Legislation, Regulation and Litigation: Demand for U.S. Legal Services in Historical Perspective*

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Abstract

Between 1970 and 1990 the U.S. legal services industry underwent a dramatic demand shift: its employment share more than doubled and the relative wages of lawyers rose by 60%, in contrast to stability before and after. We attribute this shift to three related changes in the legal environment: a wave of new legislation broadened the scope of the law, left its application uncertain, and enlisted private lawyers to enforce it through fee-shifting. Using over a century of data, we show that lawyers' employment and compensation track all three changes. Event studies link specific statutes to rising litigation and to demand for the fields of law they affect, while other explanations—lawyer quality, industrial composition, and technology—do not account for the shift. We estimate that legislative uncertainty accounts for roughly 13% of the demand shift—a cost of about $25 billion in 2024 alone.

JEL classifications: J2, J3, N3, K00.

Keywords: legal services, lawyers, legislation, litigation, labor demand.

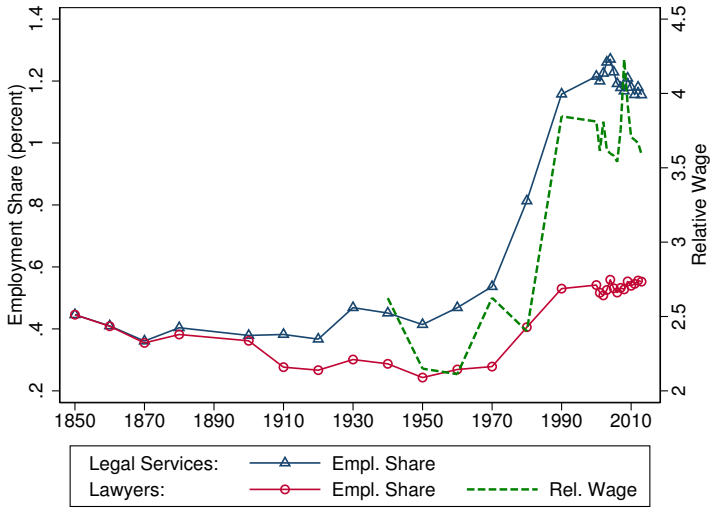
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1 Introduction

The U.S. legal services industry experienced a secular expansion in 1970–1990, more than doubling from 0.53% to 1.15% of private sector employment. As Figure 1 illustrates, this is in stark contrast to the relative stability in the employment share in the preceding 120 years—and to stability in the 35 years since. Over the same two decades, the relative wage of lawyers and law firm partners increased by 60%. The simultaneous increase in both the quantity and the price of legal services implies a relative demand shift that outpaces the growth in lawyer supply.

Lawyers occupy a unique place in modern society. Nearly every transaction of consequence—hiring a worker, resurfacing a road, dissolving a marriage—involves the legal system, and therefore lawyers. The resources an economy devotes to the legal profession are, in effect, a cost of operating under the rule of law. Whether those resources are well spent is an open question. If demand for lawyers grows because economic life has become more complex, then lawyers make new transactions possible, and their fees are a price worth paying. If instead demand grows because the law has become harder to navigate, or more rewarding to fight over, then the same fees represent a burden that pulls talent toward redistributive rather than productive work (Baumol, 1990; Murphy et al., 1991). The doubling of the profession's employment share between 1970 and 1990 reallocated roughly half a percent of the private-sector workforce toward legal services, and a far larger share of its most educated members. This paper studies the determinants of this demand shift.

Figure 1: Employment Shares and Relative Wages in Legal Services



Notes: Employment measured in hours, and the shares are within the private sector. The relative wage of legal services is the average wage in legal services divided by the average wage in the private sector, excluding legal services. Hours worked is sourced from the decennial Census from 1850–2000, and the American Community Survey from 2001–2015. The relative wage of lawyers series includes lawyers and partners, see Section 3.2 for more.

The increase in relative demand for lawyers is driven mainly by changes in the legal environment. Starting in the mid-1960s, the United States enacted a wave of landmark legislation: social regulation covering civil rights, environmental protection, workplace safety, and consumer protection. This legislation brought new domains of conduct within the reach of the law. However, much of it was written broadly, leaving key questions to be settled in court. Further, rather than expand the government's capacity to enforce these laws, Congress attached "fee-shifting" provisions to the statutes, enlisting private lawyers to enforce them. These three changes—an expansion in the scope of the law, an increase in its uncertainty, and stronger incentives for private enforcement—each raised demand for legal intermediation.

We provide theory and evidence linking the legal environment to demand for lawyers. The economics is simple: demand for legal intermediation arises from asymmetric information about the law—lawyers know how the law governs conduct, and most people do not. The market for lawyers therefore grows with the scope of the law, as more conduct becomes legally actionable, and with uncertainty about the law, as disputes require more costly effort. Litigation makes this link concrete: civil cases per capita track the employment share of legal services closely over the entire century. Whatever drives demand for lawyers operates through, or alongside, civil litigation.

To formalize these mechanisms, we adapt the litigation model of Hirshleifer & Osborne (2001), in which a plaintiff and a defendant choose costly effort in a legal battle. We extend the model with an entry stage and with a fee-shifting regime. Effort per case increases with stakes and uncertainty over the plaintiff's merit, while entry is determined by merit and the fixed cost relative to the stakes. The model then delivers sharp predictions for our three changes. An expansion of scope brings new disputes within reach of the law and operates purely on the extensive margin: more cases, with no change in effort per case. Uncertainty makes outcomes harder to predict, therefore raising both the number of cases filed and the effort spent on each. Fee-shifting lowers the plaintiff's cost of filing, as a winning plaintiff will recover fees from the defendant. This leads both sides to exert more effort. All three changes should therefore raise lawyers' employment, while only uncertainty and fee-shifting directly affect compensation, through effort.

To test our hypothesis, we combine multiple data sources spanning 1850 to 2015: administrative records, government surveys, and newly digitized directories. Before proceeding to the analysis, we document two further facts about the industry. First, a change in composition: the ratio of law firm partners to associates drops sharply between 1970 and 1990, consistent with an increase in the size of the market. Second, a rise in specialization: the share of lawyers reporting a specialization increased by 30 percentage points between 1972 and 1992. Together, the employment, compensation, composition, and specialization of the industry underwent substantial changes between 1970–1990,

in contrast to stability before and after.

Individual-level wage data show that the increase in relative wages is not explained by changes in lawyers' demographics. Instead, the rise reflects two forces. First, supply is slow-moving: entry into law is licensed, and although law school enrollment surged in the early 1970s, it plateaued by the end of the decade, with law-school capacity per capita roughly flat. The bulk of the wage increase comes in 1980–1990, after entry had stopped expanding. Second, on the demand side, uncertainty and fee-shifting raise the price directly by increasing the effort each case demands—the mechanism the model formalizes above.

The empirical evidence then proceeds in four parts, moving from the aggregate to progressively finer variation. First, we take the historical view. We assemble century-long time series on each of the three changes: pages of the Code of Federal Regulations (scope); the cumulative count of fee-shifting statutes (incentives); and the forward amendment rate of the U.S. Code (uncertainty). The "forward amendment rate" measures how often the laws in force in a given year are amended over the following decade—a proxy we developed for the uncertainty of the law, on the logic that unsettled laws are the ones later revised. In prediction regressions spanning more than a century, changes in each series precede changes in lawyers' employment share and relative wages. The pattern is exactly what the model implies: regulation predicts employment shares but not wages, while the fee-shifting and the forward amendment series predict both.

Second, we use the universe of federal civil cases to test the scope and fee-shifting mechanisms directly, in event studies around statutory changes to existing areas of law. The Civil Rights Act of 1991, which expanded the reach of employment-discrimination law, nearly doubles related filings within five years—an increase of 15,000 cases per year. The 1975 attorney-fee amendment to the Lanham Act is a rare instance of fee-shifting added to a long-standing statute, allowing us to separate fee-shifting from the underlying legislation. We also find that trademark filings double after fee-shifting is allowed—but from a much smaller base, resulting in an increase in 1,000 cases per year. This is relative to comparable federal commercial litigation with no changes in fee-shifting regimes. Both responses are the extensive margin of the model at work: expanding scope and lowering the cost of entry draw new disputes into court.

Third, we exploit exposure to landmark federal legislation. States more exposed to the Civil Rights Act of 1964, measured by black employment share, and to the Clean Air Act of 1970, measured by manufacturing in polluted counties, experience differential growth in lawyers' employment share after passage. For the Civil Rights Act, a standard deviation of exposure raises the lawyer employment share by 0.1 percentage points, roughly 30% of the mean employment share. More-exposed states also see differential growth in the corresponding federal litigation (cases specific to

civil rights or the environment), over the post-passage decades.[1] Together, these results localize the aggregate demand shift: the lawyer employment share grew most where exposure to federal legislation was greatest. This provides further evidence that specific laws, instead of forces common to all states, drove the rise.

Finally, we link laws to demand for specific types of lawyers. We digitize two sources—the Census of Services (1972–1992) and the Martindale-Hubbell legal directories (1931–1963)—to build a novel historical panel of lawyers by city and field of practice. Exploiting the staggered adoption of state policies, we find that each reform raises the share of lawyers in precisely the field it should: strict products liability in negligence and insurance law, unilateral divorce in domestic law, and banking deregulation in banking and corporate law. State legislative activity expanded in parallel with, and increasingly followed, federal legislation over this period (Angelucci et al., 2026), so this evidence identifies the same underlying shift in the legal environment that we establish in the aggregate. Changes in the law reshaped the composition of legal services, not just their level.

We rule out a number of alternative explanations. Growth in economic activity, firm density, and industrial composition do not account for the timing or magnitude of the expansion in legal services. We find no evidence of a change in lawyer quality, and no acceleration in law school fees, that could explain the increase in relative wages. Information and communications technology, which reshaped demand for skill in many sectors over this period, does not appear to have played an important role in legal services. The entry of women into law, though dramatic, tracks other high-skill professions and carries no differential wage premium. We do not find a role for changes in professional standards or an increase in political influence: the share of lawyers in Congress declined over the period.

The expansion of the law was a genuine social gain—new rights and protections that require legal intermediation to give them effect. But it was not costless, and the cost was amplified by the ambiguity with which the legislation was written and the government's limited capacity to enforce it. As a final exercise, we provide two back-of-the-envelope calculations of the "excess" cost of these reforms. The first focuses on uncertainty: under the assumption that the expansion of the law was socially beneficial but the increase in legislative ambiguity was not, we estimate that uncertainty accounts for roughly 13% of the increase in demand for lawyers, so that about $25 billion of the 2024 wage bill in legal services reflects excess costs.[2] The second calculation takes the increase in the quantity of legal employment as given, but treats the increase in relative wages as an unproductive

[1] We also consider geographic exposure to federal legislation. In Washington, D.C., the jurisdiction closest to the federal government, the legal services employment share rose from 0.8% to 4.2% between 1970 and 1990, more than five times the average state increase. This growth was in private-sector lawyers, not government lawyers.

[2] This estimate conditions on the growth in the scope of the law; without separating uncertainty from scope, the upper bound reaches $112 billion.

rent. This suggests a larger excess cost of approximately $75 billion per year, reflecting a transfer from consumers to suppliers of legal services.

Related literature. Economists have long asked why the U.S. has so many highly paid lawyers (Pashigian, 1977; Sander & Williams, 1989; Rosen, 1992; Hadfield, 2000)—but much of this literature was written in the middle of the very expansion it sought to explain. We contribute a long-run perspective on the market, and can test candidate explanations against more than a century of data.[3] Our explanation is closest in spirit to Hadfield (2000), who attributes high legal fees to the complexity and uncertainty of the legal process. We show when and why those features of the law intensified.[4]

Then, there are the questions of allocation of talent and demand for skill. Baumol (1990) argues that "the rules of the game" determine whether talent flows to productive or unproductive activity, and Murphy et al. (1991) formalize this idea, finding that countries with more lawyers grow more slowly.[5] We provide direct evidence on the mechanism within a single country: changes in the legal environment raised the returns to legal intermediation, and talent followed. In the canonical framework of Katz & Murphy (1992), rising relative wages of skilled workers reflect a secular demand shift, which the literature attributes chiefly to skill-biased technological change (Acemoglu & Autor, 2011). Lawyers fit this account poorly: their relative wages and employment share are flat or declining for most of the century, rise sharply in 1970–1990—including relative to other college graduates—and plateau thereafter, even as skill-biased technological change continued. Changes in the legal and regulatory environment can be equally important, and similarly persistent, drivers of demand for skilled workers. Gottlieb et al. (2023) make a parallel point for physicians and healthcare policy.[6]

Lastly, we contribute to a growing literature on the costs of legislation and regulation. Brooks & Liscow (2020) show that the same legislative wave raised the cost of building infrastructure, while Trebbi et al. (2023) find that lawyers rank among the occupations most intensively employed in regulatory compliance today. We quantify a cost that spans the entire economy: the resources devoted to legal intermediation.[7] Our results also offer a complementary perspective on Ash et al. (2024),

[3]The benefit of hindsight is not merely rhetorical. Pashigian (1977) attributes demand for lawyers to growth in real GNP, but output grows throughout our sample while the lawyers' share does not. Sander & Williams (1989) point to corporate demand, but industry's share of legal services income is roughly stable over the demand shift (Appendix F.1).

[4]Related recent work on the industry shows that lawyers and legal ideas shape judicial outcomes (Liu et al., 2025; Ash et al., 2026); that work takes the size of the profession as given, while we ask why it grew.

[5]This point is also made in Magee et al. (1989), though their focus is on lobbying.

[6]Such effects are more likely in activities where asymmetric information and trust govern relationships (credence goods); Philippon & Reshef (2012) and Boustanifar et al. (2017) make this point for finance.

[7]Legal services are a "critical input" in the sense of Dew-Becker (2023): an input to many downstream industries with few close substitutes, so that the sector matters far more than its modest cost share suggests.

who find that legislation that adds legal provisions raises growth across U.S. states, interpreting provisions as reducing contract incompleteness. We show that the legislative expansion carried a cost in lawyers' employment and remuneration—and that legislation written less completely is associated with slower growth in their data and with more lawyers in ours.[8]

The paper proceeds in three parts: Section 3 establishes the facts of the demand shift; Section 4 describes the changes in the legal environment and develops a theoretical framework linking them to demand for lawyers; and Section 5 presents the empirical evidence. Section 6 rules out alternative explanations, and Section 7 quantifies the excess cost of the demand shift.

2 Data and Institutional Details

2.1 Data Sources

We draw on several data sources to document the evolution of legal services in the U.S.[9]

Employment and Compensation We use the following micro data: the U.S. Censuses of 1850–2000, the American Community Survey (ACS) in 2001–2015, and the Current Population Survey (CPS) in 1967–2015, all of which distinguish individuals within an industry by occupation and other demographics.[10] We supplement the censuses and surveys with industry-level data from the Bureau of Economic Analysis (BEA) in 1929–2015. The BEA data have three main advantages over the survey data: (1) the data do not suffer from top coding and include all forms of compensation, (2) all workers are accounted for on a full-time equivalent basis, and (3) it is possible to distinguish proprietors and their income from employees and their compensation.

Specialization Data on lawyers' fields of specialization come from two sources: the Census of Services and the Martindale Hubbell Law Directories. The Census of Services is conducted every five years starting in 1967, but legal services firms are asked about lawyers' fields of specialization only in 1972–1992. We digitize the Census of Services publications to track the specialization of lawyers from 1972 to 1992 at the aggregate level and for the 28 states and the District of Columbia that are surveyed.[11]

[8] Consistent with Giommoni et al. (2025), who estimate that Italian GDP would be 5% higher if all laws were written as clearly as the constitution. Private litigation is, in part, how U.S. regulation is enforced (Shleifer, 2005), so some of this cost is the price of enforcement itself.

[9] We keep the data description to a minimum here and relegate additional details to Appendix A.

[10] We verify that the total number of lawyers (using sampling weights) in the Censuses and surveys is in line with data from the American Bar Association (ABA) from 1878 and on. The main disadvantage of these sources is the reporting of income: wages and other income are self-reported and top coded, i.e., the highest values are censored. In addition, it is difficult to distinguish between employees and proprietors, in particular, between associate lawyers who are employees and law firm partners and sole proprietors. Although some individuals report income as business income (in addition or instead of wage income), this distinction is insufficient to characterize the status of proprietorship.

[11] See Appendix A.6 for complete details on variables construction.

For the period of 1931–1963, we digitize the Martindale Hubbell Legal Directories, which include information on law firms' fields of specialization, biographies of lawyers, and the clients of law firms, across the entire United States.[12] This allows us to create an estimate of lawyers' specialization, by city and year, comparable to the Census of Services.

The LSAT, Law Schools, and the Bar We track the number of individuals that take the LSAT, Law School Enrollment and Law Degrees Awarded. Data on the LSAT come from White (1984) for 1947–1982 and then directly from the Law School Admission Council (LSAC) for 1987 on. The American Bar Association (ABA) provides enrollment and law degree statistics.

The ABA also accredits law schools, and therefore publishes a list of ABA-approved law schools in each year. We track the tuition of top programs, from Cass & Garvey (2003); Campos (2012). We also hand collect the course offerings at Harvard Law School, from 1880-2015, directly from the archived course catalog.[13]

Litigation Activity We collect three historical series on litigation: civil cases filed, criminal cases filed, and civil appeal cases filed. Data on civil and criminal cases filed in U.S. district courts are from the Historical Statistics of the United States (HSUS) (1941–1999) and the Administrative Office of the U.S. Courts (2000–2015). To extend the series historically, we use data on civil appeal cases from 1893–1989, also from HSUS.[14]

The three series above track litigation in the *aggregate*. We use case-level data from 1970–2015 from the Federal Judicial Center's Integrated Database (IDB). This includes all civil cases filed in federal district courts. The case-level data include the name of the case (i.e., the two parties involved), the date and district of filing, the "nature of suit" (the category used to classify civil cases filed in federal courts), and the outcome of the dispute.

Government Legislation, Regulation, and Fee-Shifting Our measures of government legislation and regulation come directly from the United States Code and the Code of Federal Regulations (CFR). The U.S. Code contains the general and permanent laws enacted by Congress, while the CFR contains the rules issued by federal agencies. The two are closely related: when Congress passes a law (Code), it typically delegates authority to an agency, which then writes rules to implement it (CFR).

For the CFR we use data on the number of pages in each year directly from the Federal Register Statistics, which is available starting in 1950. For the Code we use the point-in-time

[12] See Appendix A.7 for more details on the data collection and classification.

[13] See "Courses of Instruction," Harvard Law School, `https://listview.lib.harvard.edu/lists/drs-9045568`.

[14] Historical Statistics of the United States: Carter et al. (2006). Data from the Administrative Office of the U.S. Courts downloaded from `http://www.uscourts.gov/`.

editions assembled by Jeong et al. (2026), which are available every six years from 1926 to 1988 and annually from 1994. These editions include the full content of the Code, from which we measure its size and linguistic complexity. We also parse the amendment history recorded in each section of the 2015 edition of the Code, which allows us to create our own measure of legal uncertainty. Data on fee-shifting statutes introduced in the Code are from Derfner & Wolf (2012).

We also analyze specific state-level legislation that affects demand for lawyers. This includes states' adoption of strict products liability, unilateral divorce, and banking deregulation. For divorce and banking deregulation we take the adoption dates from Friedberg (1998) and Black & Strahan (2001), respectively. For strict products liability we date each state's adoption from the state-by-state survey of the case law and statutes in Vargo (1996) (Appendix Table H10).

