindly declare that the public health is involved, when all the rest of mankind know full well that the control of the plumbing business by the board and its licensees is the sole end in view." p. 248]; *Wilby v. State*, 93 MS 767(1908) ["the only purpose of the promoters of such legislation is to control the business to which it is directed, to shut out competition, create a monopoly." p. 773]; See also *People v. Ringe*, 197 NY 143(1910), p. 151; *People ex rel. Nechamcus*(Peckham dissent), 144 NY 529(1895), p. 543]

**Empirical analysis of judicial review of occupational licensing**

To provide further insight into the causes and consequences of judicial review in occupational labor markets, I have undertaken an empirical analysis of legal challenges to occupational licensing statutes brought in state supreme courts during the Gilded and Progressive Eras. This analysis is based on 587 cases brought in state courts between 1885 and 1911 in which state or municipal occupational licensing statutes were challenged on various grounds, both constitutional and non-constitutional.[42] The cases cover seventeen different occupations in forty-five states and the District of Columbia. The final dataset includes virtually all cases involving the selected occupations found in a search of occupational licensing cases in Nexis-Uni.[43]

The cases are divided into two categories based on whether a statute was challenged either on constitutional grounds or on some non-constitutional basis. A challenge was considered constitutional if it was based on a provision contained in either the federal constitution or the jurisdiction's state constitution. We focus specifically on challenges based on violation of either the due process or equal protection clauses of the 14th amendment, which comprised the vast

[42] The vast majority of the state cases in our dataset were decided in the state supreme court, with a handful decided in lower appellate courts. The dataset does not include any appellate cases that were later ruled on by a supreme court.

[43] The occupations are: architects, barbers, butchers, dentists, engineers, horseshoers, lawyers, liquor sellers, optometrists, peddlers, pharmacists, physicians, plumbers, railroad ticket sellers, teachers, undertakers, and veterinarians. A preliminary analysis based on a state-by-state Nexis search revealed that virtually all of the cases involved these seventeen occupations. The final dataset consists of cases in this time period relating specifically to occupational licensing that were uncovered by doing a joint search for "(occupation)" and "license" in Nexis-Uni. A handful of cases involving minor occupations (cotton buyers, insurance brokers, and public laundries) were excluded from the analysis. The states with the most cases were: New York(N = 52), Texas(N = 40), Missouri(N = 39), Illinois(N = 34), Minnesota(N = 31), and Pennsylvania(N = 29). The states with the fewest cases were: Wyoming (N = 0), New Mexico(N = 1), and Nevada(N = 1).

majority of constitutional challenges.[44] Grounds for challenging on state constitutional grounds tended to mirror grounds for federal constitutional challenges, because most state constitutions contained relevant clauses that were similar to clauses in the federal constitution, such as due process or equal protection.[45]

In addition, statutes could be, and were, challenged on a wide variety of technical non-constitutional grounds. These included: improper awarding of costs, challenging a statute's definition of what constituted suitable training, transferability of a license from one county to the next, alleged animosity of licensing board, alleged favoritism of licensing board, appropriate jurisdiction for licensing fee, appropriate mode of payment, appropriate definition of an occupation, and corporate status of practitioner.[46] In the analysis, I distinguish between constitutional and non-constitutional cases because in theory, we might expect the effect of court rulings to

[44] There were also a handful of challenges on commerce clause grounds, particularly for itinerant occupations like peddlers, liquor salesmen, and railroad ticket sellers. And there was one isolated challenge on contract clause grounds.

[45] Other state constitutional grounds for challenge were that it constituted special legislation, embraced more than one subject, or involved improper delegation of authority to a licensing board. See, for example: (a)Special legislation: *Ex parte Lucas*, 160 MO 218(1901); (b)More than one subject: *People v. Phippen*, 70 MI 6(1888); *State v. Sharpless*, 31 WA 191(1903); *State v. Doerring*, 194 MO 398(1906); (c)Improper delegation: *State ex rel. Williams v. Purl*, 228 MO 1(1910).