2.2 Becoming a Lawyer and Practicing Law in the U.S.

Law is a licensed profession. In order to practice law in the U.S. one must take the Law School Admission Test (LSAT), enroll in a law school accredited by the American Bar Association (ABA), complete the three-year Juris Doctor (J.D.), and pass the bar examination of the state in which they intend to practice.[15]

This process took its current form over the first half of the twentieth century. Between 1850 and 1920 law schools were few, and most lawyers instead "read law" under a practicing attorney. The ABA was founded in 1878 and published its first accreditation standards in 1921, when it also began publishing a list of approved law schools (American Bar Association, 2020). Over the same period, law schools replaced the undergraduate LL.B. with the postgraduate J.D., and automatic admission to the bar upon graduation gave way to the written bar exam.

3 Facts

We use the data described above to establish the following facts.

3.1 The employment share of legal services more than doubled from 1970–1990.

Figure 1 depicts the evolution of employment shares of legal services and lawyers in private sector employment. We juxtapose the employment share of legal services with its relative wage, which we define below in Section 3.2. The most important feature of Figure 1 is the sharp increase of employment shares from 1970 to 1990, compared to the relative stability before and after this period.

[15] There are limited ways around this. An out-of-state attorney can be admitted for a single case. Many states also grant "admission on motion," which waives the examination for attorneys who have practiced for several years and are licensed in a state that extends the same courtesy. Since 2011, states adopting the Uniform Bar Examination accept each other's bar scores, but a lawyer must still be admitted separately in each state.

The employment share of legal services more than doubles during these 20 years, from 0.53% to 1.15%, after which it remains relatively stable, at 1.2% on average. For lawyers employed in legal services, the increase is from 0.28% to 0.53%.[16] The long run evolution of legal services' employment share is similar to the evolution of its wage bill share and value added share. Importantly, all these series increase significantly in the 1970–1990 period.[17]

3.2 Relative wages of lawyers and partners increased by 60% from 1970–1990.

Figure 1 shows that the relative wage of lawyers increased dramatically between 1970–1990. The increase is sharpest between 1980 and 1990; relative wages grew from 2.40 to 3.85. We start by defining the relative wage of lawyers as the ratio of the average labor compensation among all lawyers in legal services to average wages in all other industries. Then, we make an adjustment to deal with two data issues: (1) lawyers' income is likely to be top-coded in the Census/ACS, and (2) partner's income, a large portion of compensation in the profession, is not categorized as wage income. Therefore, we combine Census/ACS with BEA data to impute the relative wage of lawyers, inclusive of partner's income.

Appendix B.2 provides more details on the calculation of our relative wage series. Decisions on top-coding and proprietors income lead to change in levels, but not in the pattern exhibited in Figure 1. Lawyers' relative wage also grows compared to other high-skilled workers (Appendix Figure B4(c)).

3.3 Within-state changes explain all of the aggregate increase in employment and compensation

We now consider the contribution of compositional changes across states. State bar examinations are barriers to mobility of lawyers across state borders. This makes states a natural unit of observation, because changes in lawyers' employment within a state are likely mostly driven by new entry, and much less by mobility across states.

We decompose the changes in aggregate employment shares into between and within state changes using the following exact decomposition formula:

$$\Delta S = \underbrace{\sum_i \Delta n_i \overline{s}_i}_{\text{Between}} + \underbrace{\sum_i \overline{n}_i \Delta s_i}_{\text{Within}} , \tag{1}$$

[16] These numbers change little when calculating employment shares out of total employment, including the public sector. See Figure B1(b) in the appendix. Public sector employment during 1970–1990 slightly increases from 7% to 8% of total employment, and thus has little effect on the overall pattern.

[17] See Figure B1(d). The wage bill share and value added share overlap almost perfectly after 1980. The wage bill share and value added shares increase much more than the employment share in 1970–1990, commensurate with the increase in the relative wage during this period.

where ΔS is the aggregate change in the employment share of legal services over the period and i denotes a state. The first sum, "Between", captures the importance of compositional changes in state sizes, Δn_i, whereas the second sum, "Within", captures the importance of within-state changes in employment shares, Δs_i.[18]

Appendix Table B1 reports the results. The main takeaway is that factors that specifically affect demand for legal services and lawyers, and not economic activity in general, play an important role in explaining the aggregate changes. In particular, in 1970–1990, within-state changes account for virtually 100% of the aggregate changes. This may arise due to state-specific forces or federal-level changes that affect state-specific intensities. In contrast, factors that affect relative state sizes (employment), while keeping the proportion of lawyers fixed, are not important. Similarly, we find that within-state changes in relative wages matter much more than changes in the composition of states' relative sizes (Appendix Table B2).

3.4 The ratio of law-firm partners to associates halved between 1970–1990

Before 1900, legal services were provided virtually only by lawyers (Figure 2(a)). After 1900 the share of lawyers in legal services drops, first sharply to 72% in 1910, and then more gradually until it reaches 41% in 2002. The sharp drop in lawyers' share within legal services and the commensurate rise of the share of clerical and paralegal staff in 1900–1910 coincides with the rapid diffusion of early ICTs (Yates, 2000), but there is no large change between 1970–1990.[19]

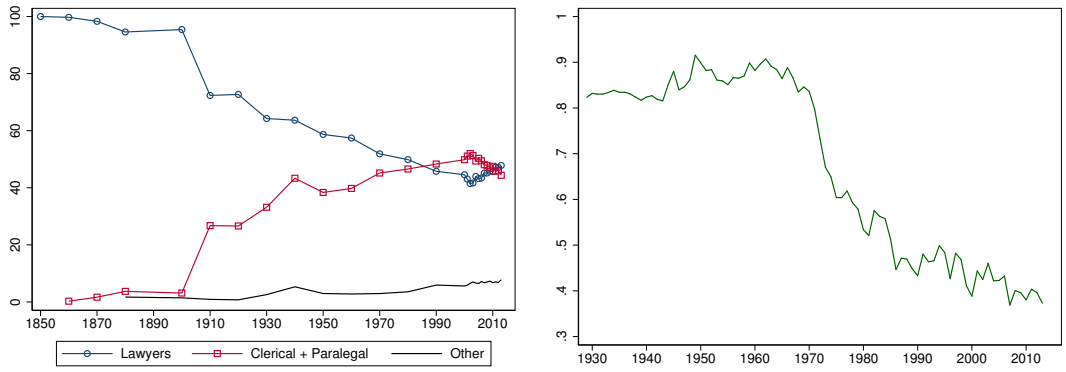
Figure 2(b) shows another important dimension in which the internal composition of legal services has changed: a marked decline in the share of law firm partners to lawyers in legal services. This ratio is stable around 0.85 until 1970, after which it drops sharply to 0.45 in 1990, after which it continues to decline moderately. The implied increase in the ratio of associate lawyers to partners and sole proprietors is consistent with an increase in the scope and market for legal intermediation after 1970. Garicano & Hubbard (2007) use the 1992 Census of Services Industries to show how the size of the market is associated with a higher ratio of associate lawyers to partners.[20] The time series trend we document, coinciding with an increase in the relative size of the legal services industry, is complementary to their cross-sectional analysis.

[18] $\overline{s}_i$ is the average employment share of legal services within state i during the period and $\overline{n}_i$ is the average employment share of state i.

[19] However, ICT does not explain the historical evolution of the share of lawyers within legal services, which we discuss in Section 6.

[20] In line with the information hierarchies theory of Garicano (2000), in larger markets there is a stronger incentive to delegate simpler and easier tasks to associate lawyers, leaving only the more difficult or complex tasks to partners.Garicano & Hubbard (2007) argue that their mechanism does not apply to clerical and paralegal workers in law firms due to legal limitations on the range of activities that such workers can perform. For example, they are prohibited from communicating legal advice directly to clients, which, they argue, would prevent hierarchies to expand through their level of employment.

Figure 2: Lawyers and the Composition of the Legal Industry



(a) Lawyers within legal services (%)

(b) Partners as Share of Lawyers

Notes: In (a), employment in the legal services industry is sourced from the decennial Census from 1850–2000, and the American Community Survey from 2001–2015. For (b), law firm partners are approximated by proprietors in legal services, from the BEA. Employment is in terms of full time equivalents.

3.5 Between 1970–1990, lawyers became more specialized.

We use the Census of Services to track the specialization of lawyers from 1972 to 1992. Table 1(a) documents that over this period lawyers have become much more specialized: the share of generalist lawyers declined by more than half from 58.2% to 28.3%. The increase in specialization—the majority occurring between 1977 and 1987—coincides with an increase in the relative size of the legal services industry. This increase in specialization is in contrast to relative stability in the 40 years prior, as we show in the accompanying exhibit (Table 1(b)).[21] The share of lawyers in "general" law decreases by about 5 percentage points in the 32 years in the Martindale-Hubbell sample, from 68.5% in 1931 to 63.5% in 1963.

The largest contributors to the increase in specialization between 1972–1992 are Negligence, Insurance, Banking, Corporate, and Domestic Law.[22] As in Section 3.3, we can decompose the changes in field shares into compositional changes in state employment of lawyers, and within-state changes in employment shares of each field. Across the U.S., lawyers became increasingly specialized, and increases in any given field are not driven by compositional changes across states (Appendix Table B3).

Finally, we examine the industry composition of lawyers' employment, between legal services,

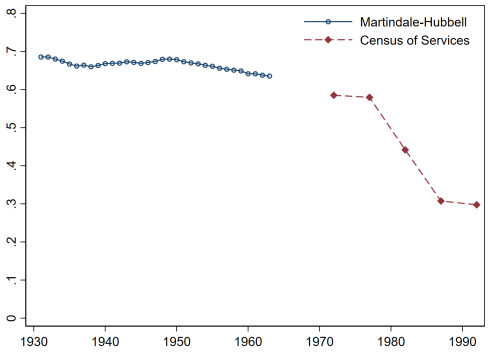
[21] We categorize lawyers into fields using the practice areas of their law firms, which we obtain from digitizing historical directories. See Appendix A.7 for more details.

[22] The other categories, which are not listed in the table, include Governmental, Environmental, Real Estate, Patent, Criminal, Taxation and Wills. Taxation and Wills are the only categories to experience a decrease in this period. Meanwhile Governmental and Environmental Law emerge as categories during the period (Governmental in 1977 and Environmental in 1992)—the Census only reports categories with at least 1% market share, otherwise it is delegated to "Other".

Table 1: The Rise of Specialization

% Field	1972	1977	1982	1987	1992	Δ
General	58.5	58.0	43.4	30.3	28.3	-30.2
Specialized	41.5	42.0	56.6	69.7	71.7	30.2
Specialization (ranked by change)						
Other	6.6	7.7	12.4	15.4	18.2	11.7
Negligence	7.1	7.0	9.9	12.7	13.4	6.2
Insurance	2.0	2.1	3.5	4.9	5.9	3.9
Banking	2.8	2.3	3.5	5.3	4.5	1.8
Corporate	6.5	5.8	7.1	9.1	8.0	1.5
Domestic	1.1	1.7	2.2	2.7	2.6	1.5

(a) Share of Lawyers by Field, 1972–1992



(b) Share of Lawyers in General Practice, 1931–1992

Notes: Panel (a) reports percent shares from U.S. totals of lawyers by field from the Census of Service Industries; General and Specialized sum to 100, and the fields of specialization sum to the share of Specialized. Only fields whose share rose by at least 1.5 percentage points over 1972–1992 are shown, ordered by the size of the change. Panel (b) plots the share of lawyers in general practice over 1931–1992, splicing Martindale-Hubbell (1931–1963) with the Census of Services (1972–1992). See Appendix A.6 and Appendix A.7 for more information on each data source.

industry and government. Appendix Figure B1(c) illustrates that most lawyers are employed in legal services, and that the evolution of their employment shares is different from those of lawyers in industry and in government.

3.6 The increase in wages is not explained by changes in lawyers' demographics

We use individual level wage data from the CPS to calculate the wage premium for lawyers and its evolution over time. The CPS's rich demographics let us ask whether changes in the composition of lawyers—gender, age, location—explain the aggregate rise in relative wages.[23]

We estimate the following regression, separately for each three-year period:

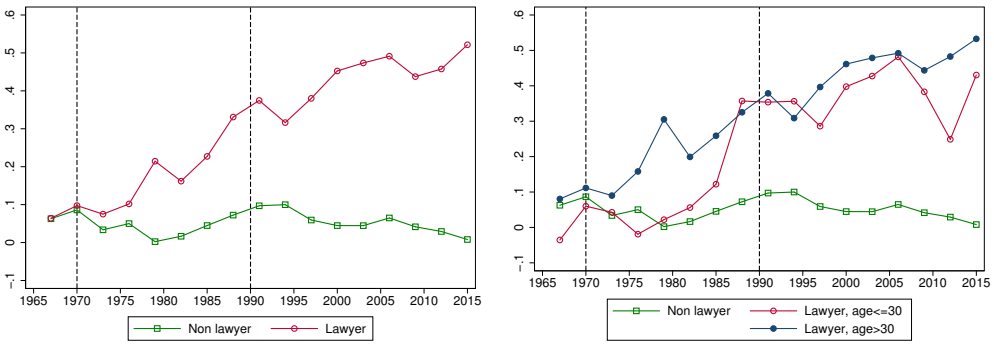
$$\ln w_{it} = \alpha_t \cdot \mathbb{1}_{it}^{\text{lawyer|legal}} + \beta_t \cdot \mathbb{1}_{it}^{\text{non-lawyer|legal}} + x_{it}'\gamma_t + \varepsilon_{it}, \tag{2}$$

where w is the annual wage, $\mathbb{1}_{it}^{\text{lawyer|legal}}$ is a dummy for individuals employed as lawyers in legal services, and $\mathbb{1}_{it}^{\text{non-lawyer|legal}}$ is a dummy for non-lawyers employed in legal services. The vector x_{it} includes dummies for education levels, race, urban, gender, marital status, Metropolitan Statistical Area (MSA), industry, and experience and experience squared.[24] The coefficients to these demographics can vary over time (γ_t), which captures, among other things, changes in returns to education.

[23]This does not include non-wage income, and wages are top-coded; this will lead us to underestimate lawyers' wage premium, given that lawyers' wages are more likely to be top-coded than most other occupations. We deal with top-coding as explained earlier in this section (multiplying by 1.5 through 2002).

[24]As in much of the literature, we use the age minus the implied number of years of education minus 6 to gauge potential labor market experience.

Figure 3: The Wage Premium for Lawyers



(a) Lawyers and Non-Lawyers (b) Lawyers: Incumbents and New Entrants

Notes: The figure displays the estimates of the wage premia for lawyers and non-lawyers in legal services (a), and the wage premia for lawyers above and under 30 years old (b). These two figures show the coefficients, α_t and β_t, from estimating equation (2) for each three year period, t (we pool data for consecutive three-year periods to attain better precision). The dependent variable is log(annual wages). Source: CPS March Annual Supplement, 1968–2017.

Figure 3(a) shows the wage premia for lawyers (α_t) and non-lawyers (β_t) in legal services. The wage premium for lawyers increases from 0.1 to 0.4 over the period of 1970 to 1990. Neither changes in observable demographic characteristics of lawyers, nor changes in the overall skill premium explain the large increase in the relative wage of lawyers. There is no trend for non-lawyers in legal services, consistent with the aggregate series, which uses a different data source.

Next, we investigate whether the trend in the lawyers' wage premium is consistent with barriers to entry. Figure 3(b) shows the wage premia for lawyers under age 30 (entrants) and lawyers older than 30 (incumbents). The larger wage premium for older lawyers is consistent with the existence of industry rents, as well as potential changes in fields of specialization from less to more lucrative fields. The younger lawyers do not see an increase in their wage premium until 1985, after which it catches up with that of the older lawyers.[25] This pattern is not consistent with a simple story of entry barriers restricting supply and thus causing higher wages for lawyers. If that were the case, then we would have observed a higher wage premium for young lawyers, as incumbents compete for their talent. In fact, law school enrollment expanded sharply in the early 1970s, and the number of ABA-approved schools continued to grow (Appendix Figure F4).

Young lawyers' wage premium starts to increase when their share of employment among lawyers starts to decrease. We observe the share of young lawyers increase from 14% in 1967–69 to 32% in 1979–81, and then decrease, returning again to 14% in the 1994–1996 period (Appendix Table F3). Once the share of young lawyers goes back to "normal" in 1994, their wage premium is roughly

[25]This is consistent with Sander & Williams (1989), who do not find increases in starting salaries for lawyers in large and elite New York law firms before 1984–86, which is the end of their sample.

indistinguishable from the older lawyers. This suggests the increase in entry (driven by observing the overall increase in industry wage premium) depresses the wage premium, until the industry reaches a new steady state.[26]

3.7 Taking stock

Workers in legal services roughly doubled their employment shares between 1970 and 1990. At the same time their relative wages increased and remain high after 1990. Simple economic theory implies that demand outstripped supply during this period. While supply partially caught up with demand in terms of quantities, the new equilibrium exhibits higher relative wages of lawyers and law firm partners. We illustrate that the demand shift was pervasive, exhibited within states and occupations, and not driven by changes in composition thereof. We also document organizational and compositional changes within legal services that are associated with the demand shift. We now turn to explaining these facts.

4 Demand for legal services

Demand for legal intermediation arises from information asymmetry: lawyers know how the law governs conduct, while most people do not. It follows that the market for lawyers grows with the scope of the law—as the law comes to govern more conduct, more activity requires legal intermediation. How the law is written and how it is enforced also matter, because they determine how many disputes are worth pursuing and how much effort each one demands.

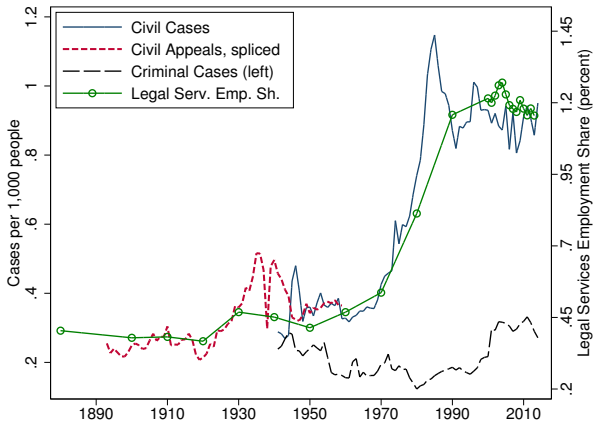
In Figure 4 we plot the intensity of civil litigation in U.S. federal courts alongside the employment share of legal services. The two series move together closely, while criminal cases exhibit no trend. This pattern is not driven by a change in how many lawyers each case requires: the number of lawyers per federal case filed is relatively stable throughout the sample.[27] Whatever drives the increase in demand for legal services, the mechanism likely operates through civil litigation or in conjunction with it.

We attribute the 1970–1990 demand shift to three changes in the legal environment, each beginning in the mid-1960s. First, an expansion in scope: a wave of legislation brought new domains of conduct within the reach of the law. Second, an increase in uncertainty: much of this legislation was written in broad, open-ended language, leaving contested questions to be settled

[26] An alternative explanation would be that younger lawyers are willing to accept a low initial wage in return for a high wage later in their career, consistent with complex rent sharing arrangements within law firms.

[27] Appendix Figure G3 shows that on average 2.5 lawyers are employed for every federal case filed. While this ratio increases a bit over time, from 2.4 in 1960 to 2.86 in 2000, this trend is weak compared with the changes in employment and litigation themselves. Although these are only federal cases, it is consistent with a fixed litigation technology over the sample.

Figure 4: Litigation and Legal Services Employment Share



Notes: Civil cases in 1941–1999 and Civil appeals from 1893–1994 are sourced from HSUS while cases 2000–2015 are from the Administrative Office of the U.S. Courts. Cases are normalized by total population in units of 1,000 people. The Civil Appeals series is proportionally spliced so that the average value in 1950–1959 fits the average value of Civil Cases in the same period. Appendix Figure G2 plots the civil and appellate series separately (without the splice). Legal services employment share is calculated as in Figure 1.

in court. Third, a change in lawyers' incentives: rather than expand public enforcement capacity, Congress enacted statutes to encourage private sector enforcement.

In the remainder of this section, we document each of the three changes. We then develop a theoretical framework that formalizes the link between the legal environment and demand for lawyers. We consider the model through the lens of litigation, due to the close link between civil litigation, relative wages, and employment of lawyers.

4.1 Scope: Major Legislation and Regulation

From the mid-1960s through the 1980s the federal government passed a series of landmark acts that came to be called "social regulation." Leading examples include the Civil Rights Act of 1964, the Voting Rights Act of 1965, the National Environmental Policy Act (NEPA) of 1969, the Occupational Safety and Health Act (OSHA) of 1970, the Clean Water Act of 1972, and the Consumer Safety Act of 1972.

We argue that these acts and the resulting regulations contributed to demand for legal services. For example, the Civil Rights Act, together with the Voting Rights Act of 1965, provided unprecedented protection against discrimination, and the ability to sue violations of equal opportunities and disenfranchisement. This increased the scope of the law, and therefore the demand for legal services. In 1970, 4,926 Civil Rights related cases were filed in federal district court. By 1990 there were 18,689 filings, an increase of almost 300% from 1970, and over 1500% from 1965.[28]

[28]This precedes the case-level data availability, we take this from an article on the effect of the Civil Rights Act

Another leading example is in environmental protection. By the 1960s the U.S. already had a long history of environmental legislation, concerning preservation, multi-use management plans and public health. However, these were specific and never as strong and broad as the NEPA of 1969, which Liroff (1976) considered "the most sweeping environmental law ever enacted by a United States Congress."[29] Title 40 of the Code of Federal Regulations (CFR) was introduced in 1970 with the formation of the EPA, and is dedicated to the protection of the environment. Currently, Title 40 consists of 37 volumes and more than 1,200 pages of federal regulations.

Figure 6(a) shows the overall evolution of the Code of Federal Regulations. There is a 160% increase in the length of regulatory code between 1970 and 1990; between the early 1960s and 1980 the length more than doubles.[30] The 1970s and 1980s were also the era of economic deregulation, when federal controls on entry and prices were dismantled in transportation, telecommunications, finance, and utilities. However, deregulation did not remove the industries in question from the reach of the law; instead it replaced one legal regime with another.[31] We see the stock of federal regulation continue to grow throughout the deregulation era, rather than shrinking.

Independent evidence of the law's expanding scope comes from legal education. We digitize the Harvard Law School course catalog from 1880 to 2010 and classify each course into one of ten fields.[32] Two patterns stand out. The number of distinct courses offered held near 35 for most of the twentieth century, then rose sharply after the mid-1960s—from about 55 in 1964 to 138 a decade later, and over 200 by 2010 (Figure 5(a)). This is not driven by enrollment, which were roughly flat over the sample.[33] At the same time, the composition of the curriculum shifted: the share of courses in government-related law—public law, economic regulation, and social regulation—held near 20% through the 1960s, then rose to 35% between 1970 and 1990 (Figure 5(b)). Harvard Law

on litigation from the US Courts website (`https://www.uscourts.gov/data-news/judiciary-news/2014/06/09/over-two-decades-civil-rights-cases-rise-27-percent`).

[29] Appendix Figure G4(a) shows that before the NEPA was passed there were no "Environmental Matters" cases. In 1972, soon after NEPA was passed (and the same year as the Clean Water Act), 126 federal civil cases were filed for "Environmental Matters." By 1992, 20 years later, that number had increased ten-fold to 1,252. We observe a similar pattern for cases filed for occupational health and safety matters in Appendix Figure G4(b). Before the OSHA was passed in 1970 this category of filings did not exist.

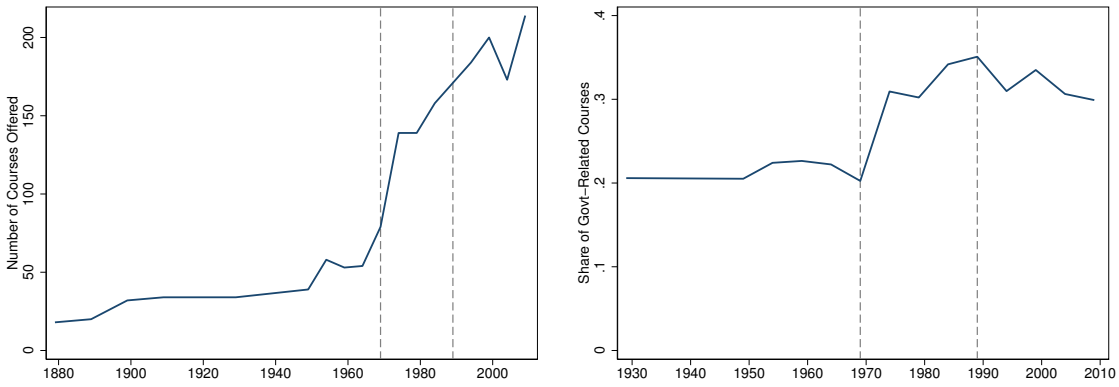
[30] We see a similar pattern with the number of words in the U.S. Code, we do not have a pages measure for that series (Appendix Table C3(a)).

[31] In effect, deregulation substituted rules of competition for administrative control of entry and prices (Kearney & Merrill, 1998). Where an agency had previously approved prices and terms ex ante, firms now had to work out what conduct was permissible ex post, often in court: legal scholars came to describe the outcome as "regulation by litigation" (Freyer, 2010). We provide more details on deregulation in Appendix E.

[32] We assign each course to a field following the catalog's own subject groupings, using a large language model to classify courses from their titles and descriptions. Government-related law comprises public law, economic regulation, and social regulation.

[33] J.D. enrollment was 1,596 in 1930, 1,607 in 1960, 1,784 in 1970, and 1,733 in 2010, so the rise reflects more courses per student rather than more students; Appendix Figure F5 plots courses per student.

Figure 5: Harvard Law School Course Offerings



(a) Number of Courses Offered

(b) Share of Government-Related Courses

Notes: Courses offered at Harvard Law School, hand-collected from the archived "Courses of Instruction" catalog. Panel (a) is the total number of distinct courses offered, 1880–2010. Panel (b) is the share of courses in government-related law, which we categorize as any courses related to public law, economic regulation, and social regulation. Dashed vertical lines mark 1970 and 1990. Appendix Figure F5 plots panel (a) normalized by J.D. enrollment.

retooled its curriculum toward precisely the fields that the social regulation of the era expanded.[34]

4.2 Uncertainty: Completeness of the Law

Much of the legislation of this era was written in broad, open-ended language. Legislation drafted this way is incomplete: statutes that fail to settle matters ex ante are litigated, clarified, and ultimately rewritten.[35] We develop a measure of the incompleteness of a statute by how often it is rewritten. The U.S. Code records, in each section's source credit, the date the section was enacted and every act that subsequently amended it. From this we construct a *forward amendment rate*: the share of Code sections in force in year t that are amended at least once over the following ten years.[36]

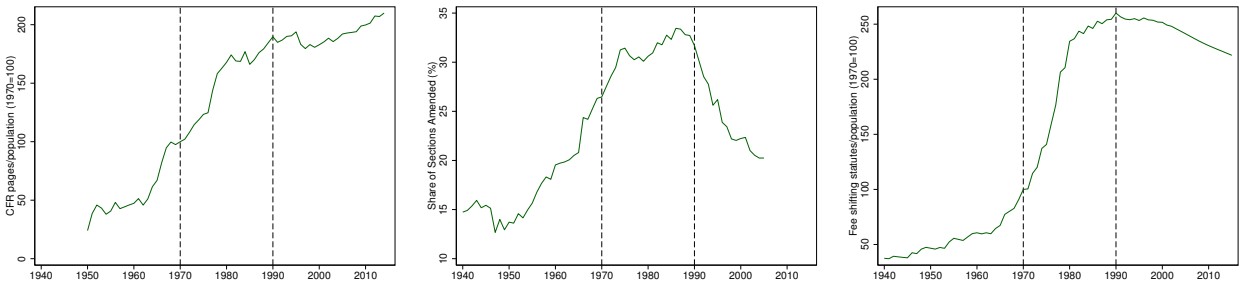
Figure 6(b) plots the series. Amendment activity is low and stable in the 1940-50s—about 15% of the sections in force in each year are amended within the following decade—then rises steeply from the mid-1960s. The forward amendment rate peaks at 34% in the mid-1980s, before falling back to 20% by 2005, the last year with a complete ten-year window in the 2015 edition

[34]Harvard's curriculum has long been a model for U.S. legal education, so its offerings track the field more broadly (Stevens, 1983).

[35]Congressional overrides of Supreme Court statutory-interpretation decisions surged over precisely this period (Eskridge Jr., 1991). The Civil Rights Act of 1991, which we study in Section 5.2, is an example: it rewrote Title VII to override a series of 1989 Supreme Court decisions. The converse also occurs—a statute whose meaning the courts settle definitively may never require amendment—so our measure understates incompleteness that is resolved entirely through precedent.

[36]This is similar in spirit to Ronchi & Salvestrini (2025), who measure the quality of judicial rulings in Italian courts by whether they are "appeal-proof." Our forward amendment rate analogously treats a section's subsequent amendment as revealing that it failed to settle matters ex ante.

Figure 6: Federal Regulation, U.S. Code, and Fee-shifting Statutes



(a) Pages of Federal Regulation (b) Future Amendments to U.S. Code (c) Fee-shifting Statutes

Notes: Figure (a) shows the number of pages in the Code of Federal Regulations (CFR), divided by the U.S. population, where we set the value in 1970 to 100. The source for CFR pages is the Federal Register Statistics (`https://www.federalregister.gov/reader-aids/federal-register-statistics`). Figure (b) shows the share of the sections of the U.S. Code in force in each year that will be amended within the next 10 years. We create this measure from the amendment histories recorded in the source credits of the 2015 edition of the U.S. Code. Figure (c) shows the cumulative introduction of legislation with fee-shifting statutes, divided by the U.S. population, where we set the value in 1970 to 100. The source for the timing of fee-shifting statutes is Derfner & Wolf (2012). For each figure, we demark 1970 and 1990 with dashed vertical lines.

of the Code.[37] The intensity of revision rises even more sharply than the share, as sections can be amended multiple times. Counting amendment events, the code in force receives about 20 amendments per 100 sections in 1950, 48 per 100 in 1970, and nearly 69 per 100 at the mid-1980s peak (Appendix Figure C1).[38] The law on the books around 1980 was thus exceptionally unsettled: within a decade, a third of its provisions would be revised. Notably, and in contrast to the secular growth of regulation, this measure of legal uncertainty falls after 1990.

Amendments measure incompleteness ex post, as revealed by subsequent legislative correction; a complementary measure looks ex ante, at the text of the legislation itself. Ash et al. (2024) track the number of "contingent clauses" in state legislation. Contingent clauses are stipulations in the legal text, conditioning actions and outcomes and therefore reducing ambiguity in the interpretation of laws (Battigalli & Maggi, 2002; Ash et al., 2024). The share of contingent provisions is another proxy for the uncertainty in the legislation—fewer contingencies imply more ambiguity in the law.[39]

[37] Because the window looks forward, the value at year t reflects amendments enacted through $t + 10$: the peak for the mid-1980s stock reflects revision activity concentrated between the mid-1980s and the mid-1990s.

[38] The same pattern holds by vintage: sections enacted in the 1970s and 1980s were amended within their first decade at two to three times the rate of earlier cohorts (Appendix Figure C2). The cohort version of the measure addresses a mechanical concern: the stock in force in the 1970s and 1980s was unusually young, and young sections are amended more often, so the forward amendment rate could rise with the age composition of the Code alone. The cohort measure compares sections at the same age, each observed over its first decade of life, and traces the same inverted U.

[39] The contingency measure is available only for state legislation; we treat it as a proxy for legislative drafting practice generally. State legislative activity expanded in parallel with federal activity—the average state introduced roughly 2,900 pages of legislation in 1970 and 4,500 pages in 1990, an increase of more than 50% (Appendix Figure C4(a))—and over the postwar period federal legislative activity increasingly predicts subsequent state legislation (Angelucci et al., 2026).

Appendix Figure C4(b) shows that the share of contingencies in state legislation falls from 20.1% in 1970 to 19.5% in 1990—in contrast to relative stability before 1970 and after the late 1990s. This is consistent with the forward amendment rate; legislation of the 1965–1990 boom was less complete than the legislation that came before or after.

4.3 Fee-Shifting: Incentives for Plaintiff's Lawyers

When Congress enacted major social regulation acts, there was a concern about the government's capacity to enforce them. In order to address this, Congress enacted "fee-shifting" statutes, which allow lawyers to collect fees from the losing party if they prevail in court. This is in contrast to the status quo in the United States, the so-called "American Rule," which dictates that lawyer fees are to be only paid by the party that hires the lawyer (Vargo, 1992). The typical fee-shifting statute stipulates that the plaintiff's lawyer will be paid by the defendant if the plaintiff wins the case.[40]

Fee-shifting provisions respond to an asymmetry in litigation resources between repeat-player defendants, typically well-resourced firms or government entities, and one-shot individual plaintiffs. Legislators worried that this asymmetry in resources would systematically suppress enforcement even where the underlying merits are strong. Farhang (2010) documents a legislative pattern consistent with the theory that fee-shifting functions as a substitute for, rather than a supplement to, public enforcement. Simply put, the intent of these statutes was to provide legal services for plaintiffs, thereby increasing demand for legal services.

Figure 6(c) shows that between 1970 and 1990 the number of fee-shifting statutes triples—from 58 statutes to 184. Much of the increase during this time period is due to statutes relating to consumer protection, environmental protection, civil rights or employment—i.e., in "public interest litigation." However, we also see an increase for categories that are more commercial in nature, for example, economic regulation and intellectual property.[41]

4.4 Theoretical framework

In order to frame the discussion, we borrow the litigation model of Hirshleifer & Osborne (2001), who model the interaction between plaintiffs and defendants in a legal battle. We extend the model to consider entry in the litigation stage, and then use this framework to measure costs, effort and outcomes under our three changes of interest: (1) the scope of the law, (2) the uncertainty of the

[40] One of the most notable examples of a fee-shifting statute comes from the Civil Rights Attorney's Fees Award Act of 1976, which allows the federal court to award attorney fees from the losing party to the lawyer of the plaintiff in civil rights cases. The intention was to create an incentive for attorneys to bring civil rights cases on behalf of plaintiffs. Some in Congress were against the bill, calling it "a bonanza to the legal profession" (Diamond, 1983).

[41] We report more statistics on fee-shifting statutes by type in Appendix Figure G1 (panels (a) and (b)).

law, and (3) fee-shifting regimes. While the model is in terms of litigation, we stress that the logic also extends to transactional legal work. We discuss that extension in Appendix D.5.

The model has two stages: entry into litigation, and effort in the litigation stage. Both entry and effort enter the demand function for lawyers. We begin with effort:

Litigation Effort Define the "Litigation Success Function" (LSF) as follows:

$$\frac{\pi}{1-\pi} = \Big(\frac{L_p}{L_d}\Big)^{\alpha} \frac{Y}{1-Y},$$

where π is the probability that the plaintiff (p) wins, L_p is the litigation effort of the plaintiff, L_d is the litigation effort of the defendant (d), α determines the sensitivity of the outcome to effort, and $Y \in (0,1)$ governs uncertainty about the merit of the plaintiff. If $Y = 1$ then the defendant is surely at fault, while if $Y = 0$, the defendant is surely not at fault. The cost of effort is specified as $C_i = \gamma L_i$. We think of C_i as payments to lawyers; this cost delivers C_i/γ units of effort in the legal battle. Lastly, the value of the lawsuit is a function of the probability of winning, the stakes J, and costs:

$$V_i = \pi J_i - C_i = \pi J_i - \gamma L_i\,,\ i \in \{p, d\},$$

where the stakes for the plaintiff are assumed to be positive, $J_p = J > 0$, and the stakes for the defendant are negative: $J_d = -J_p$.

If the two parties choose effort simultaneously to maximize their respective V_i, then the Nash equilibrium level of effort will be symmetric:

$$L = \alpha \frac{J}{\gamma} Y(1-Y).$$

Litigation effort increases with stakes J, sensitivity to effort α, and uncertainty about merit (as Y approaches $1/2$). Costs will increase with any of these three changes, as $C = \gamma L$.

Entry into Litigation Consider a population of potential disputes, each drawing merit Y from a distribution $G(Y)$ on $(0,1)$. Solving backward, the plaintiff files a suit only if litigation has positive value at the equilibrium effort levels. Litigation carries a fixed cost $F > 0$ which is incurred regardless of stakes or effort.

The plaintiff brings a case if the value is greater than the fixed cost of entry: $V_p^* = \pi J - \gamma L^*(Y) \geq F$. The optimal effort, L^*, therefore gives way to:

$$\varphi(Y) \equiv Y\big[1 - \alpha(1-Y)\big] \ \geq\ \frac{F}{J},$$

where the function $\varphi(Y)$ is the value of litigation per dollar of stakes. The entry threshold Y^* is the root of $\varphi(Y) = F/J$. The entry threshold is increasing in F and decreasing in J: high-stakes

disputes clear the fixed cost easily and are litigated even at modest merit, while low-stakes disputes are filed only if merit is high. Anything that lowers F/J expands the set of disputes litigated. Appendix D.2 derives Y^* in closed form and characterizes its comparative statics.

Total Demand Total demand for legal services in litigation is proportional to the number of cases filed times the average effort per case (see Appendix D.2):

$$\text{Total demand} \propto \underbrace{[1 - G(Y^*)]}_{\text{extensive margin}} \times \underbrace{\mathbb{E}[L^*(Y) \mid Y \geq Y^*]}_{\text{intensive margin}}. \tag{3}$$

4.5 Changes in the Legal and Regulatory Environment

We examine the three changes of interest—scope, uncertainty, and fee-shifting—through the lens of the model.