[46] Some example rulings in each of these categories are cited here (a)Improper awarding of costs: *People ex rel. State Board of Health v. Hettiger*, 150 IL(A) 448(1909); (b)What constitutes suitable training: *Smith v. State Board of Dental Examiners*, 113 KY 212(1902); *State vs. Oredson*, 96 MN 509(1905); *Wise v. State Veterinary Board*, 138 MI 428(1904); (c)Transferability: *Orr v. Meek*, 111 IN 40(1887); (d)Animosity: *Elmore v. Overton*, 104 IN 548(1886); (e)Favoritism: *Illinois State Board of Examiners of Architects v. People*, 93 IL(App) 436(1900); (f)Mode of payment: *Royall v. Virginia*, 116 US 572(1886); (g)Jurisdiction: *Puckett v. State*, 33 FL 385(1894); *Ex parte Bains*, 39 TX 62; (h)Definition of an occupation: *The Druggist Cases*, 85 TN 449(1886); *State v. Taylor*, 106 MN 218(1908); *People v. Ringe*, 197 NY 143(1910); *Cherokee v. Perkins*, 118 Iowa 405(1902); *Smith v. People*, 92 IL(App) 22(1900); (i)Corporate status: *In re Indian Brewing Co.'s License*, 226 PA 56(1909); *State v. McKnight*, 131 NC 717(1902). In addition, we observe many other miscellaneous grounds for non-constitutional challenge among the cases.

differ in the data. Importantly, a ruling on constitutional grounds is generally a ruling on either upholding the statute or overturning it on some fundamental grounds. So, for example, if a court rules on constitutional grounds against a defendant charged with practicing dentistry without a license in defiance of a licensing statute, this is interpreted as deferring to the legislative body that enacted the statute. Such a ruling in effect validates the motivations of the legislature, important factors being that the statute addresses an information asymmetry, is not deemed redistributional, or is unlikely to give rise to a monopoly.

A ruling on non-constitutional grounds, however, cannot be interpreted so easily. As we have seen, the non-constitutional grounds for a challenge were many and varied, and they often bore little relation to the redistributional effects of a statute. For example, in one case the legal question was whether a license was portable from one county to the next. In another case, the question was whether massage therapists should be treated as physicians. In both of these examples, the question was how the licensing statute should be interpreted, not whether the statute itself was constitutionally valid. The pattern of judicial review of these non-constitutional challenges will provide further evidence in our analysis below regarding the redistributional or monopolizing consequences of occupational licensing.

To implement my strategy, I require a way to distinguish statutes with significant informational functions from ones that were largely redistributional. For this, the occupations are divided into two categories, which I call *professional* and *non-professional*. Table 1 lists all occupations, the category they have been assigned to, and the number of cases involving each occupation. These categories are intended to reflect the degree of asymmetric information regarding practitioner quality, which was likely an important issue with the occupations listed as

"professional."[47] Table 1 indicates that the occupations most commonly subjected to challenge were physicians and peddlers, but all included occupations, except for optometrists, had at least five cases. Both professional(N = 321) and non-professional(N = 266) occupations are heavily represented. The categorization shown in Table 1 will be used in the base analysis, with various robustness checks, to be described below.

A closer look at the data reveals some suggestive patterns relating to the propensity for occupational licensing statutes to be overturned on constitutional grounds. Whereas 49 statutes involving non-professional occupations facing constitutional challenges were overturned, only eight involving professional occupations were similarly overturned. These numbers constitute 37% and 8% of the total challenges in each category respectively, indicating that the courts were significantly more reticent about overturning statutes involving professional occupations. Figure 2 reports the percentage of statutes overturned on constitutional grounds, by occupation, where the columns on the left are the professional occupations. Again, the evidence suggests that the courts were significantly less likely to overturn licensing statutes involving professional occupations.