Scope An expansion in the scope of the law brings a new domain of human activity within the law's reach. The law maps each potential dispute into merit: a dispute over conduct that the law does not cover has no legal basis ($Y = 0$), no matter the harm, so the reach of the law corresponds to a mass point of G at $Y = 0$. An expansion of scope moves disputes out of this mass point, so that they draw positive merit. The entry threshold Y^* is unchanged, this raises the mass of disputes with $Y \geq Y^*$, increasing filings.[42]

Uncertainty When the statute does not clearly delineate what conduct is actionable, the law less clearly characterizes disputes. Therefore, more disputes carry intermediate merit, near $Y = 1/2$, rather than being clear-cut wins or losses. We model this uncertainty as a concentration of $G(Y)$ toward $1/2$.[43]

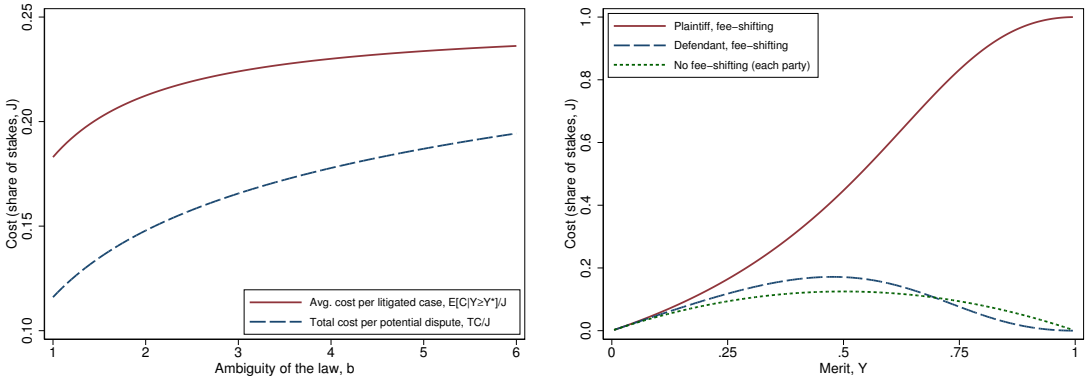
Because equilibrium effort $L^*(Y)$ is maximized at $Y = 1/2$, concentrating G toward $1/2$ raises average effort per filed case (the intensive margin). Provided the entry threshold lies below the contested middle, it also moves mass above Y^*, raising filings (the extensive margin).[44] Under this case, legislative ambiguity raises both the number of cases and the effort per case, and therefore unambiguously raises total demand for legal services. Figure 7(a) quantifies the cost consequences: moving from a uniform merit distribution to an ambiguous legal environment (Beta(b, b) with b rising from 1 to 6) raises the average cost per litigated case by 29% and total litigation costs by two thirds. Appendix D1 shows that the share of disputes litigated also rises.

[42] See Appendix D.3 for more details.

[43] A convenient parameterization is $G(Y) = \text{Beta}(b, b)$, symmetric about $1/2$, with b indexing ambiguity: $b = 1$ is uniform, and $b > 1$ concentrates mass toward $1/2$. More generally, an increase in legislative ambiguity is a mean-preserving concentration of G toward $1/2$.

[44] This holds whenever $F/J < (2 - \alpha)/4$, so that meritorious, closely contested disputes are litigated rather than deterred. See Appendix D.3 for the derivation.

Figure 7: Model Predictions on Litigation Costs



(a) Uncertainty (b) Fee-shifting

Notes: Panel (a) shows the average cost per litigated case, $E[C|Y \geq Y^*]$, and total litigation costs per potential dispute, as uncertainty increases. Merit is distributed Beta(b, b), and a higher b concentrates disputes toward the contested middle, $Y = 1/2$. Parameters: $\alpha = 0.5$ and $F/J = 0.25$, which imply $Y^* = 0.37$ (see Appendix D.3). Panel (b) shows equilibrium payments to lawyers, as a share of the stakes, in the Hirshleifer & Osborne (2001) model that we extended to add fee-shifting. More details on the fee-shifting model and further results of the numerical exercises are in Appendix D.4.

Fee-Shifting We extend the model to allow for fee-shifting in Appendix D.4. The equilibrium is no longer symmetric: the plaintiff exerts more effort than under the American rule, the defendant responds in kind, and the plaintiff's effort exceeds the defendant's by a factor of $1/(1-\pi) > 1$. Effort and total cost per case rise relative to the American rule at every level of merit (the intensive margin). Figure 7(b) shows how costs change with the merit of the plaintiff, Y. Moving from the 25th to the 50th percentile of merit raises total payments to lawyers by about a third under the American rule, but roughly doubles them under fee-shifting.

Fee-shifting also expands entry. First, because the plaintiff now bears only a fraction $(1-\pi)$ of her variable costs, her value of litigation rises and the entry threshold falls. Second, fee-shifting lowers the plaintiff's effective fixed cost F: the plaintiff pays little or nothing up front and her lawyer is compensated by the defendant upon a win, so the fixed barrier to filing falls toward zero. A lower F lowers Y^* and expands the set of disputes filed.

The theoretical results imply that by increasing predicted payments to plaintiffs' lawyers, not only did the fee-shifting statutes create an incentive for private sector lawyers to represent plaintiffs, they also increased total costs. This includes the equilibrium response—lawyers of the defendants also increase effort across a range of Y. Indeed, when fee-shifting statutes were debated in Congress, opponents voiced concerns over an increase in legal costs (Diamond, 1983).

5 Empirical Evidence

We present the empirical evidence in four parts, moving from broad aggregates to progressively finer variation. We begin with the aggregate time series, relating lawyers' employment and compensation to our three measures of the legal environment over more than a century. We then exploit variation arising from litigation responses to specific statutory changes, cross-state differences in exposure to federal legislation, and, finally, state policies that shift demand for specific fields of law. As the variation narrows, identification sharpens—at each step we trade coverage of the aggregate demand shift for a tighter link between specific changes in the legal environment and demand.

5.1 Historical Regressions

Figure 6 suggests that the timing of major legislation and regulation, the uncertainty inherent in the new legislation, and the attached fee-shifting statutes, align with the structural change we observe in the legal services industry. We confirm this with a set of historical regressions.

Empirical Strategy We fit prediction regressions, where we regress future changes in the outcomes of interest on past changes in the legal environment:

$$\Delta y_t = \alpha + \beta \Delta x_{t-5} + \varepsilon_t, \tag{4}$$

where Δy_t are changes from t to $t+5$ and Δx_{t-5} are changes from $t-5$ to t. We compute Newey-West standard errors that allow for autocorrelation up to 5 lags and are robust to heteroskedasticity.[45] All of the series are normalized to have mean 0 and standard deviations of 1. The regulation and fee-shifting series are cumulative stocks, so we use them in changes. The forward amendment rate (Figure 6(b)) is different: it is already a flow. We therefore use its lagged level: the forward amendment rate in $t-5$ measures the change in amendments between $t-5$ and t, and is used to predict changes in y between t and $t+5$.

Results Table 2 presents the results of estimating Equation (4). All three historical series are positively correlated with our outcomes of interest. These correlations are almost always statistically significant. In contrast, other control variables (i.e., measures of taxes, innovation, and economic activity) are not consistently associated with these outcomes.[46]

Panel A shows the results for employment shares and composition of lawyers. A standard deviation increase in federal regulation predicts a 0.4 standard deviation increase in lawyers' employment

[45] The results are robust to using 4 or 6 year lags instead of 5 years (for both variables construction and standard error calculation).

[46] See Appendix Table H1 for the coefficient estimates. Appendix Table H2 adds civil litigation as a predictor and Table H3 uses legal services industry outcomes (instead of only lawyers within).

shares over the next five years. A standard deviation increase in the cumulative fee-shifting statutes predicts an even larger effect—0.7 standard deviation increase in lawyers' employment shares. The increase in uncertainty, as measured by the forward amendment rate, is positively correlated, though not statistically significant. The large effects on quantity of lawyers are consistent with our claim that changes in the legal environment made for a larger market for lawyers. The composition results (Columns (4)-(6) of Panel A) show similar results—a standard deviation increase in any of the legal-environment variables predicts a 0.3-0.4 standard deviation increase in lawyers per partner. This is consistent with the market-size mechanism of Garicano & Hubbard (2007) discussed in Section 3.4: as changes in the legal environment expand the market for legal services, partners leverage their expertise over more associates.

Panel B in Table 2 shows the relative wage outcomes, which also show positive correlations for fee-shifting and uncertainty. The pages of federal regulation show a small and insignificant effect on wages. Consistent with the theoretical framework, the regulation series is strongly correlated with future employment, but does not have a direct link with wages (effort, in the model). Meanwhile fee-shifting and uncertainty, which have a clear link with total cost (Figure 7) exhibit a strong effect on wages. A standard deviation increase in fee-shifting is followed by a 0.7 increase in lawyers' relative wage in the next 5 years, while a standard deviation in the forward amendment rate is similarly followed by a 0.6 standard deviation in wages (Panel B, Columns (2) and (3)). The magnitudes for relative wage that include proprietors income are slightly smaller in magnitude, but qualitatively similar.[47]

The robust relationship between these series provides suggestive evidence that changes in the legal and regulatory environment from the mid-1960s through the 1980s led to a major demand shift for legal services. But these are aggregate correlations. In the rest of this section we sharpen the identification, exploiting variation across individual statutes and states to move from correlation toward cause.

5.2 Legislation and Litigation Activity

We use case-level data from district courts to study the relationship between legislation and litigation activity directly. The objective of this exercise is to identify the relationship between the changes in the law and demand for lawyers, as proxied by litigation. Litigation provides a useful setting because it is easy to measure: cases are filed, categorized, and can be linked to specific legislation.

Figure 4 shows the change in litigation activity in the aggregate, and Appendix Table G1 shows

[47] Proprietors' income is measured with more noise than wages: it mixes returns to labor and ownership and is reported less consistently across sources. See Appendix B.3 for how we construct the partner income series.

Table 2: Historical Regressions

	Panel A: Employment and Composition					
	Δ Lawyer Emp. Share$_t$			Δ Associates per Partner$_t$		
	(1)	(2)	(3)	(4)	(5)	(6)
Δ Federal Regulation Pages$_{t-5}$	0.404***			0.377**		
	(0.113)			(0.153)		
Δ Fee Shifting Statutes$_{t-5}$		0.712***			0.356**	
		(0.113)			(0.141)	
Forward Amendment Rate$_{t-5}$			0.275			0.317**
			(0.235)			(0.131)
R-squared	0.64	0.59	0.23	0.17	0.14	0.11
Observations	54	91	91	54	80	80
	Panel B: Compensation					
	Δ Rel. Wage$_t$			Δ Rel. Wage (with income)$_t$		
	(1)	(2)	(3)	(4)	(5)	(6)
Δ Federal Regulation Pages$_{t-5}$	0.118			0.039		
	(0.098)			(0.239)		
Δ Fee Shifting Statutes$_{t-5}$		0.674***			0.484**	
		(0.101)			(0.191)	
Forward Amendment Rate$_{t-5}$			0.648***			0.335
			(0.196)			(0.237)
R-squared	0.63	0.58	0.55	0.39	0.43	0.35
Observations	54	69	69	54	69	69

Notes: This table reports the estimates of Equation 4. The dependent variables are changes in lawyers' employment shares, ratio of associate lawyers to law firm partners, or relative wages from t to $t+5$; predictive variables are in changes from $t-5$ to t. The predicted variables (federal regulation pages, fee shifting statutes, and forward amendment rate) are standardized. Each specification also controls for changes in the top marginal tax rate, top corporate tax rate, firms per capita, and patent application intensity, whose coefficients are suppressed here (reported in Appendix Table H1). Standard errors are Newey-West with up to five lags and robust to heteroskedasticity. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

the change in litigation by type. Federal civil cases are linked to legislation through "nature of suit" codes. These codes are generally created only after a statute is passed, therefore by definition the litigation activity will not exist before the law is created. Instead, we study instances in which an existing area of law was substantially changed, and ask how litigation responded. We take two case studies in this spirit, which relate to two different changes of interest: scope and fee-shifting.

Empirical Strategy Our empirical strategy is an event study at the nature of suit level.[48] We track the number of cases brought under a treated suit type, relative to untreated control suit

[48]The original data is at the case level, and each case i is associated with a district, d, nature of suit, n, and filing date (year), t. For the purposes of the analysis we aggregate the case to the nature of suit-year level, nt, as that will be the variation in the policy change.

types, before and after a reform enacted in year t^*:

$$Y_{nt} = \sum_{\substack{\tau=-6 \\ \tau \neq -1}}^{12} \beta_\tau \left[\text{Treated}_n \times \mathbb{1}\{t = t^* + \tau\}\right] + \theta_n + \gamma_t + \epsilon_{nt}, \tag{5}$$

where Y_{nt} is the number of cases filed in federal court under nature-of-suit code n in year t, Treated_n is an indicator for the treated nature-of-suit code(s), and $\mathbb{1}\{t = t^* + \tau\}$ indicates that year t is τ periods from the reform year t^*. We include fixed effects for the filing year, γ_t, and nature of suit, θ_n. The coefficients of interest, $\{\beta_\tau\}_{\tau=-k}^{m}$, measure the difference in filings between treated and control cases τ years relative to the reform.

Expansion of Scope We return to the Civil Rights Act, one of the landmark statutes behind the aggregate expansion of scope. We study its 1991 amendment, which strengthened anti-discrimination employment law: Title VII of the Act, originally enacted in 1964, was expanded in response to a series of 1989 Supreme Court decisions that had narrowed its reach.[49] The 1991 Act falls just after our 1970–1990 window, but it is the cleanest scope expansion the data allow us to study: the design requires a substantial change to an existing area of law, with enough pre-period filings to establish trends.[50] Three major changes were made with the 1991 expansion: broader liability, broader remedies, and broader scope. In short, it made it easier for plaintiffs to challenge employment practices, added compensatory and punitive damages and the right to a jury trial, and extended protection to the full employment relationship rather than only the hiring contract.

We can translate these three changes through the lens of our model. Expanded coverage means that disputes previously without legal basis ($Y = 0$) now draw positive merit from G, expanding its support. Stronger liability shifted mass in G toward higher Y, tilting the LSF toward plaintiffs. Finally, the increase in the potential damages and the right to a jury trial raised the stakes J.[51]

In terms of the event study (Equation 5), the treated code is "Civil Rights: Employment" and the reform year is $t^* = 1991$. Figure 8(a) shows that employment-discrimination filings increase substantially after 1991, almost doubling within five years of enactment. This is an increase of roughly 15,000 cases within five years (Appendix Figure G5). As predicted in the model, increasing the support of G, shifting the distribution towards more merit, and increasing J, all compound to increase demand for legal services.

The model predicts more than a rise in filings: shifting the mass of G toward higher merit should

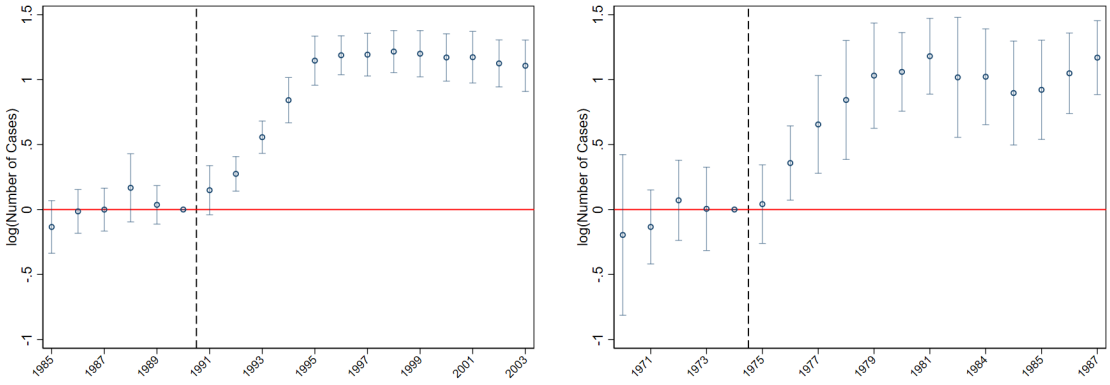
[49] Most notably *Wards Cove Packing Co. v. Atonio*, 490 U.S. 642 (1989), and *Patterson v. McLean Credit Union*, 491 U.S. 164 (1989).

[50] The exercise identifies the response of litigation to an expansion of the law's scope, while the timing of the aggregate demand shift is established by the historical regressions in Table 2.

[51] The Act also expanded existing fee-shifting by making expert-witness fees recoverable, overriding *West Virginia University Hospitals, Inc. v. Casey.*

also produce better outcomes for plaintiffs. Settlement rates and plaintiff win rates both rise after 1991 (Appendix Figure G6)—consistent with a scope expansion that strengthens the underlying merit of the plaintiffs.

Figure 8: Legislation and Litigation Activity



(a) Expansion of Scope: Civil Rights Act (1991) (b) Fee-Shifting: Amended Lanham Act (1975)

Notes: Panel (a) is a difference-in-differences event study of the (log) number of employment-discrimination filings around the 1991 Civil Rights Act; panel (b) is the event study of equation (5) for the effect of the 1975 Lanham Act attorney-fee provision on the (log) number of trademark filings. Both are estimated at the nature-of-suit level with nature-of-suit and filing-year fixed effects, comparing the treated code to control codes. The source of the data is the Federal Judicial Center Integrated Database.

The Effect of Fee-Shifting The Lanham Act was passed in 1946, and serves to govern trademark law in the United States. It allows the owners of federally registered trademarks to pursue civil remedies for trademark infringement and dilution. In July 1975, an attorney fees provision was added to the Lanham Act, in order to allow fee-shifting in "exceptional cases".[52] This is in contrast with most other fee-shifting statutes, which are introduced with the original legislation, therefore making it difficult to separate the effect of the legislation from the effect of fee-shifting itself.

We estimate the effect of the 1975 amendment on trademark litigation using the same event-study specification in Equation (5), now with Trademark_n (nature of suit 840) as the treated indicator and reform year $t^* = 1975$. As before, the coefficients of interest $\{\beta_\tau\}$ measure the difference in case filings between trademark cases and control cases τ years relative to the addition of fee-shifting. We use the period 1969-1987; six years before the provision and twelve years after.[53]

[52]This was in response to the *Fleischmann Distilling Corp v. Maier Brewing Co.* (1967) Supreme Court Case, which ruled that attorney's fees could not be awarded in cases under the Lanham Act without explicit statutory authorization.

[53]Our data starts in 1970, but we also observe the filing date. Therefore we have the majority of cases filed in 1969 in the 1970+ caseload data.

Our control group is other federal commercial litigation whose fee regime did not change in 1975: patent cases (nature of suit 830) and securities cases (nature of suit 850). These are natural comparisons for trademark. All three are disputes between sophisticated, typically corporate, repeat-player litigants, and all are high-stakes relative to ordinary civil litigation. Their filing volumes are driven by the same broad forces, for example, the growth of commerce and firms, which our year fixed effects absorb. We argue that only the treatment differs: the Lanham Act's fee provision was added in 1975, whereas patent and securities laws' fee-shifting provisions were unchanged.[54]

Figure 8(b) shows the results—trademark litigation more than doubles after the addition of the fee-shifting statute, an increase of roughly 1,000 cases per year, with no differential pre-trend (Appendix Figure G5(b)). Fee-shifting was not an isolated change: dozens of federal fee-shifting statutes were enacted between 1970 and 1990, spanning both public-interest and commercial areas of law (Appendix Figure G1). If even a fraction of these statutes generated responses of this magnitude, the cumulative effect on litigation—and on the demand for plaintiffs' lawyers—would be substantial, consistent with the historical regressions.

Fee-shifting also changes how cases resolve, though the model does not give a clear prediction—effort increases but so does entry. We cannot study outcomes around the Lanham amendment itself due to poor data quality on outcomes pre-1978. However, we compare fee-shifting to American-rule case types in aggregate over 1978–2015. We find that fee-shifting case types settle substantially more, yet do not win more on the merits. The flat merits win rate is consistent with fee-shifting drawing marginal cases into litigation; the higher settlement rate, with the greater fee exposure it places on defendants (Appendix G).[55]

5.3 Exposure to federal legislation

Having tied specific statutes to litigation, we now ask whether the demand for lawyers rose most where exposure to federal legislation was greatest. If federal legislation and regulatory decisions were important drivers of the increase in the demand for legal services, then we would expect to see a differential effect in locations with more exposure to the federal government. We probe this by exploiting cross-state variation in exposure to specific federal legislation. Then we analyze the trajectory of lawyers geographically close to the federal government—in Washington, D.C.

[54]Patent law has allowed fee-shifting since 1946. Some securities provisions permit it too—e.g., §11(e) of the Securities Act of 1933—but these are discretionary, rarely awarded, and, crucially, unchanged in 1975. We use a restricted control group, as opposed to the CRA 1991 analysis, because of the relatively small caseload in trademark law.

[55]The fee-shifting rule itself shapes behavior: when the Supreme Court's *Buckhannon* decision (2001) made a private settlement no longer sufficient to secure fees, plaintiffs in fee-shifting cases pursued merits judgments instead. An event study analysis shows that the win rate rose (Appendix Figure G8).

Empirical Strategy We estimate a difference-in-differences regression that exploits the passage of a major piece of federal legislation and cross-sectional variation in states' exposure to it. We compare the demand for lawyers in states with more or less pre-period exposure to the legislation, before and after its passage:

$$y_{st} = \beta \text{ Exposure}_s \times \text{Post}_t + \lambda_s + \gamma_t + \varepsilon_{s,t}. \tag{6}$$

Our main outcomes of interest, y_{st}, are the employment share and relative wages of lawyers in state s and time t, though in the appendix we show the results for legal services (Appendix Table H4). Exposure_s is a standardized, pre-period measure of state s's exposure to the legislation, and Post_t is an indicator for the years following its passage. We include state (λ_s) and time (γ_t) fixed effects, in the classic two-way fixed effects design, and cluster the standard errors at the state level. We study two landmark federal policies: the Civil Rights Act of 1964 and the Clean Air Act of 1970.

The Civil Rights Act (1964) The Civil Rights Act of 1964 outlawed discrimination based on race, color, religion, sex, or national origin. The Equal Employment Opportunity Commission was formed in 1965 to administer and enforce the discrimination laws put forth in the Civil Rights Act, as well as the Equal Pay Act of 1963. Further, the Civil Rights Act of 1968 was meant to expand the Civil Rights Act of 1964, to prohibit housing discrimination and enable the enforcement of housing rights.[56] Together, this is a substantial increase in the scope of the law.

For the Civil Rights Act, we measure "Exposure_s" as the state's black employment share measured in 1960 (before the legislation was introduced).[57] Post_t turns on after 1964. Table 3, Column (1), shows the baseline result. The lawyer employment share is increasing differentially in states with a higher share of black employment, after the passage of the Civil Rights Act. A standard deviation increase in pre-period black employment share is associated with a 0.12 increase in the employment share of lawyers post-CRA, about 30% of the mean.

In Column (2) we include a control for "Jim Crow" states in the post-CRA period.[58] We include this interaction in order to control for the entrenched racism and history of segregation in these states that leads to differential trends in black employment and differential response to civil rights legislation (Johnson & Robbins, 2001; Hornbeck & Naidu, 2014). The baseline effect is

[56] As a by-product, the Civil Rights Act created the basis for class action lawsuits; see Miller (1978). Class action lawsuits are called this because they are about violation of rights of a class of people. This concept did not exist before the Civil Rights Act. See also Hensler (2001) and Miller (1979).

[57] Appendix Figure H1(a) maps the cross-state variation in this exposure measure.

[58] As defined by states that segregated schools by law prior to Brown v. Board of Education. Historically, all states had some "Jim Crow" laws. This definition aims to capture states with more entrenched segregation that may be differentially treated by the Civil Rights Act. The list of states that fall under this definition are AL, AR, DC, DE, FL, GA, KY, LA, MD, MO, MS, NC, OK, SC, TN, TX, VA and WV.

now slightly stronger and more precisely estimated. Figure 9(a) shows the event study estimates: lawyer employment shares in more-exposed states evolve similarly before the Civil Rights Act and diverge only after its passage.[59]

Table 3: Federal Legislation and State-level Demand for Lawyers

	(1)	(2)	(3)	(4)	(5)
Panel A: Lawyer Employment Share$_{st}$					
Black Emp. Share$_{s,1960}$ × Post$_t$	0.115*	0.182**			0.176***
	(0.064)	(0.089)			(0.058)
CAA Non-Attainment$_{s,1970}$ × Post$_t$			0.050	0.101	0.104**
			(0.042)	(0.089)	(0.046)
Controls		×		×	×
Observations	343	343	343	343	343
Within R-sq.	0.189	0.240	0.036	0.076	0.318
Panel B: Relative Wage of Lawyers$_{st}$					
Black Emp. Share$_{s,1960}$ × Post$_t$	0.040	0.002			-0.008
	(0.085)	(0.121)			(0.073)
CAA Non-Attainment$_{s,1970}$ × Post$_t$			0.020	0.215	0.224
			(0.099)	(0.145)	(0.140)
Controls		×		×	×
Observations	337	337	337	337	337
Within R-sq.	0.001	0.002	0.000	0.031	0.032

Notes: The table reports the estimates of Equation 6. Standard errors are clustered by state. Alaska and Hawaii are excluded (statehood 1959; no 1940–1950 census data). Panel B additionally loses six state-year cells with no sampled wage-earning lawyers in 1950. Both exposure measures are standardized, so coefficients can be interpreted as standard deviation of exposure. CAA non-attainment is the share of the state's 1970 manufacturing employment located in counties violating the federal TSP standards in 1970–71 (imputed from EPA monitor data). The outcome in Panel A is the employment share of lawyers in legal services, in percent; it averages 0.39 over 1970–2000 and 0.44 over 1980–2000. The outcome in Panel B is the relative wage of lawyers in legal services. Controls include Jim Crow × Post in Columns (2) and (5) and manufacturing employment share × Post in Columns (4)–(5). * p< 0.1, ** p<0.05, *** p<0.01.

The Clean Air Act (1970) The Clean Air Act of 1970 (CAA) established uniform national air-quality standards. Counties whose air violated the new standards were designated "nonattainment," and polluters (firms) in those counties faced a far more demanding legal environment than those in attainment counties (Greenstone, 2002). For an affected firm, the designation converted air quality into a legal problem: emission limits and compliance schedules had to be negotiated with regulators, permits for plants had to be applied for and federal enforcement actions had to be

[59] A joint Wald test cannot reject that the pre-event coefficients are zero ($p = 0.31$ in the baseline specification). Appendix Figure H2(a) reports the corresponding estimates and pre-trend diagnostics from the event-study estimator of Freyaldenhoven et al. (2021).

defended. Further, the statutory language was new and untested.[60] The Act also authorized private parties to enforce emission limits directly against firms and agencies, with fee-shifting for prevailing plaintiffs.

All of these regulations applied with full force in non-attainment counties, while firms in attainment counties were left largely untouched. This across-county variation in regulatory stringency has been used to study the effects of the regulation on various outcomes in environmental economics (Greenstone, 2002; Chay & Greenstone, 2005; Isen et al., 2017); we use it here to study the demand for lawyers.[61] We follow the literature and measure Exposure_s as the share of the state's 1970 manufacturing employment located in non-attainment counties.[62] Because states with more manufacturing overall might see different trends in lawyer demand for reasons unrelated to the Clean Air Act, our controlled specifications also include the state's manufacturing employment share interacted with the post indicator, so that identification comes from where manufacturing was out of compliance rather than from how industrial the state was.

Columns (3)–(5) of Table 3 report the results. The baseline coefficient is 0.05 and imprecisely estimated; it doubles once we control for the state's overall manufacturing exposure. A one standard deviation increase in nonattainment exposure is associated with a 0.10 percentage point increase in the lawyer employment share after 1970—about a quarter of the mean employment share, up from roughly 13% at the imprecise baseline. Figure 9(b) shows the corresponding event study.[63]

Litigation and Relative Wages Appendix Table H5 traces the litigation channel directly: relative to the 1970s, more-exposed states see differential growth in federal filings over the post-passage decades—in absolute per-capita volume for civil rights cases, which grow proportionally from an already-high base in exposed states, and in proportional terms for environmental cases.

Panel B of Table 3 repeats the analysis with the relative wage of lawyers as the outcome. The model predicts the price response to be strongest for the Clean Air Act: its demand shock runs through high-stakes disputes over untested statutory language, precisely the uncertainty-intensive work for which effort per dispute, and hence spending on lawyers, is highest. Civil-rights litigation,

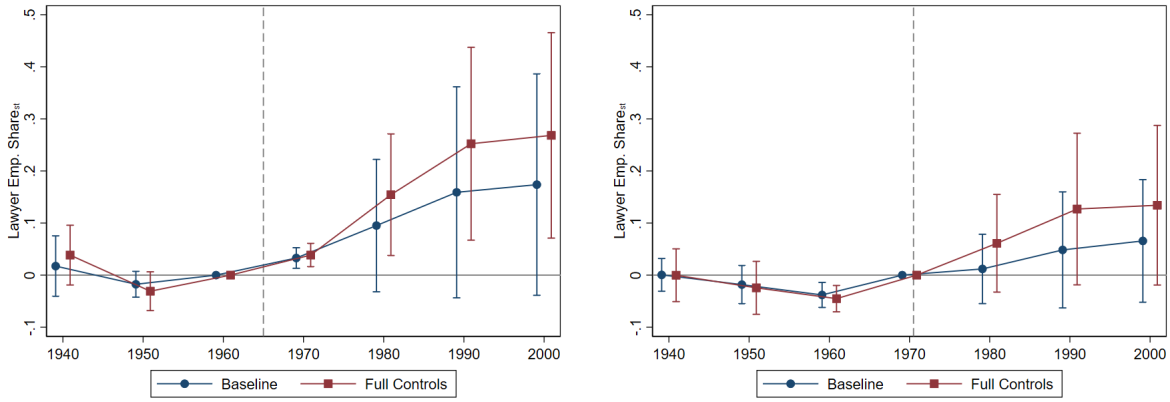
[60] What counted as a "source," a "modification," or an adequate control technology had to be worked out plant by plant, through administrative proceedings and litigation (Melnick, 1983).

[61] The Clean Water Act of 1972 (CWA), the other landmark environmental statute of the era, is less suited to this design. Appendix H.2.1 constructs a CWA exposure measure—the share of manufacturing near navigable waters—and shows the results.

[62] Because the EPA did not maintain county-level designation records in the early years, we follow this literature and impute the initial designations from the EPA's raw monitor data: a county is non-attainment if any monitor in 1970–71 violated the federal particulates standards (an annual geometric mean above 75 $\mu g/m^3$, or a second-highest daily reading above 260 $\mu g/m^3$).

[63] There is no evidence of differential pre-trends: a joint Wald test cannot reject that the pre-event coefficients are zero ($p = 0.48$ in the baseline specification; $p = 0.69$ with the full set of controls), and Appendix Figure H2(b) reports the corresponding Freyaldenhoven et al. (2021) event-study estimates.

Figure 9: Exposure to Federal Legislation Across States



(a) Civil Rights Act and Black Employment Shares

(b) Clean Air Act and CAA Non-Attainment

Notes: The figure reports event-study versions of Equation 6, in which the exposure measure is interacted with census-year indicators instead of a single post indicator. The outcome is the employment share of lawyers in the state, in percent, constructed from the decennial Census, 1940–2000. In each panel, the baseline series corresponds to the specification of Column (1) (in (a)) or Column (3) (in (b)) of Table 3, and the full-controls series to that of Column (5), with each control interacted with the census-year indicators. Estimates are staggered horizontally for readability. Bars show 95% confidence intervals; standard errors are clustered by state. Appendix Figure H2 reports the corresponding estimates and pre-trend diagnostics from the event-study estimator of Freyaldenhoven et al. (2021).

by contrast, became procedurally standardized relatively quickly, and much of the plaintiff-side work was carried out by salaried government and public-interest lawyers, with fees set by courts. In the data, however, neither statute detectably moves state-level relative wages. This may be because regulatory work created by the Clean Air Act was concentrated in a small segment of each state's bar, so even a substantial wage response is diluted across all lawyers in the state. It may also be that the wages in the related fields, such as corporate law, are set at a national rather than a state level: the largest firms pay associates on a uniform, seniority-based scale that leading firms move in lockstep, so that a demand shock concentrated in one state need not raise the wages recorded there.[64]

Demand for Lawyers in Washington, D.C. Finally, we compare the change in legal services and lawyers' employment shares in Washington, D.C. to those shares' evolution in other states. All states experienced an increase in legal services' employment share between 1970 and 1990: the mean increase was 0.57 percentage points with a standard deviation of 0.42. In Washington, D.C. the increase of legal services' employment share between 1970 and 1990 was 3.33 percentage points, over five times the average increase (Appendix Figure H3). In the aggregate, the employment share

[64]The "Cravath system"—pioneered by Cravath, Swaine & Moore in the early twentieth century—has large firms hire directly from law schools and pay a standardized salary set by graduation cohort rather than by individual bargaining or local market conditions. Top-of-market associate pay is thus effectively set nationally (Galanter & Palay, 1991).

of legal services increased from 0.53% to 1.15% from 1970 to 1990. In Washington, D.C. the legal employment share increased from 0.82% to 4.15%. In this period of major federal social regulation and deregulation, lawyers were attracted to the federal capital in greater intensity than to any other state, by a wide margin.

The significant increase in lawyers and legal employment in Washington D.C. does not include lawyers in government. In 1970, there were roughly equal numbers of lawyers in government and the private sector in Washington.[65] By 1990, there were 2.3 lawyers in the private sector for every lawyer in government (Figure H3(c)).[66] The differential effect in D.C. is suggestive of the role of federal legislation in driving demand for lawyers. Fee-shifting statutes that accompanied the federal legislation had, by design, the effect of increasing the demand for private sector lawyers, instead of expanding the employment of lawyers in government.

5.4 State-level legislation and fields of law

We now turn to study legislation that we can link to a field of law. That allows us to study how legislation increases the demand for a specific type of lawyer. We exploit the staggered adoption of state laws that map cleanly onto a field of practice—providing the most direct evidence that changes in the legal environment reshape the composition of demand for legal services, and not merely its level.

We study Negligence, Insurance, Domestic, Banking, and Corporate Law, which are the fields that experienced the largest increases in the 1972–1992 period (Table 1). We extend the Census of Services panel by digitizing the Martindale Hubbell directory, which allows us to create measures of fields of law at the local level. We use the years 1952–1963, allowing for a 40-year period of study (1952–1992).[67] The majority of the policy changes that we study occur in the 1960–1980 period, as shown in Appendix Figure H5.

We use this data to study policy changes at the state-level. The empirical approach is a classic two-way fixed-effects design:

$$y_{fst} = \beta \text{Policy}_{fst} + \theta X_{st} + \lambda_s + \gamma_t + \varepsilon_{fst}. \tag{7}$$

Our primary outcome of interest is the share of lawyers in state s practicing in field f in year t.[68] We regress this on the timing of policy adoption for a policy that affects demand for field f.

[65] Per the 1970 Census, there were 4,800 lawyers employed in government and 4,500 lawyers employed in the private sector, of which 3,900 were in legal services and 600 in industry.

[66] Per the 1990 Census, there were 3,941 lawyers in government in D.C., 7,604 in legal services, and 1,412 in industry.

[67] Forty years, but with a gap in 1964–1971, and in the years between the census of services survey years.

[68] We prefer shares to lawyer counts because sampling variation can move the measured number of lawyers in a state across waves for reasons unrelated to the demand for lawyers. Shares net out this state-year measurement variation.

Therefore, Policy_{fst} "turns on" when the policy is enacted in state s and time t, and takes the value of 1 for all years after. We control for the total number of lawyers in the sample, and potentially other related policies, in X, and include state (λ_s) and year (γ_t) fixed effects. We cluster standard errors at the state level.

Our policies of interest, which we can clearly link to fields of law, are product liability, unilateral divorce, and banking deregulation. We describe each policy and the results in-kind.

Strict Products Liability Strict products liability holds a manufacturer liable for injuries caused by a defective product regardless of negligence.[69] The doctrine was codified in a 1965 model code provision that state courts widely adopted.[70] Strict products liability was part of a broader consumer-protection movement of the 1960s and 1970s, which also produced landmark federal legislation such as the National Traffic and Motor Vehicle Safety Act (1966) and the Consumer Product Safety Act (1972). [71]

By lowering the plaintiff's burden of proof and expanding the set of recoverable injuries, strict products liability should raise the returns to bringing suit and therefore increase demand for lawyers, particularly those practicing negligence (personal injury) law on the plaintiff side. In terms of the model, lowering the plaintiff's burden of proof shifts the merit distribution G toward higher Y (tilting outcomes toward plaintiffs), while expanding the set of recoverable injuries raises the stakes J.[72] Priest (1991) argues that this expansion of liability also had large effects on insurance markets: by effectively making manufacturers insurers of product risk, it destabilized liability-insurance markets. This should therefore increase the demand for insurance lawyers, who handle coverage disputes and insurer-side litigation. We use the timing of states' adoption of strict products liability to test whether expanding manufacturer liability is associated with increases in the share of lawyers practicing negligence law and insurance law within a state.

Table 4, Columns (1)-(4), show the results. Columns (1) and (3) report the effect of strict products liability on the negligence and insurance shares in isolation, while Columns (2) and (4)

[69] An injured consumer needs only to show that the product was defective and caused harm, not that the manufacturer failed to exercise due care.

[70] The 1965 provision is §402A of the "Restatement of Torts, Second". The Restatements are model formulations of common-law rules drafted by the American Law Institute. These laws become binding only as each state's courts (or, occasionally, its legislature) adopt them. States adopted §402A in turn over the following two decades; Vargo (1996) surveys this process, and Appendix Table H10 reports the adoption dates. California was the first state to adopt strict products liability, in 1963; 21 states had adopted it by 1970, and 36 by 1975.

[71] In this respect, strict products liability is close in spirit to the social regulation we study in Section 4: by broadening the grounds for liability and easing injured parties' access to the courts, it expanded the scope of the law.

[72] Products liability is a change to tort law, which Waldfogel (1995) identifies as the most uncertainty-intensive area of litigation: structurally estimating a selection model across contract, property, and tort cases, he finds outcome uncertainty highest for torts, whose legal standards are the least clearly understood. In terms of our model this is precisely the region where effort per case—and hence the demand for lawyers—is greatest, which may help explain the large negligence and insurance responses.

additionally control for the other state policies we study. These controls guard against the estimate reflecting a spurious correlation between the timing of products-liability adoption and other contemporaneous state reforms.[73] Strict products liability increases the share of lawyers practicing negligence law (for the plaintiff side) by about 1.3 percentage points. The average state over the sample has 4.5 percent of lawyers in negligence law, therefore this corresponds to a nearly 30% increase in the share of negligence lawyers in the state. The results show a similar magnitude for insurance lawyers, at about 1.6 percentage points, or over a third of the baseline insurance share. Appendix Figure H6 reports the corresponding event studies for the plaintiff-negligence and insurance shares: both show no evidence of a differential pre-trend and step up to positive, largely significant effects after adoption.[74]

Unilateral Divorce Unilateral divorce, which allows one spouse to dissolve a marriage without the other's consent, was adopted differentially across states starting in the late 1960s, and throughout the 1970s and early 1980s. There is evidence that the divorce rate increased as a result, at least immediately following this legislation (Friedberg, 1998; Wolfers, 2006). This would increase demand for lawyers due to the nature of the divorce procedure. Specifically, it should increase demand for lawyers practicing domestic law. We use data on the timing of the adoption of unilateral divorce laws to test whether lowering the barriers to divorce is associated with an increase in the share of lawyers practicing domestic law in the state.