For further evidence regarding the court treatment of these licensing statutes, we now turn to an econometric analysis of the court rulings. In this analysis, the dependent variable is the variable *Overturned*, which is a categorical variable that equals 1 when a practitioner successfully challenges a statute, and 0 otherwise.[48] The variable *Professional* is a categorical

[47] Law and Kim(2005), p. 729. See also Gabriel(2010) for an extended study of the asymmetric information problems associated with one of our professional occupations: pharmacists.

[48] The practitioner appeared in the cases in one of two ways: either as plaintiff, or as defendant. In the former case, the practitioner filed suit as a direct challenge to the statute. In the latter case, a suit would be brought by the state attorney general for violating the statute; say,

variable that equals 1 if the occupation is professional and 0 if the occupation is non-professional. In the analysis, this variable is modeled as the treatment effect in determining the outcome *Overturned*. Our sampling strategy – selecting all cases in Nexis-Uni with the key words "[occupation]" and "license" during the time period – is designed to avoid selection error.

My model controls for two important factors that could affect the propensity of the courts to overturn a licensing statute. The first is discrimination. A significant subset of the cases involved challenges to licensing statutes on the basis that they discriminated, on the basis of geography, demographic factors, or disability. Challenges where discrimination on these bases was explicitly invoked may have been treated differently by the courts if judges viewed them as involving fundamental issues of fairness or justice.[49] In order to control for the effect of these considerations on court rulings, I define a categorical variable *Discrimination* that equals 1 when a statute subject to a challenge allegedly involved discrimination against some group, and 0 otherwise.

A second factor is urbanization, a factor mentioned as potentially relevant in existing studies. Information asymmetries for professional occupations may have been more pronounced in cities because scientific advances were more likely to occur there.[50] On the other hand, the concentration of more practitioners in urban centers may have reduced the transaction costs of organizing politically. It then becomes an empirical question whether greater urbanization would increase the likelihood that licensing statutes would be overturned. To control for the possible effect on judicial review, we capture urbanization in two ways. $Urban^{2500}$ and

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for practicing without a license. In either case, the statute was considered upheld if the court ruled against the practitioner.

[49] *Bessette v. People*, 193 IL 334(1901).

[50] Law and Kim, p. 726.

*Urban*$^{20000}$ are defined as the percentage of total population in a state contained in cities with populations greater than 2,500 and 20,000, respectively.[51]

The models to be estimated are fixed effects models of the following specification:

$$Y_{it} = \beta_0 + \beta_1 X_{it} + \sum \gamma_j Z_{jit} + \alpha_i + \delta_t + \varepsilon_{it} \quad (1)$$

where Y, the outcome variable, is *Overturned* and X, the treatment variable, is *Professional*. The vector Z of control variables includes *Constitutional*, a categorical variable that equals 1 when the statute was challenged on constitutional grounds and 0 otherwise. The other control variables in Z are *Discrimination* and *Urban*$^X$, where X is the threshold population level (2,500 or 20,000) defining urbanization. $\alpha_i$ is a time-invariant state-level fixed effect, while $\delta_t$ is a time fixed effect. These fixed effects are included to capture unobservable differences across states and possible changes over time. For example, the effects of differences in judicial ideologies may vary across states for various reasons, including whether judges were popularly elected or appointed by the governor.[52] And some evidence from the rulings suggests the possibility of evolving judicial attitudes toward licensing statutes over time.[53]

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[51] These are standard measures of urbanization used in historical studies of 19th century United States in the scholarly literature [Schnore(1961); Williamson(1965); Law and Kim (2006)]. Other urbanization measures include SMSA populations [Riefler(1979)]; Hirschman-Herfindahl indices of urban concentration[Henderson(1988)]; and measures of urban primacy in national settings[Ades and Glaeser(1995); Henderson(2003)]. Data limitations make these inapplicable, or infeasible to implement, during the time period of our study.

[52] See, for example, Hanssen(2004).

[53] In the 1908 case of *Wilby v. State*, for example, the Mississippi supreme court stated, about a licensing statute for plumbers:

> "Legislation of this kind is on the increase. It is stealing its way into the statutes for the ostensible purpose of raising revenue for the state, when in truth and in fact the only purpose of the promoters of such legislation is to control the business to which it is directed, to shut out competition, create a monopoly…" (p. 773)

The quote suggests that this court, observing the recent wave of licensing statutes, was growing skeptical that they were not merely pretexts for creating monopolies.

Our estimation strategy involves performing standard parametric estimation for models with binary dependent variables, and then testing for the robustness of these results in several ways. The basic estimations will use the standard conditional logit and probit estimators, which assume that the disturbance terms $\varepsilon_{it}$ take on the logistic and normal distributions. Table 2 reports the results of logit estimations of model (5) on the entire sample.[54] The last three columns report the results using various combinations of state-level and time fixed effects. For comparison, the estimates of a linear probability model (LPM) are also reported. The main result of interest is the consistently negative and highly-significant coefficient on *Professional*. This result controls for whether a case involved constitutional issues, discrimination, and the degree of urbanization in a state, as well as unobservable cross-state differences and change over time. These results indicate that the courts were significantly less likely to overturn occupational licensing statutes for the professional occupations. Since these occupations would have been subject to greater asymmetric information, upholding occupational licensing would have promoted efficiency in these occupational markets.[55]

It is important to note that this finding controls for differences in the mix of constitutional and non-constitutional challenges, differences in cases involving discrimination, and the degree of urbanness of the state. Furthermore, the findings on the control variables seem sensible: the courts were less likely to overturn in cases involving constitutional challenges, and they were

[54] The pattern of results was extremely similar for the probit estimations.

[55] These results are also highly robust to different categorizations of professional vs. non-professional occupations. This especially includes classifying plumbers as professional, as judges appeared to disagree on the extent to which plumbing required special skills. See *State v. Gardner*(1898), pp. 606-07; *State ex re. Winkler*(1898), p. 176; *People ex rel. Nechamcus*(1895), p. 541. The results are also robust to the selective omission of individual occupations and the selective omission of cases from various individual states, including the states with the largest number of cases, including New York, Illinois, and Missouri.

more likely to overturn in cases involving discrimination. Finally, it is notable that there is little evidence that the degree of urbanization affected the courts' propensity to overturn. This result is consistent with our earlier argument that there may have been offsetting effects in urban areas.

As an additional check, I split the entire sample into constitutional and non-constitutional challenges and perform separate estimations on each sub-sample. These estimations permit the effect of all regressors to vary across the sub-samples, which allows us to observe whether courts treated constitutional challenges differently from mere procedural issues. Table 3 reports the results of a second set of estimations, all of which include state-level and time fixed effects. The key finding here is that the propensity of the courts to overturn statutes governing professional occupations only occurred with constitutional challenges. There is no evidence that professional status mattered to the courts in cases decided on procedural grounds. It should also be noted that as expected, the model of constitutional challenges performs considerably better in terms of overall explanatory power, as reflected in the (pseudo) $R^2$s.

Further interpreting the results shown in Table 3, Table 4 shows the predicted probabilities that statutes licensing occupations would be overturned on both constitutional and non-constitutional grounds for both occupational categories. These probabilities are based upon the logit models in columns (2) and (4). The first two columns of Table 4 indicate that the likelihood of being overturned on constitutional grounds was much lower for the professional occupations. Furthermore, for constitutional cases, the presence of a discrimination challenge increased the likelihood of being overturned, but especially for non-professional occupations. On the other hand, for non-constitutional challenges, neither occupational status nor a discrimination challenge has much effect on the likelihood of a licensing statute being overturned.