Table 4, Columns (5) and (6), show the results. The share of lawyers practicing domestic law increased by about 0.4 percentage points after the passage of unilateral divorce, which translates to an over 20% increase in domestic law share, off a baseline of 1.8%. The event study in Appendix Figure H6(c) shows no differential pre-trend and a positive shift after adoption, though the post-adoption bins are estimated less precisely than for products liability.

Banking Deregulation Before the mid-1970s banks in most states were restricted in which markets they could operate, both within and across states. Banking deregulation allowed banks to expand more easily. We study two types of legislation related to the banking industry.[75] The first

[73] Also, because shares sum to one by construction, a reform that expands one field mechanically compresses the others, so the controls also net out these movements.

[74] Appendix Table H7 further shows that the negligence effect is concentrated on the plaintiff side—strict products liability raises the plaintiff-negligence share but has no significant effect on the defendant-side or total negligence shares—consistent with the doctrine's expansion of plaintiff-side litigation. We also estimated the cohort-robust group-time difference-in-differences estimator of Callaway & Sant'Anna (2021) for each of the field outcomes (Appendix Table H9). The point estimates are directionally consistent with the results above—positive for every field–policy pair—but imprecise, and none attains conventional significance. This is a demanding specification for our data: with only five Census of Services cross-sections, an eight-year gap (1964–1971) between the annual and the cross-sectional sources, and few never-treated states, the group-time estimator has little clean group-time variation to exploit.

[75] We use data on state-level bank deregulation from Black & Strahan (2001).

Table 4: State Legislation and Fields of Law

	Negligence		Insurance		Domestic		Banking + Corporate		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Strict Products Liability$_{st}$	1.320***	1.353***	1.556*	1.614**		0.113		0.629	0.467
	(0.441)	(0.399)	(0.787)	(0.700)		(0.134)		(1.197)	(1.172)
Unilateral Divorce$_{st}$		-0.270		0.429	0.465**	0.473**		-0.815	-0.851
		(0.510)		(0.691)	(0.185)	(0.221)		(1.015)	(1.031)
Multibank Holding$_{st}$		0.900		1.253*		-0.163	1.622	1.761*	1.793*
		(0.669)		(0.705)		(0.277)	(1.015)	(1.001)	(1.009)
Intrastate Branching, M&A$_{st}$		-0.790**		0.126		0.014	1.047	0.828	1.711*
		(0.384)		(0.631)		(0.263)	(1.014)	(0.956)	(0.881)
Bank Dereg. Controls									×
Observations	493	493	493	493	493	493	493	493	493
Within R-sq.	0.073	0.112	0.059	0.094	0.048	0.055	0.045	0.057	0.075
Mean dep. var.	4.505	4.505	4.433	4.433	1.771	1.771	12.283	12.283	12.283

Notes: State-level legislation dates: come from Vargo (1996) (strict products liability), Black & Strahan (2001) (banking deregulation), and Friedberg (1998) (unilateral divorce). Shares are in percents. DC and MD are excluded: the composition of lawyers there trends differentially due to their proximity to the federal government. Appendix Table H8 reports the results including them. * p< 0.1, ** p<0.05, *** p<0.01.

permitted multibank holding companies, letting a single holding company own several separately chartered banks within a state; the second allowed intrastate branching through merger, so that a bank could expand within a state by acquiring existing banks and converting them into branches.[76]

Each of these reforms set off waves of holding-company formation, bank mergers and acquisitions, and the associated regulatory applications—precisely the chartering and regulatory work performed by lawyers who advise banks and bank holding companies. We therefore expect banking deregulation to increase the demand for lawyers practicing banking and commercial law. Intrastate branching through merger should also raise demand for corporate lawyers, who handle the mergers, acquisitions, and reorganizations through which firms combine. We combine the two fields, reported separately in the Census of Services, as one, and study the effect of banking deregulation on the "Banking + Corporate" share.

Table 4, Columns (7)-(9), present the results. When states adopt multibank holding companies the demand for banking and corporate lawyers increases, though the estimates are noisy, at around 1.7 percentage points. The baseline share of banking and corporate lawyers in a state is 12.3%, so this translates to a 14% increase. Similarly, the effect is positive and noisy for intrastate branching via M&A.

Taken together, these results show that the legal environment shapes not just how many lawyers there are, but what type of lawyer is in demand. In each case the staggered timing of a reform

[76]Further deregulation included unrestricted intrastate branching, allowing banks to open new offices anywhere in the state; and interstate banking, allowing out-of-state holding companies to acquire banks across state lines. We include these two policies as controls in Column (9).

predicts a rise in exactly the field it should—products liability in negligence and insurance, unilateral divorce in domestic relations, and banking deregulation in banking and corporate law—and because the outcomes are field shares, these are compositional shifts, not mechanical ones. Next, we review other potential explanations—which we do not find evidence for—that could explain a rise in demand for legal services.

6 Alternative explanations

Other factors may have contributed to the rise in demand for legal services. We explore the potential importance of technology, economic activity, innovation, supply restrictions, changes in lawyer quality, changes in industry standards, gender, and political influence. Overall, we find no evidence supporting these alternative explanations.

Technology. Legal services is an information-intensive industry, thus the ICT revolution may have contributed to its expansion and internal organization. Using Fixed Assets tables from the BEA, we compute the relative ICT intensity in legal services versus the rest of the private sector. Appendix Figure F1(a) displays this measure, where we see that legal services increased their relative ICT intensity starting only in 1995, whereas beforehand there is no trend. This implies that ICT cannot be an important factor driving demand for legal services.

Industry composition. We ask whether changes in the composition of industries or in their legal services intensity can help explain the increase in the observed share of legal services. In order to assess this, we use a simple accounting model that attributes industry output to demand for final goods (including net exports) coming from households, the government and investment via input-output linkages (Leontief, 1936). We fix the input structure and value-added intensities of the economy in 1970 and apply this to final goods demand in 1990. This gives us counterfactual shares in GDP that are driven by changes in industrial composition.[77]

We apply this exercise to data from the BEA Industry Accounts. The GDP share of legal services increases by 0.7 percentage points from 1970 (0.7 percent) to 1990 (1.4 percent). We find that change in industry composition accounts for only 23% of the increase in legal services share in GDP. The remainder is driven by within-industry increases in intensity of legal intermediation.

Using the same data and methodology we study changes in the composition of users (or "destinations") of legal services as inputs. We find that overall, industries increase their share of legal services output by only 1.3 percentage points from 1970 (56.4%) to 1990, while the share of legal services paid directly by households and the government drops by 1.3 percentage points.[78] The

[77] See Appendix F.1 for more details.

[78] Industries that increased most include retail, finance, insurance, real estate, health, food services, computers and

increase in industry as buyers of legal services explains little of the rise in legal services value added share, in contrast to claims by Sander & Williams (1989) and by Hadfield (2000).

Firm density. The number of firms is another candidate: for a given economy size, more firms means more activity occurs between firms rather than within them, and such activity requires legal intermediation.[79] We use data from U.S. Census Business Dynamics Statistics (BDS) (1977–2014) and from the HSUS (1857–1983) on the number of firms and normalize this by total population. Appendix Figure F1(b) displays the number of firms per capita. Overall, after the secular increase in the number of firms per capita in 1857–1880, we do not document a pattern that could help explain the rise in demand for legal services. We also do not find evidence of a persistent correlation between firms per capita and the legal services outcomes of interest in Table 2. Even if the number of firms does not correspond to our indicators of legal services, market structure might. However, recent figures from Kwon et al. (2024) imply that corporate concentration has steadily increased over the last 100 years, with no change in trend starting around 1970.

Innovation. Innovation, as captured by patenting activity, can potentially contribute to demand for legal services through demand for intellectual property protection (IPR). However, this is not a major source of the demand shift. Our tabulation of the Census of Services shows that the share of IPR ("Patent") lawyers is quite small, rising only modestly from 1.7 percent in 1972 to 1.9 percent in 1992. Moreover, as shown in Appendix Figure F1(c), patent applications show no trend from 1930 to 1990, increasing sharply afterwards—which does not correlate well with employment and remuneration of lawyers overall (we do not have separate wage data by field of specialization).

Supply. Restriction of supply by ABA accreditation and state bar examinations is widely recognized as a barrier to entry. This barrier did not tighten at the onset of the demand shift: first-year enrollment grew by roughly a third between 1970 and 1975, as average enrollment per school doubled from 125 in 1954 to 250 in 1972 and twenty ABA-approved schools were added over the 1970s. But the expansion was front-loaded. After 1975 the entry flow stalls: first-year enrollment per capita is flat from 1975 through 1990, only six schools are added in the 1980s, and schools per capita decline (Appendix Figure F4). When applications surged in the late 1980s—LSAT takers rose by roughly a third between 1987 and 1990—enrollment barely moved. Supply restrictions therefore cannot explain the onset of the boom, and the timing of the young-lawyer wage premium (Section 3.6) is inconsistent with barriers alone driving wages. But the stagnation of law-school capacity after the late 1970s helps explain why the 1980s portion of the demand shift appears in

electronics, chemicals.

[79] Economic activity that occurs within the boundary of firms does not require legal intermediation; this is part of the Coasian rationale for the existence of firms, which can economize on such transaction costs.

relative wages rather than in further quantity growth.

We plot law school tuition, and law school "relative cost" in Appendix Figure F7. We do not see any differential trend in law school tuition in 1970–1990, or post 1990. We compute a measure of the "relative cost" of law school, which is equal to tuition plus the average wage of college graduates divided by the expected wage of lawyers; assuming that agents use only current information, we proxy the latter by the average wage in that year. This relative cost of law school decreases steadily from 1960 to 1990, and stabilizes from 1990 to 2015.

Quality. A rise in lawyer quality could raise relative wages. Law School Admission Test (LSAT) scores are considered a good measure of academic quality of law school applicants (Wightman, 2000), and there is no evidence that applicant quality increased in our period of interest. Instead, some scholars have found a decline in law school applicant quality in the 1980s (Vernon & Zimmer, 1987).[80]

Another way to gauge variation in quality is to examine the ratio of LSAT takers to enrolled students in law schools. Unless the difference between LSAT takers and enrollment is due solely to residual low quality candidates, then when this ratio is high we expect selectivity to be higher too. We use data from several sources to build the ratio of LSAT takers to enrollment.[81] This ratio increases from 0.32 in 1948 to 3 in 1970, after which it fluctuates around 3 for the rest of the sample (Appendix Figure F6(a)).[82] This does not suggest an increase in quality in 1970–1990.

We then examine the ratio of law degrees awarded to the cohort enrolled three years before (a J.D. law degree typically takes three years). We expect this ratio to be smaller when schools screen graduates more intensively. We find that this ratio increases from 0.5 for the 1948 enrollment cohort to a bit less than 0.9 for the 1972 cohort, after which it fluctuates around that value for the rest of the sample (Appendix Figure F6(b)). By this metric, quality has decreased, not increased from the 1950s to 1972, after which it has remained stable. We conclude that quality—thus measured—is not a major source of the rise in relative wages for lawyers.

Finally, we do not find that changes in degree requirements for taking the bar exam and becoming a practicing lawyer are an important factor in explaining the evolution of the relative wage of lawyers. Starting in the beginning of the 20th century, U.S. law schools gradually stopped offering undergraduate LL.B. law degrees, and instead offered a post-graduate degree, typically a J.D.

[80] Due to changes in the scale of grades, grading systems and changes in the contents of the LSAT, it is not possible to build meaningful time series that span our sample.

[81] We combine data on the number of LSAT takers from White (1984) for 1947–1982, the Manhattan Review (LSAT Prep Courses & Tutoring) for 1950, 1961, 1970, 1980 and 1985, and the Law School Admission Council (LSAC) for 1987 and on. We have data from the American Bar Association (ABA) on enrollment.

[82] The increase in this ratio to 1970 is largely driven by the number of schools that joined LSAC and, thus, accepted the LSAT as their yardstick for admission.

degree (or LL.M., especially for foreign lawyers).[83] However, the process of the J.D. becoming the official requirement to taking the bar exam was gradual, starting long before 1970, and did not accelerate at that moment in time.[84]

It is worthwhile to keep in mind that these measures of quality pertain to the flow of lawyers when they enter the profession. Even if quality was trending upwards from 1960, it would have taken many years for this trend to materialize in the stock of lawyers. Taking into account cohorts over time, our micro-level regressions reported in Section 3.6 rule out a simple story of quality upgrading.

Industry standards. State bar associations uphold strict guidelines dictating the acceptable behavior of lawyers. Until 1977, these guidelines included a prohibition on advertising, and violation of the regulation could result in disbarment. This changed with the Supreme Court Ruling in *Bates v. the State Bar of Arizona* (1977). The Court ruled that advertising was a form of free speech and therefore protected by the First Amendment. Olson (1991) argues that this deregulation of legal advertising had a role in explaining the "litigation explosion." We collect data on advertising post-*Bates* to probe this hypothesis.

Appendix Figure F2 shows a muted response to this change in policy, as measured by the average number of lawyers' advertisements in 4 major newspapers across the United States.[85] The timing suggests that the advertising response in the immediate wake of *Bates* could not explain the increase in employment share and relative wages we observe in 1980, however it is possible that advertising continued to increase demand for legal services, inducing entry. The role of advertising on compensation is less straightforward. Examples in Appendix Figure F3 show that lawyers advertised the fees for their services. While a first-mover advantage could make advertising lucrative—as it apparently did for the Legal Clinic of Bates & O'Steen—the proliferation of advertising would lead to tougher price competition, which would suggest a wage effect in the opposite direction.[86]

Another dimension in which industry standards have evolved is in the prevalence of contingent fee arrangements. These are arrangements used by lawyers to attract business, and imply that the lawyer that represents the plaintiff receives a share of the stakes if the case prevails, but nothing if it does not. Contingent fees can increase access to justice, while at the same time increase lawyers' incomes, thereby giving incentives for entry (Painter, 1995; Helland & Klerman, 2024).[87] Since

[83]This change followed the movement for the "scientific study of law" at Harvard, during the 19th century.

[84]In addition, given roughly 40 years of work, a 3-year delay in starting to practice law cannot explain the magnitude of the increase in the relative wage.

[85]Our hand-collected sample of newspaper advertisements covers the immediate post-period, from 1977–1982. The newspapers in the sample went from containing no advertisements for legal services to about 5 to 15 ads per issue.

[86]Testimony from Bates indicates how lucrative this business was; *What's up with all the ads for law firms?*, Planet Money, 2024, https://www.npr.org/2024/10/04/1203595460/lawyers-ads-law-groups-commercials-banned.

[87]Some research has modeled how contingent fees affect lawyers' effort (Danzon, 1983; Kritzer et al., 1985). Another

such contingent fee arrangements are private contracts, no representative statistics exist on their prevalence, let alone consistent time series. Therefore, it is difficult to assess whether the prevalence of contingent fees increased particularly in 1970–1990. Contingent fees are more prevalent in some fields of the law in the United States, such as insurance and negligence, which have increased their shares of litigation activity in 1972–1992 (Table 1), as well as in class action lawsuits.[88]

Women in law. The share of women enrolled in law school rose dramatically from under 10% in 1970 to almost 50% in 2000 (Katz et al., 2023). A differential increase of women into the field of law could potentially explain part of the increase in the share of lawyers, although this does not explain the contemporaneous increase in the relative wage. Appendix Figure F8(a) shows that while indeed the share of women employed as a lawyer increased between 1970 and 1990, it continued to grow on the same trend post-1990. Moreover, the share of women employed in other high-skill professions (doctors, engineers, scientists) exhibits the same pattern. Wage premia regressions (as in equation (2)), augmented with an indicator for female lawyers show that these women did not receive a wage premium for being a lawyer that is different from that of men (Appendix Figure F8(b)). This is consistent with data from LSAT scores: women do not exhibit significantly different distributions of grades compared to men.[89]

Political influence. A final hypothesis that we consider is that a change in the political influence of lawyers led to the demand shift for their services. We examine the share of lawyers in Congress, and we do not find any change between 1970–1990. In fact, the number of lawyers in Congress decreased over this period (Appendix Figure F9). That is not to say that lawyers in Congress cannot be influential in shaping the legislation that we study—Bonica (2017) shows that lawyer-legislators are significantly more likely to support fee-shifting statutes and other bills that support the profession. However, we do not find an increase in influence, as measured by the share of legislators that are also lawyers, during this period.

7 Excess costs

In this section we quantify two components of the demand shift that might represent a cost to society. The first is the uncertainty of the new legislation, which raised the effort required to resolve each dispute, even where the underlying law was beneficial. The second is rent: the possibility that

strand of literature debates the potential ethical aspects of contingent fees, such as conflicts of interest between lawyer and client and litigation stirring ("client-getting" or "ambulance chasing") (Moliterno, 2002).

[88] A more recent, and related phenomenon is litigation finance. However, this started increasing its prevalence in the United States only after 2000, long after our period of interest ("A Brief History of Litigation Finance", in *The Practice*, September/October 2019, The Center on the Legal Profession, Harvard Law School).

[89] Women score on average slightly below men, but this difference is very small in comparison to the standard deviation of test scores.

lawyers' pay rose by more than was needed to draw them into the profession, a gap that restrictions on entry into law could sustain. We provide a back-of-the-envelope calculation for each: the first quantifies the cost of legislative uncertainty, the second takes the growth in legal employment as optimal but treats the growth in remuneration as rent.

7.1 Excess costs due to uncertainty of the law

What is the cost of increased uncertainty in the law? The assumption underpinning this exercise is that the increase in the scope of the law is socially beneficial—civil rights, environmental protections, etc.—but the increase in uncertainty is not. We predict counterfactual levels of employment and wages of lawyers absent this uncertainty, with a simple back-of-the-envelope exercise.

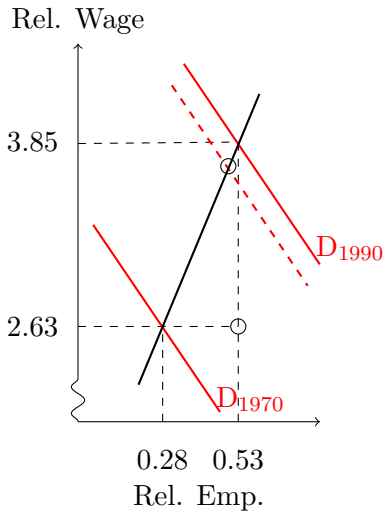
The exercise requires two inputs: the relative supply curve for lawyers, which lets us predict counterfactual equilibria, and the share of the demand shift attributable to uncertainty. For lawyers' relative labor supply curve we start with the two years of interest from our time series: 1970 and 1990. In 1970, the relative employment share of lawyers was 0.28 and their relative wage was 2.63. In 1990, the employment share was 0.53 and the relative wage was 3.85. We assume that the relative labor supply curve is linear and did not change over this 20 year period—the only change was a shift of the demand curve. Under this assumption, we can trace out the supply curve between the two observed equilibria. This is shown in the diagram in Figure 10.