**Discussion and conclusions**

The central takeaway message of these findings is that during the late 19th- and early 20th-centuries, licensing statutes governing professional occupations were much more likely to be upheld than comparable statutes governing non-professional occupations. This finding is highly robust to a variety of assumptions about model specification, estimation procedure, the categorization of professional vs. non-professional occupations, and selective omission of individual occupations from the sample. If professional occupations involved greater information asymmetries and/or if statutes for non-professional occupations involved more redistribution, this result is consistent with state courts using the police power in one of two ways, or both. First, the courts discouraged redistribution across classes of practitioners, which was consistent with enforcing the due process and equal protection clauses of the 14th amendment along with adhering to a strong judicial norm that proscribed class legislation. Second, they apparently implemented the understood legitimate uses of the police power of promoting public health, safety, and welfare.

All of this is consistent with a view of the courts of this period as largely promoting efficient outcomes in occupational licensing markets. And it is also consistent with some existing scholarship on this period, which has documented that occupational licensing may itself have served an important efficiency function in addressing information asymmetries associated with new, emerging occupations.[56] However, our findings go beyond that scholarship by drawing a clear distinction between the new professional occupations and the more traditional, longstanding non-professional occupations. The results suggest that legislatures tried to help practitioners

[56] Law and Kim(2005); Law and Marks(2009).

in the latter occupations through licensing laws, but they were commonly rebuffed by courts concerned with redistributive legislation.

One outstanding question concerns how we reconcile this generally happy story with the dim view that most economists have of occupational licensing in current occupational markets. As we have seen, economists are broadly critical of present-day occupational licensing laws, which are generally considered to raise the prices of occupational services, have uncertain effects at best on practitioner quality, reduce practitioner mobility, and adversely impact vulnerable groups including minorities and immigrants. Put another way, the monopolizing, redistributional vices of licensing seem to dominate any informational virtues overall, even for occupations clearly characterized by asymmetric information, such as physicians[57], dentists[58], lawyers[59], and midwives[60].

As we have seen, legislatures continued to enact licensing statutes well after the end of the Progressive Era. Furthermore, occupational licensing has been extended to all sorts of occupations where it is difficult to argue that there are informational concerns warranting protection of consumers. And constitutional challenges to licensing legislation subsequently diminished over time, to the point that they have become rare.[61] How do we explain this subsequent history? One possibility is that constitutional challenges became rare as the constitutional issues were

[57] Kugler and Sauer(2005); Peterson, Pandya, and Leblang(2014).
[58] Kleiner and Kurdle(2000).
[59] Howard(1998).
[60] Adams, Ekelund, and Jackson(2003).
[61] Edlin and Haw(2014), p. 1129. See also Paul Spinden, who has recently argued that courts have conferred "virtually unfettered discretion" on states when it comes to enacting licensing statutes. Spinden(2015), p. 640.

resolved over time. Such a pattern would be consistent with standard law-and-economics models that predict reductions in litigation with reductions in legal uncertainty.[62]

However, another very different possibility is that over time, judges became more opposed to overturning redistributive labor legislation. One line of legal thought holds, for example, that after this period, progressive judges increasingly expressed their preferences for deferring to legislatures, which may have opened the door wider to redistributive legislation.[63] As opposed to the first model, this latter explanation has been embraced by a number of scholars in the legal realism school. These two hypotheses are distinguishable in the data, as we should be able to observe whether challenges continued to occur and if so, whether the courts upheld the challenges. Future research will examine subsequent patterns of litigation and court rulings to provide insight into these two distinct possible causes of the decline over time in rulings on licensing statutes.

Another implication is more prescriptive than positive: How *should* the current courts be treating occupational licensing legislation? The history described here suggests that selective overturning of licensing statutes can weed out redistributive statutes from ones that actually address information issues. This raises the question of whether courts could revive the application of class legislation review principles to occupational licensing.[64] Doing so need not place too much power in the hands of unelected judges.[65] Rather, instead of simply overturning licensing

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[62] Priest and Klein(1984); See also Hylton(1993).

[63] See, for example, Bernstein(2011); Barnett(2016).

[64] A revival of class legislation review principles has been proposed by a number of legal scholars to areas as diverse as racial gerrymandering, abortion, and sex and race discrimination. See Yudof(1990); Saunders(1997); Balkin(2007); Nourse and Maguire(2009).

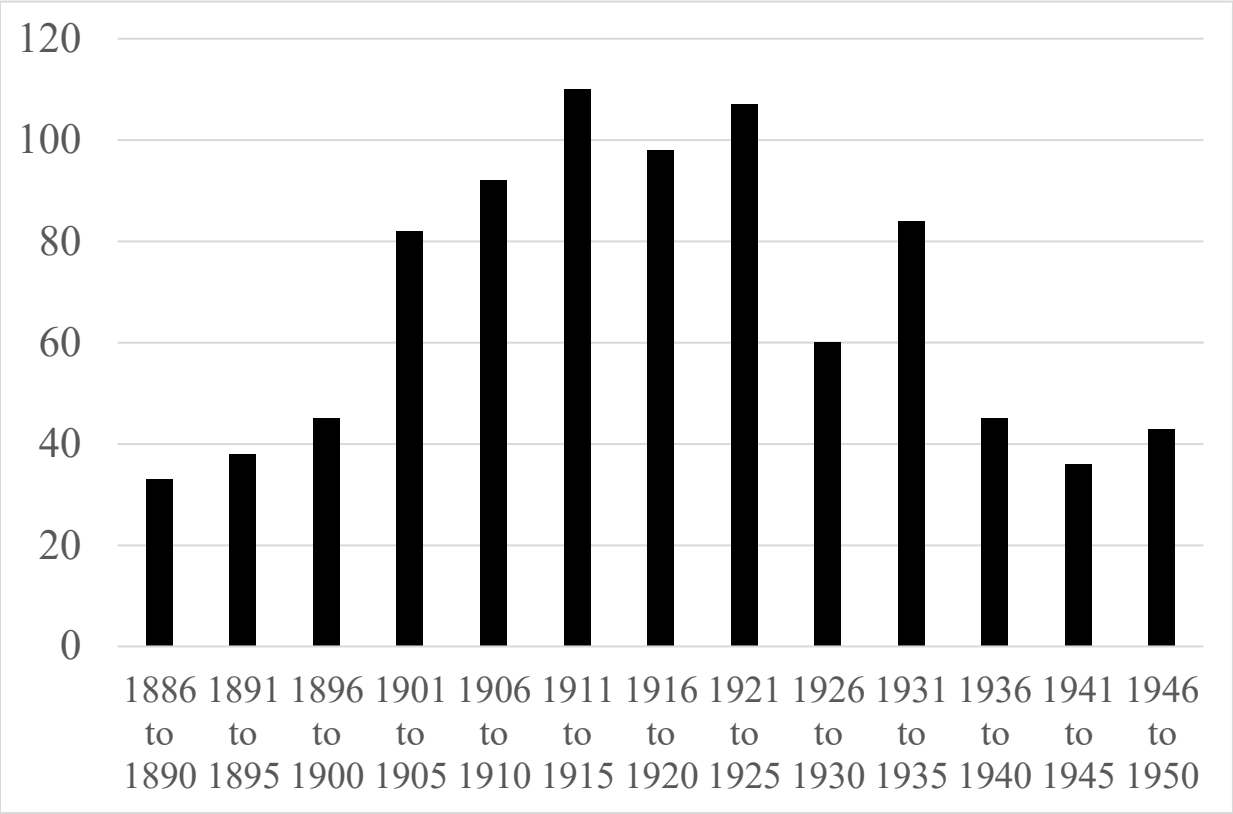
[65] This is, of course, a longstanding concern among many legal scholars known as the *counter-majoritarian difficulty*. See, for example, Friedman(2001). Currently, over half of all states select their supreme court judges by appointment. See Ballotpedia, https://ballotpedia.org/State_supreme_courts.

statutes that are redistributive on the face, courts could, for example, return questionable statutes to the legislature, asking for further justification or clarification, with the possible threat of non-enforcement.[66] This would seem to be a reasonable way to maintain legislative authority while providing meaningful, but not overly intrusive, judicial review.[67] Future research will develop this idea within the context of current occupational licensing laws.