Attributing a portion of the demand shift between 1970 and 1990 to an increase in uncertainty is a larger challenge. Our measure of uncertainty over this period is the forward amendment rate of the U.S. Code. Because demand responds to the uncertainty of the law already on the books, we lag the amendment rate ten years, so the relevant change for the 1970–1990 outcome window is the rise from 32 to 64 amendments per 100 sections between 1960 and 1980. Appendix Table C1 reports regressions, in levels, of employment shares on the lagged amendment rate, estimated annually over 1960–2013. Conditional on the pages of federal regulation—our measure of the scope of the law—each additional amendment per 100 sections raises lawyers' employment share by 0.0011 percentage points, so the rise in the amendment rate accounts for 0.034 percentage points, or 13%, of the observed 0.25 percentage-point increase in the employment share (12% for the legal services industry).[90][91] Taking the net-of-scope estimate, we calibrate a counterfactual demand shift that is 86.7% of the observed shift between 1970 and 1990, which is shown in Figure 10 with the dashed red demand curve. Given the labor supply curve, the calibrated shift implies a new equilibrium at

[90] An elasticity (log-log) specification yields a smaller net-of-scope attribution of 3–5%. The levels estimates are statistically significant for both outcomes and stable across lag choices for the scope control, and they line up with an alternative attribution based on the share of contingent provisions in state legislation—an ex ante text measure of statutory ambiguity (Appendix Figure C4)—which implies roughly 9–12%.

[91] Without conditioning on scope, the amendment rate accounts for 72% of the demand shift.

Figure 10: Counterfactual Demand for Lawyers



Shift (%)	Wage Bill Share (%)	Δ $B (2024)
100	2.05	-
90	1.89	17.66
86.7	**1.84**	**23.42**
80	1.74	34.64
70	1.59	50.93

Notes: The graph on the left shows the relative supply and demand for lawyers. The observed relative wage and relative employment from the data are plotted as the 1970 and 1990 equilibria. The x-axis scale is twice that of the y-axis, for visibility. The dashed red line shows the counterfactual demand curve that we derive in our back-of-the-envelope exercise; see Appendix Table C1. The table on the right shows how the counterfactual demand shift translates into changes in the wage bill share and dollars ($2024B). The results for the calibrated demand shift are highlighted in bold.

(0.50, 3.69).

How does this counterfactual equilibrium translate into levels of employment and wages? In 1990, the wage bill share of lawyers in legal services was 2.05% of the total wage bill.[92] In the counterfactual, this is reduced to 1.84%, a 10% decrease. Given the total wage bill in 2024, this is a decrease of $23 billion in a single year. Assuming reallocated lawyers earn the same wage elsewhere and other prices are fixed, this $23 billion is the annual social cost of misallocating talent to law.

We repeat this exercise for the legal services industry (instead of only the lawyers within). We predict a counterfactual demand shift for legal services that is 87.7% of the observed shift in 1990, resulting in a new wage bill share of 2.61%, a decrease of $27 billion in 2024.[93]

7.2 Excess costs due to rents

We next assess to which degree the increase in total remuneration in legal services in 1970–1990 is in excess of what would be needed to motivate workers in that sector to provide the required output—i.e., rents. Underlying this calculation is the idea that lawyers and other legal practitioners were

[92] In 1990, there were approximately 578,000 lawyers with an average wage of $119,000. The counterfactual implies a new level of 542,000 lawyers with an average wage of $114,000.

[93] At the industry level, which includes all legal support staff, relative wages are lower but employment shares are higher: the equilibrium was at (0.54, 2.06) in 1970 and at (1.16, 2.45) in 1990. This implies a wage bill share of 2.85% in 1990 (instead of 2.05% for lawyers). Appendix Table C1 shows that each additional amendment per 100 sections raises the legal services employment share by 0.0024 percentage points, conditional on the pages of federal regulation.

already efficiently incentivized in 1970 to provide optimal effort, and that to the extent that the desired quantity of legal intermediation increased, it could be provided with the same incentives.[94]

Consider the difference between the wage bill share of legal services in 1990 and what it would have been with the same growth in the employment share as in the data, had the *relative* wage remained as it was in 1970. That is, we assume that wage growth in legal services since 1970 was at the same rate as in the rest of the private sector, with only an adjustment for the rise in the aggregate college premium that accounts for the need to keep lawyers' incentives in line with other highly skilled workers:

$$excess_{WBsh^{1990}_{legal}} = WBsh^{1990}_{legal} - Nsh^{1990}_{legal} \cdot rw^{1970+}_{legal} = 0.007,$$

where WB denotes wage bill, Nsh denotes employment share, rw denotes relative wage of legal services to the aggregate average wage, and rw^{1970+}_{legal} accounts for the rise in the aggregate college premium (see Appendix Section C.2 for more details). The calculation implies that legal services' wage bill was 0.7 percentage points in excess of 1970. Comparing this to the actual $WBsh^{1990}_{legal}$, which was 1.74 percent, we have an excess payment of 41% to legal services employees (lawyers and non-lawyers together). We perform a similar calculation for proprietors' income, as an approximation for law firm partners' incomes, and calculate an excess payment of $excess_{INCsh^{1990}_{legal}} = 39\%$ to proprietors in legal services.

We use the total wage bill WB^{1990} and total proprietors' income INC^{1990} in the private sector to calculate the dollar value implication of $excess_{WBsh^{1990}_{legal}}$ and of $excess_{INCsh^{1990}_{legal}}$ as follows:

$$EXCESS^{1990}_{legal} = excess_{WBsh^{1990}_{legal}} \cdot WB^{1990} + excess_{INCsh^{1990}_{legal}} \cdot INC^{1990} = \$31.1\text{bn}$$

in 1990 alone, and $75 billion per year in 2024 prices. This calculation does not take into account potential cost in terms of misallocation of talent, since it assumes that employment and quantities are fixed at equilibrium levels. Instead, it represents a transfer of income from consumers to suppliers of legal services. At the same time, if the demand curve in Figure 10 were really at D_{1990} and the relative wage remained at 2.63, then we would have seen even greater relative employment in legal services (lawyers or other workers) compared to the 1990 relative quantity of 0.53. In that case, the supply restriction is an additional cost, akin to inefficiency in monopolized markets.

[94] The simple counterfactual is that relative wage remains at 1970 levels (2.63), and relative employment at 1990 levels (0.53). We mark this point in the diagram in Figure 10.

8 Conclusion

The legal services industry underwent remarkable changes between 1970 and 1990: the employment share of legal services more than doubled and the relative wage of lawyers increased by 60%. In contrast, the periods before 1970 and after 1990 both exhibit stability.

We trace this expansion to three changes in the legal environment: a broadening of the law's scope, a rise in its uncertainty, and a shift toward private enforcement through fee-shifting. Our results line up with the theory. Federal regulation tracks lawyers' employment but not their wages, while fee-shifting and legal uncertainty track both. Litigation rises after specific expansions of scope and introductions of fee-shifting. And the adoption of particular state laws predicts demand for the corresponding fields of practice: products liability for negligence and insurance lawyers, unilateral divorce for domestic-relations lawyers, and banking deregulation for banking and corporate lawyers. The same forces reshaped the profession from within, raising the ratio of associates to partners and pushing lawyers to specialize.

Are the resources a society devotes to legal services well spent? Our evidence is mixed. Part of the rise in demand reflects a genuine expansion of the law: economic life grew more complex and citizens gained new rights, and giving effect to those rights requires legal intermediation. But we also identify costs, which take several forms. The uncertainty embodied in broadly written legislation raises the effort—and hence the cost—required to resolve each dispute. Fee-shifting statutes, though justified as a way to make legislation effective, likewise raised the cost per case litigated. A further cost arises from the allocation of talent, as more able individuals are absorbed into legal intermediation, litigation, and the prevention of litigation.

While our findings suggest social costs, we do not measure the social benefit of changes in the legal environment. We cannot say, for example, what would have followed had the government enforced the new laws itself rather than enlisting private lawyers, and although our estimates point to rents, we do not pin down their source. These are questions for future work. What we do show is that how a society writes its laws is itself an economic decision, one that shapes the allocation of talent and the cost of the rule of law for decades.

References

Acemoglu, D. & Autor, D. (2011). Skills, tasks and technologies: Implications for employment and earnings. In O. Ashenfelter & D. Card (Eds.), *Hanbook of Labor Economics*, volume 4b: North Holland.

American Bar Association (2020). *ABA Standards and Rules of Procedure for Approval of Law Schools, 2020–2021*. Section of Legal Education and Admissions to the Bar, Chicago, IL. Preamble/Introduction.

Angelucci, C., Ash, E., & Longuet-Marx, N. (2026). Policymaking in the American states, 1787–2020. Working Paper.

Ash, E., Chen, D. L., & Naidu, S. (2026). Ideas have consequences: The impact of law and economics on American justice. *Quarterly Journal of Economics*, 141(1), 845–887.

Ash, E., Morelli, M., & Vannoni, M. (2024). More Laws, More Growth? Evidence from U.S. States. *Forthcoming, Journal of Political Economy*.

Battigalli, P. & Maggi, G. (2002). Rigidity, discretion, and the costs of writing contracts. *American Economic Review*, 92(4), 798–817.

Baumol, W. J. (1990). Entrepreneurship: Productive, unproductive, and destructive. *Journal of Political Economy*, 98, 893–921.

Black, S. E. & Strahan, P. E. (2001). The division of spoils: Rent-sharing and discrimination in a regulated industry. *American Economic Review*, 91(4), 814–831.

Bonica, A. (2017). Why are there so many lawyers in congress? Available at SSRN: `https://ssrn.com/abstract=2898140`.

Boustanifar, H., Grant, E., & Reshef, A. (2017). Wages and human capital in finance: International evidence, 1970–2011. *Review of Finance*, 22(2), 699–745.

Brooks, L. & Liscow, Z. (2020). Infrastructure costs. Working Paper, George Washington University.

Callaway, B. & Sant'Anna, P. H. (2021). Difference-in-differences with multiple time periods. *Journal of Econometrics*, 225(2), 200–230.

Campos, P. (2012). The crisis of the american law school. *U. mich. Jl reForm*, 46, 177.

Carter, S., Gartner, S., Haines, M., Olmstead, A., Sutch, R., & Wright, G., Eds. (2006). *Historical Statistics of the United States Millennial Edition Online.* , Cambridge University Press.

Cass, R. A. & Garvey, J. H. (2003). Law school leviathan-explaining administrative growth. *U. Tol. L. Rev.*, 35, 37.

Chay, K. Y. & Greenstone, M. (2005). Does air quality matter? evidence from the housing market. *Journal of Political Economy*, 113(2), 376–424.

Danzon, P. M. (1983). Contingent fees for personal injury litigation. *The Bell Journal of Economics*, (pp. 213–224).

Derfner, M. F. & Wolf, A. (2012). *Court Awarded Attorney Fees*. Matthew Bender & Company. Updated Annually.

Dew-Becker, I. (2023). Tail risk in production networks. *Econometrica*, 91(6), 2089–2123.

Diamond, R. A. (1983). The firestorm over attorney fee awards. *American Bar Association Journal*, 69(10), 1420–1425.

Eskridge Jr., W. N. (1991). Overriding Supreme Court statutory interpretation decisions. *Yale Law Journal*, 101(2), 331–455.

Farhang, S. (2010). *The Litigation State: Public Regulation and Private Lawsuits in the U.S.* Princeton, NJ: Princeton University Press.

Flood, S., King, M., Ruggles, S., & Warren, J. R. (2017). Integrated public use microdata series, current population survey: Version 5.0. [dataset]. minneapolis: University of minnesota, 2017. https://doi.org/10.18128/D030.V5.0.

Freyaldenhoven, S., Hansen, C., Pérez Pérez, J., & Shapiro, J. M. (2021). Visualization, identification, and estimation in the linear panel event-study design. NBER Working Paper No. 29170.

Freyer, T. (2010). Deregulation theories in a litigous society. In E. Balleisen & D. Moss (Eds.), *Government and Markets: Toward a New Theory of Regulation* (pp. 482–511). Cambridge University Press.

Friedberg, L. (1998). Did unilateral divorce raise divorce rates? evidence from panel data. *The American Economic Review*, 88(3), 608–627.

Friedman, S. J. (1981). Deregulation and litigation. *Litigation*, 8(1), 8–50.

Galanter, M. & Palay, T. (1991). *Tournament of Lawyers: The Transformation of the Big Law Firm*. Chicago: University of Chicago Press.

Garicano, L. (2000). Hierarchies and the organization of knowledge in production. *Journal of Political Economy*, 108(5), 874–904.

Garicano, L. & Hubbard, T. N. (2007). Managerial leverage is limited by the extent of the market: Hierarchies, specialization, and the utilization of lawyers' human capital. *Journal of Law and Economics*, 50(1), 1–43.

Giommoni, T., Guiso, L., Michelacci, C., & Morelli, M. (2025). *The Economic Costs of Ambiguous Laws*. CESifo Working Paper Series 11929, CESifo.

Gottlieb, J. D., Polyakova, M., Rinz, K., Shiplett, H., & Udalova, V. (2023). Who values human capitalists' human capital? healthcare spending and physician earnings. NBER Working Paper No. 31469.

Greenstone, M. (2002). The impacts of environmental regulations on industrial activity: Evidence from the 1970 and 1977 clean air act amendments and the census of manufactures. *Journal of Political Economy*, 110(6), 1175–1219.

Hadfield, G. K. (2000). The price of law: How the market for lawyers distorts the justice system. *Michigan Law Review*, 98(4), 953–1006.

Helland, E. & Klerman, D. (2024). Contingent fees and access to justice. *Washington University Law Review*, 102, 1–22.

Hensler, D. R. (2001). Revisiting the monster: New myths and realities of class action and other large scale litigation. *Duke Journal of Comparative & International Law*, 11, 179–213.

Hirshleifer, J. & Osborne, E. (2001). Truth, effort, and the legal battle. *Public Choice*, 108(1), 169–195.

Hornbeck, R. & Naidu, S. (2014). When the levee breaks: Black migration and economic development in the american south. *American Economic Review*, 104(3), 963–90.

Isen, A., Rossin-Slater, M., & Walker, W. R. (2017). Every breath you take—every dollar you'll make: The long-term consequences of the clean air act of 1970. *Journal of Political Economy*, 125(3), 848–902.

Jeong, D., Holehouse, J., Yoon, J., Kempes, C., West, G. B., & Youn, H. (2026). A dataset showing a century of evolution in the complexity of the United States legal code. *Scientific Data*, 13. `https://doi.org/10.1038/s41597-025-06313-w`.

Johnson, C. & Robbins, R. (2001). *Patterns of Negro Segregation*. The African American Intellectual Heritage Series. University of Notre Dame Press.

Katz, D. M. & Bommarito, M. J. (2014). Measuring the complexity of the law: The United States Code. *Artificial Intelligence and Law*, 22(4), 337–374.

Katz, E. D., Rozema, K., & Sanga, S. (2023). Women in u.s. law schools, 1948–2021. *Journal of Legal Analysis*, 15(1), 48–78.

Katz, L. F. & Murphy, K. M. (1992). Changes in relative wages, 1963-1987: Supply and demand factors. *The Quarterly Journal of Economics*, 107(1), 35–78.

Kearney, J. D. & Merrill, T. W. (1998). The great transformation of regulated industries law. *Columbia Law Review*, 98, 1323–1409.

Kritzer, H. M., Felstiner, W. L., Sarat, A., & Trubek, D. M. (1985). The impact of fee arrangement on lawyer effort. *Law & Society Review*, 19, 251.

Kwon, S. Y., Ma, Y., & Zimmermann, K. (2024). 100 years of rising corporate concentration. *The American Economic Review*, 114(7), 2111–40.

Leontief, W. W. (1936). Quantitative input and output relations in the economic systems of the united states. *The Review of Economics and Statistics*, 18(3), 105–125.

Liroff, R. A. (1976). *National policy for the environment.* Indiana University Press, Bloomington.

Liu, J., Peng, W., Wang, S., & Xu, D. (2025). The societal impacts of the legal profession: Evidence from commercial disputes in China. NBER Working Paper No. 33708.

Magee, S. P., Brock, W. A., & Young, L. (1989). *Black hole tariffs and endogenous policy theory: Political economy in general equilibrium.* Cambridge University Press.

Martindale-Hubbell (1931). Martindale-hubbell law directory. New Providence, NJ: Martindale-Hubbell, Inc. Published annually; editions for 1931–1963 digitized and accessed via HeinOnline.

Melnick, R. S. (1983). *Regulation and the Courts: The Case of the Clean Air Act.* Washington, DC: Brookings Institution.

Mengle, D. (1990). The case for interstate branch banking. *FRB Richmond Economic Review*, 76(6), 3–17.

Miller, A. R. (1978). An overview of federal class actions: past, present and future. *The Justice System Journal*, (pp. 197–222).

Miller, A. R. (1979). Of frankenstein monsters and shining knights: Myth, reality, and the "class action problem". *Harvard Law Review*, (pp. 664–694).

Moliterno, J. E. (2002). Broad prohibition, thin rationale: The acquisition of an interest and financial assistance in litigation rules. *Georgetown Journal of Legal Ethics*, 16, 223.

Murphy, K. M., Shleifer, A., & Vishny, R. W. (1991). The allocation of talent: Implications for growth. *The Quarterly Journal of Economics*, 106, 503–530.

Olson, W. K. (1991). *The Litigation Explosion.* Truman Talley Books–Dutton.

Painter, R. W. (1995). Litigating on a contingency: A monopoly of champions or a market for champerty. *Chicago-Kent Law Review*, 71, 625.

Pashigian, B. P. (1977). The market for lawyers: The determinants of the demand for the supply of lawyers. *Journal of Law and Economics*, 20(1), 53–85.

Philippon, T. & Reshef, A. (2012). Human capital in the u.s. financial sector: 1909–2006. *The Quarterly Journal of Economics*, 127(4), 1551–1609.

Priest, G. L. (1991). The modern expansion of tort liability: Its sources, its effects, and its reform. *Journal of Economic Perspectives*, 5(3), 31–50.

Priest, G. L. & Klein, B. (1984). The selection of disputes for litigation. *The Journal of Legal Studies*, 13(1), 1–56.

Ronchi, M. & Salvestrini, V. (2025). Gender diversity and decision-making in teams. Working Paper.

Rosen, S. (1992). The market for lawyers. *Journal of Law and Economics*, 35(2), 215–246.

Sander, R. H. & Williams, E. D. (1989). Why are there so many lawyers? perspectives on a turbulent market. *Law & Social Inquiry*, 14(3), 431–479.

Shleifer, A. (2005). Understanding regulation. *European Financial Management*, 11(4).

Stevens, R. (1983). *Law School: Legal Education in America from the 1850s to the 1980s*. Chapel Hill: University of North Carolina Press.

Trebbi, F., Zhang, M. B., & Simkovic, M. (2023). The cost of regulatory compliance in the united states. NBER Working Paper No. 30691.

Vargo, J. F. (1992). The american rule on attorney fee allocation: The injured person's access to justice. *Am. UL Rev.*, 42, 1567.

Vargo, J. F. (1996). The emperor's new clothes: The american law institute adorns a "new cloth" for section 402a products liability design defects—a survey of the states reveals a different weave. *University of Memphis Law Review*, 26, 493.