[66] See Nourse and Maguire(2009), pp. 1005-11 for more details on how this could work.

[67] Such a system of judicial review could implement what Randy Barnett and others have called a "rebuttable presumption of constitutionality." See Barnett(2014).

Figure 1: Number of occupational licensing statutes enacted annually, five-year periods: 1886 to 1950




Source: Zhou, "Occupational power," p. 537.

Figure 2: Percentage of cases overturned on constitutional grounds, by occupation

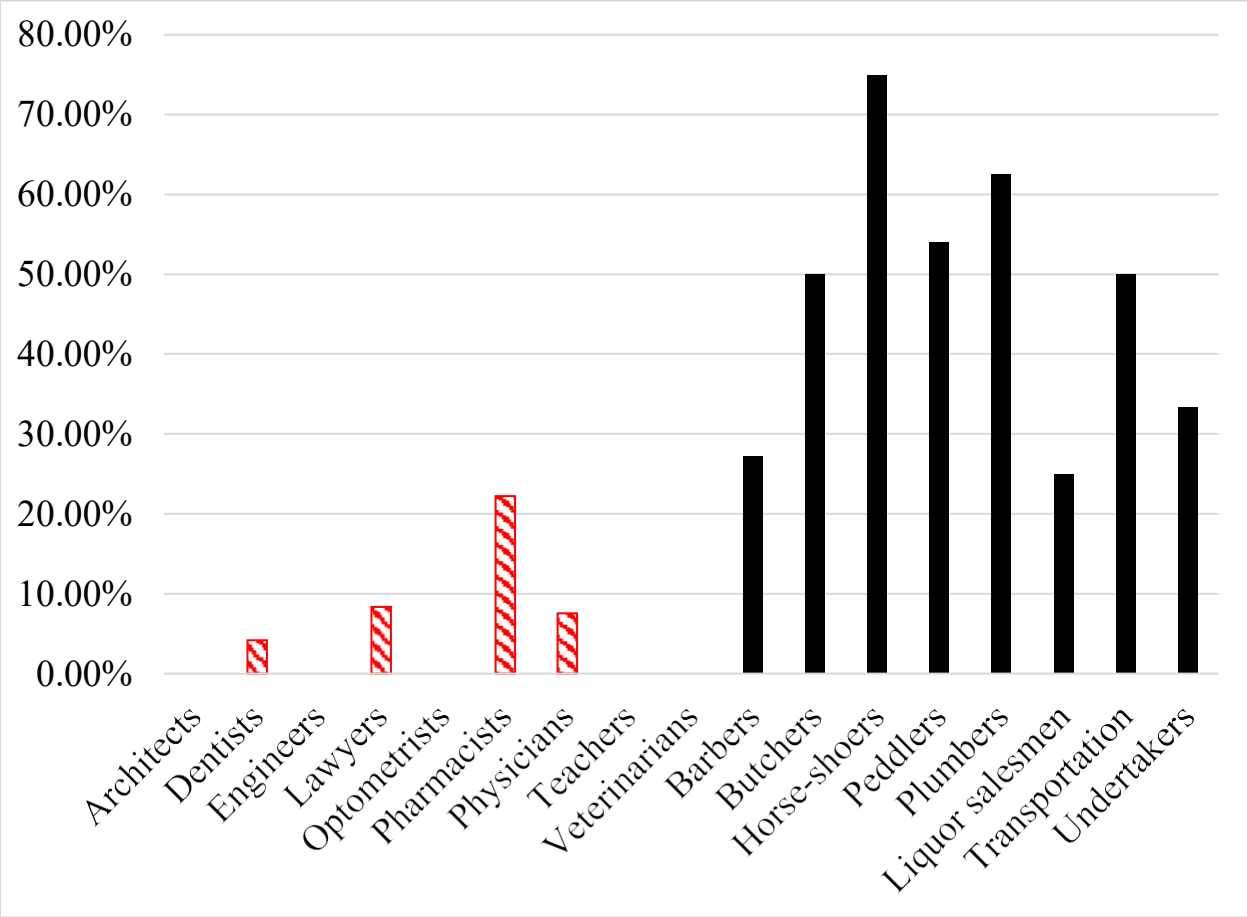


Table 1: Categorization of occupations

| Professional | | Non-professional | |
|---|---|---|---|
| Occupation | Number of cases | Occupation | Number of cases |
| Architects | 6 | Barbers | 14 |
| Dentists | 52 | Butchers | 17 |
| Engineers | 11 | Horseshoers | 6 |
| Lawyers | 24 | Liquor salesmen | 88 |
| Optometrists | 3 | Peddlers | 93 |
| Pharmacists | 29 | Plumbers | 33 |
| Physicians | 165 | RR ticket salesmen | 10 |
| Teachers | 24 | Undertakers | 5 |
| Veterinarians | 7 | | |
| TOTAL | 321 | | 266 |

Table 2: Propensity to overturn, Entire Sample

| Variable | LPM | Logit | | |
|---|---|---|---|---|
| | (1) | (2) | (3) | (4) |
| *Professional* | -0.184**** | -1.01**** | -0.853**** | -0.96**** |
| | (0.042) | (0.219) | (0.205) | (0.194) |
| *Constitutional* | -0.245**** | -1.39**** | -1.40**** | -1.25**** |
| | (0.047) | (0.262) | (0.25) | (0.235) |
| *Discrimination* | 0.120* | 0.724** | 0.816*** | 0.70** |
| | (0.052) | (0.323) | (0.310) | (0.286) |
| $Urban^{Small}$ | -0.011 | -0.053 | -0.035 | -0.001 |
| | (0.01) | (0.071) | (0.026) | (0.005) |
| *CONSTANT* | 0.963**** | 2.477** | 1.86*** | 0.543 |
| | (0.047) | (1.12) | (0.613) | (0.772) |
| State fixed effects | Yes | Yes | Yes | No |
| Time fixed effects | Yes | Yes | No | Yes |
| (Pseudo) $R^2$ | 0.243 | 0.186 | 0.153 | 0.117 |
| N | 588 | 571 | 572 | 587 |

Figures in parentheses are estimated standard errors.
*Significant at 10%; **Significant at 5%; ***Significant at 1%; ****Significant at 0.1%.

Table 3: Regression results, Constitutional vs. non-constitutional challenges

| | Constitutional | | Non-constitutional | |
|---|---|---|---|---|
| Variable | LPM | Logit | LPM | Logit |
| | (1) | (2) | (3) | (4) |
| Professional | -0.404**** | -4.57**** | -0.87 | -0.45 |
| | (0.068) | (0.97) | (0.58) | (0.28) |
| Discrimination | 0.128* | 1.49** | 0.067 | 0.35 |
| | (0.073) | (0.70) | (0.127) | (0.60) |
| Urbanization | -0.021 | -0.057 | -0.01 | -0.058 |
| | (0.22) | (0.25) | (0.019) | (0.091) |
| CONSTANT | 0.537 | -0.56 | 0.932 | 2.21* |
| | (0.487) | (4.94) | (0.273) | (1.30) |
| (pseudo) $R^2$ | 0.482 | 0.446 | 0.235 | 0.166 |
| N | 211 | 153 | 377 | 363 |

Figures in parentheses are estimated standard errors. All estimations include both state-level and time fixed effects.

*Significant at 10%; **Significant at 5%; ***Significant at 1%; ****Significant at 0.1%.

[a] McFadden $R^2$.

Table 4: Predicted probabilities of being overturned on constitutional, non-constitutional grounds: professional v. non-professional occupations

| | Constitutional | | Non-constitutional | |
|---|---|---|---|---|
| | Discrimination | No discrimination | Discrimination | No discrimination |
| Professional | 0.026 | 0.0059 | 0.892 | 0.853 |
| Non-professional | 0.717 | 0.364 | 0.928 | 0.901 |

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