Vernon, D. H. & Zimmer, B. I. (1987). The size and quality of the law school applicant pool: 1982-1986 and beyond. *Duke LJ*, (pp. 204).

Waldfogel, J. (1995). The selection hypothesis and the relationship between trial and plaintiff victory. *Journal of Political Economy*, 103(2), 229–260.

White, T. O. (1984). LSAC/LSAS: A Brief History. *Journal of Legal Education*, 34(3), 369–373.

Wightman, L. F. (2000). Beyond fya: Analysis of the utility of lsat scores and ugpa for predicting academic success in law school. LSAC Research Report Series No. LSAC-RR-99-05.

Winston, C. (1998). U.s. industry adjustment to economic deregulation. *Journal of Economic Perspectives*, 12(3), 89–110.

Wolfers, J. (2006). Did unilateral divorce laws raise divorce rates? a reconciliation and new results. *American Economic Review*, 96(5), 1802–1820.

Yates, J. (2000). Business use of information and technology during the industrial age. In A. D. Chandler Jr. & J. W. Cortada (Eds.), *A Nation Transformed by Information*: Oxford University Press.

Appendix

A Data

A.1 BEA

The BEA reports statistics on legal services in SIC 8111 in 1929–2000; from 1998 and on it uses NAICS 5411. This leaves three years of overlap, that can be used to gauge any differences between the two systems of industry classification. Comparing SIC 8111 and NAICS 5411 legal services indicates that the SIC 8111 is a proper subset of NAICS 5411, and that industries were added to the latter. These additional industries (in NAICS 5411 and not in SIC 8111) include more lower paid jobs, e.g. paralegal services, notaries, title agents. The following crosswalk table illustrates this.[95]

SIC	Title (and note)	NAICS	Title
8111	Legal Services	5411	Legal Services
8111	Legal Services	541110	Offices of Lawyers
	-Null Set for U.S.-	541120	Offices of Notaries
6541	Title Abstract Offices	541191	Title Abstract and Settlement Offices
7389	Business Services, NEC (process services, patent agents, notaries public, paralegal services)	541199	All Other Legal Services

The relevant BEA series come from the National Income and Product Accounts (NIPA) tables and the Industry Economic Accounts. The NIPA tables, which cover the years 1929 to 2015, have series of employment and income by industry. These data, which are aggregated to the industry level, are sourced from administrative data from state unemployment insurance (UI) programs. We use the following series from the NIPA tables:

1. (Table 6.2) Compensation of Employees by Industry (NW): Compensation measures the total income both wages and salaries and supplements to wages and salaries earned by employees in return for contributing to production during an accounting period.

2. (Table 6.5) Full-Time Equivalent Employees by Industry (FTE): Full-time equivalent employees equals the number of employees on full-time schedules plus the number of employees on part-time schedules converted to a full-time basis. The number of full-time equivalent employees in each industry is the product of the total number of employees and the ratio of average weekly hours per employee for all employees to the average weekly hours per employee on full-time schedules.

3. (Table 6.8) Persons Engaged in Production by Industry ($FTE2$): Equals the number of full-time equivalent (FTE) employees plus the number of self-employed persons. Unpaid family workers are not included. The number of self-employed persons in a given industry is calculated by subtracting the FTE number from FTE2.

[95] Crosswalk table based on `https://www.census.gov/eos/www/naics/concordances/concordances.html`.

4. (Table 6.12) Nonfarm Proprietors' Income by Industry (NW_{prop}): Nonfarm proprietors' income measures the income before deducting income taxes, of sole proprietorships, partnerships, and other private nonfarm businesses that are organized for profit but that are not classified as corporations. Sole proprietorships are businesses owned by a single individual. Partnerships include most associations of two or more of: individuals, corporations, noncorporate organizations that are organized for profit, or of other private businesses. Other private businesses are made up of tax-exempt cooperatives, including credit unions, mutual insurance companies, and rural utilities providing utility services and farm marketing and purchasing services.

The BEA Industry Economic Accounts is the source of the Value Added data series. This series starts in 1947, but the value added of legal services is not reported separately until 1963. The value added of an industry, also referred to as gross domestic product (GDP)-by-industry, is the contribution of a private industry or government sector to overall GDP. The components of value added consist of compensation of employees, taxes on production and imports less subsidies, and gross operating surplus. Value added equals the difference between an industry's gross output (consisting of sales or receipts and other operating income, commodity taxes, and inventory change) and the cost of its intermediate inputs (including energy, raw materials, semi-finished goods, and services that are purchased from all sources).

A.2 Census

The Census microdata is extracted from IPUMS USA. The sample starts in 1850 and ends in 2000, after which we rely on data from the American Community Survey (ACS, see description below). A 5% sample of the decennial census is used in 1900, 1930, 1980, 1990 and 2000. A 1% sample is used in all other years. There is no 1890 observation because a 1921 fire destroyed most of the 1890 records.

We limit the sample to employed individuals. This is used to create three series by industry, occupation and education level: employment, hours worked per week, and income from wages. The employment series starts in the first year of our data, but income and hours worked is not recorded until 1940.

We need to identify lawyers and the legal services industry, in order to track the evolution or their wages and employment with respect to the rest of the economy. Lawyers can be classified in three types: Lawyers in legal services, Lawyers in government, and Lawyers in other private industries. Non-lawyers in legal services are categorized as "clerical", "paralegal", and "other". Paralegals were not listed as an occupation before 1980, so they would be included in our "clerical" group pre-1980. This includes all occupations classified as: "Clerical and Kindred", "Office and Administrative Support", "Office Machine Operators", "Secretaries", and "Clerical Occupations".

A.2.1 Legal services in 1940

We notice an anomaly in legal services employment in 1940. There is a significant increase in the share of legal services employment from 1930 to 1940 and an even greater decrease from 1940 to 1950. There was no corresponding increase or decrease in the number of lawyers in legal services. We attribute the peak in legal services employment in 1940 to a classification error, specifically an error in how some occupations were classified. For example, in 1940 there are 169 "Artists and Art

Teachers" in legal services. There were 3 "Artists and Art Teachers" in the legal services industry in 1930 and 1950 combined.

As a first step in correcting this error, we re-classify occupations that clearly should not be in legal services. This includes "Artists and Art Teachers" and "Dancers". After re-classifying occupations that don't belong to legal services there is still a spike in the 1940 employment share, albeit smaller than before. In the second step we identify the particular occupations that are driving this increase in employment share. We follow the following steps to do this:

1. Calculate each occupation's share of legal service employment, by year.
2. Calculate the percent increase in that share between 1930 and 1940, and between 1940 and 1950.
3. Identify an "outlier" as an occupation whose share both:
   (a) increases by more than 100% between 1930 and 1940, and
   (b) decreases by more than 50% between 1940 and 1950.
4. Calculate the fraction of each occupation that will remain in legal services, based on the average of their 1930 and 1950 values.
5. Take weighted totals for hours, employment, and wage bill, for 1940 and the identified "outliers" in legal services.
6. Use the fraction calculated in step 4 to split hours, employment and wage bill between legal and non-legal (and within legal between clerical and other) from step 5.

A.3 American Community Survey (ACS)

The American Community Survey (ACS) microdata is extracted from IPUMS USA. The sample starts in 2001 and ends in 2015. The ACS is a 1-in-100 national random sample of the population. Just as with the decennial census data, we limit the sample to employed individuals. This is used to create three series by industry, occupation and education level: employment, hours worked per week, and income from wages.[96]

A.4 Census/ACS series

We create one series for analysis with the decennial censuses (until 2000) and the ACS (from 2001), calling it "Census/ACS". It should be noted that there is one major difference between the Census and the ACS. This difference arises because the decennial census uses "point of time" estimates while the ACS uses "period" estimates. This means that data collection for the decennial census targets a specific point in time whereas ACS data are collected continuously.

While decennial census enumeration lasts from around mid-March to late August, most of the data is collected around the April 1st time period and, for all practical purposes, represents the characteristics of the population as of April 1st in the decennial census year. The 2005 ACS, for

[96] For more details on the ACS see `https://ofm.wa.gov/sites/default/files/public/legacy/pop/acs/ofm_acs_user_guide.pdf` and `https://ofm.wa.gov/washington-data-research/population-demographics/american-community-survey`.

example, contains data collected from January to December 2005. Certain questions, of course, refer to previous years data. For example, the Census captures income from the previous calendar year while the ACS captures income from the previous 12 months. That means that the 2005 ACS income data reflect income received between January 2004 and November 2005, depending on when the individual was surveyed.

A.4.1 Hours worked

There are three different "hours worked" questions recorded in the IPUMS microdata, depending on the year of the survey. We use all three to create the hours worked series. "Hours worked last week" is recorded, as a continuous variable, in 1940, 1950, 1980, and 1990. "Hours worked last week" is recorded in intervals in 1940, 1950, 1960, 1970, 1980 and 1990. "Usual hours worked per week" is recorded, as a continuous variable, from 1980 to 2015. In the years in which we only have weekly hours worked as an intervalled variable (1960, 1970) we assign the midpoint of the recorded interval to each individual.

A.4.2 Business income

The Censuses and the ACS report business income, which, in principle, would include the income of law firm partners in legal services. These data are top codded in a similar fashion as wage data (see below), but with different thresholds. We experimented with building income series for lawyers and for law firm partners using these data. Unfortunately, the business income data are not very informative. This is because the incidence of top coding is high, especially in early years, and because we suspect that business income beyond the top coding threshold is much more skewed than labor income. One useful piece of information that we do get from the business income data is that it corroborates the V-shape evolution of proprietors' income in legal services from the BEA (a drop from 1973 to 1982 and then a sharp increase until 1990), shown in Figure B3(c).

A.4.3 Top coding for wage income data

Table A1 reports top code thresholds and top coded wages for wage income data in the Census (1940–2000) and in the ACS (2001 and onwards). In 1940–1980 respondents' wages above these thresholds are reported at the threshold. In later years wages above the top code thresholds are reported as state median of wages above threshold (1990) or state mean of wages above threshold (2000 and on). From 2000 there is state-level variation in top code reporting, and from 2003 the top code threshold itself varies by state (99.5^{th} percentile within the state).

Table A2 reports the percent of employees that are top coded and their corresponding unadjusted wage bill share in the Censuses (1940-2000) and in the ACS (2001 and onwards). The unadjusted top coded wage bill share sums all top coded wages, and then divides by the total wage bill.

Table A1: Top code thresholds and values in U.S. Censuses and ACS

Year	Top code wage threshold	Top code wage value
1940	$5,001	$5,001
1950	$10,000	$10,000
1960	$25,000	$25,000
1970	$50,000	$50,000
1980	$75,000	$75,000
1990	$140,000	State median of wages above threshold*
2000	$175,000	State mean of wages above threshold*
2001-2002	$200,000	State mean of wages above threshold*
2003-	99.5th Percentile in State	State mean of wages above threshold*

Notes: 1940-2000 are U.S. Census years, 2001 and on are American Community Survey (ACS) years. *Top coded wage value is the state median or mean of values strictly greater than the corresponding top code wage threshold. For example, in 1990 an individual's wage that was originally reported as being greater than $140,000 was coded as the median over values strictly greater than $140,000 within that individual's state of residence.

Table A2: Top coded employees and share of wage bill that is top coded

	Percent of top-coded workers					Percent of wage bill that is top coded, before adjustment				
	Private Sector	Legal Services	Non-lawyers in Legal Services	Lawyers in Legal Services	Lawyers in Private Sector	Private Sector	Legal Services	Non-lawyers in Legal Services	Lawyers in Legal Services	Lawyers in Private Sector
1940	0.05	0.11	0.07	0.15	1.15	0.34	0.81	0.50	1.18	2.56
1950	0.68	2.04	0.15	3.72	15.99	3.64	12.72	0.73	29.23	33.29
1960	0.27	0.65	0	1.14	4.99	2.02	6.40	0	12.40	13.27
1970	0.18	0.49	0	0.94	3.76	1.55	4.96	0	9.18	11.22
1980	0.44	1.80	0.04	3.56	4.81	2.91	11.70	0.36	18.94	12.68
1990	0.62	3.64	0.15	7.79	8.37	5.80	22.65	1.45	33.41	23.98
2000	1.06	4.68	0.45	9.93	16.43	10.86	30.68	4.94	43.56	44.51
2001	0.84	4.33	0.43	9.49	13.02	9.04	28.13	4.29	41.03	36.53
2002	0.86	4.62	0.33	10.67	14.72	9.03	29.73	3.52	43.91	41.21
2003	0.90	4.91	0.45	11.14	15.30	8.39	28.27	4.19	40.76	37.66
2004	3.32	13.06	1.71	27.51	45.11	18.47	46.87	9.58	66.54	71.90
2005	0.92	4.93	0.44	10.84	16.23	9.06	28.50	4.59	40.30	39.80
2006	0.90	5.56	0.49	12.16	14.99	8.99	31.41	5.06	43.68	35.77
2007	0.91	5.09	0.37	10.81	15.21	9.27	29.27	3.72	40.61	38.81
2008	0.88	5.67	0.39	12.07	14.56	9.05	32.03	4.11	43.85	38.58
2009	0.95	6.00	0.46	12.57	16.20	9.24	31.68	4.42	43.07	40.15
2010	1.19	7.26	0.68	15.08	20.15	10.31	35.37	6.06	47.96	45.67
2011	1.17	6.99	0.44	14.31	20.87	10.35	33.94	4.04	45.88	47.82
2012	1.18	6.27	0.45	12.81	21.75	10.42	31.67	3.72	43.43	47.35
2013	1.19	7.02	0.65	13.96	19.21	11.09	35.11	5.86	46.73	45.47

Notes: The table reports the percent of employees that are top coded and their corresponding unadjusted wage bill share in the Censuses (1940-2000) and in the ACS (2001 and onwards). The unadjusted top coded wage bill share sums all top coded wages, and then divides by the total wage bill.

A.5 Current Population Survey (CPS)

We use the Annual Social and Economic supplement to the Current Population Survey (March), which reports annual income and work variables for the previous year. Here, 1967–2015 correspond to surveys carried out in 1968–2016. For complete details on the CPS see Flood et al. (2017), or web page `https://cps.ipums.org/cps/`. From these data we use only the employment data in Figure B1(a).

A.6 Census of services, states-fields sample

We created a "states-fields" sample of lawyers by state and fields of specialization using the Census of Services. The Census of Services is conducted every five years starting in 1967, but legal services firms are asked about lawyers fields of specialization only in 1972–1992. We combine this with employment data from the Censuses. The 1970 and 1990 Census data are used for 1972 and 1992 employment numbers, respectively. Here we provide details on how we constructed the "states-fields" sample.

- The Census of Services reports the number of lawyers in the USA, and their numbers in the USA by field. The Census of Services also reports numbers of lawyers (total and by field) for MSAs with enough respondents. Not all MSAs are reported. This implies that the total lawyer counts for all MSAs is less than the total for the United States from the same source.
  - We take into account a small number of changes in definitions of MSA over time in CO, NY and WI. In order to use as much information as possible, we split MSAs when necessary. For example, in NY we have "Buffalo" in 1972–1987, but "Buffalo-Niagra Falls" in 1987 and 1992. We use the Buffalo share of lawyers in "Buffalo-Niagra" in each field in 1987 to extrapolate the Buffalo numbers from the "Buffalo-Niagra Falls" total in 1992. The same is done for Denver-Boulder in CO, and Miluwakee-Racine in WI.
- We aggregate MSA level data up to the state-level. For example, lawyers in New York = Lawyers in Buffalo + Lawyers in New York City + Lawyers in Albany. Some states have only one MSA. The total number of states is 28 plus the district of Columbia (DC), and are listed here: AL, AZ, CA, CO, CT, DC, FL, GA, IL, IN, KY, LA, MA, MD, MI, MO, NC, NJ, NY, OH, OK, OR, PA, TN, TX, UT, VA, WI. Overall, the state-fields sample contains 51% of the total number of lawyers in the United States. See Table A3 in the appendix for the list of MSAs and their mapping to states.
- Here is the list of fields, with the share of each field across states in the total for the field in the USA (pooling across 1972 and 1992) in the resulting sample: banking and commercial (55%), corporate (69%), criminal (48%), domestic relations (40%), insurance (49%), patent/trademark/copyright (77%), real estate (52%), tax (67%), wills/estate planning/probate (46%), negligence (50%). We aggregate a handful of tiny fields into a category called "other" (63%). Finally, there are lawyers that are classified as "general practice" (40%).
- We merge into the state-fields sample state-level employment the Census. In doing so, we use only the employment of the specific MSAs underlie the state-fields sample from the Census of Services. Using the New York example, Employment in NY = Employment in Buffalo + Employment in New York City + Employment in Albany.

Table A3: Sample for Field Decompositions

State No.	State	MSA
1	AL	Birmingham
2	AZ	Phoenix
3	CA	Los Angeles-Long Beach
	CA	Sacramento
	CA	San Francisco-Oakland
4	CO	Denver-Boulder
5	CT	Hartford
6	DC	Washington
7	FL	Jacksonville
	FL	Orlando
8	GA	Atlanta
9	IL	Chicago
10	IN	Indianapolis
11	KY	Louisville
12	LA	New Orleans
13	MA	Boston
14	MD	Baltimore
15	MI	Detroit
16	MO	Kansas City
	MO	St. Louis
17	NC	Charlotte-Gastonia
18	NJ	Newark
19	NY	Albany-Schenectady-Troy
	NY	Buffalo
	NY	New York
	NY	Rochester
	NY	Syracuse
20	OH	Cincinnati
	OH	Cleveland
	OH	Columbus
21	OK	Oklahoma City
	OK	Tulsa
22	OR	Portland
23	PA	Philadelphia
	PA	Pittsburgh
24	TN	Memphis
25	TX	Dallas-Fort Worth
	TX	Houston
	TX	San Antonio
26	UT	Salt Lake City-Ogden
27	VA	Norfolk-Virginia Beach-Portsmouth
28	WI	Milwaukee

Notes: This is the set of MSAs for which we have data on field of law in both 1972 and 1992. There are 42 MSAs and 27 states plus the District of Columbia. These states make up the sample for the decomposition in Table B3.

A.7 Martindale Hubbell Directory

The *Martindale–Hubbell Law Directory* is a biographical directory of U.S. lawyers and law firms. The combined *Martindale–Hubbell Law Directory* first appeared in 1931 as a two-volume set and was revised and published annually thereafter, growing into the standard nationwide reference on the American bar (Martindale-Hubbell, 1931). The directories have two parts: a broad geographic roster that aims to list every admitted attorney by city (with name and address), and a set of professional listings that firms buy and compose themselves. We use the latter, because it has information on the practice area of each firm.

We digitized the firm listings for 1931–1963 (Martindale-Hubbell, 1931). Each entry lists a firm (or an individual practitioner), its location, the names and short biographies of the firm's members and associates, and a description of the firm's areas of practice. The resulting sample contains 224,921 firm-year listings across 40,974 distinct firms. For each listing we count lawyers as the sum of members and associates recorded in the biographical text; solo practitioners listed under a firm name but without individual bios are counted as one lawyer. The number of lawyers in the digitized sample grows from about 9,800 in 1931 to about 53,000 in 1963.

The directory functioned as a referral network: its central use was to help lawyers and their business clients locate counsel in other cities, which made a detailed listing most valuable to firms seeking out-of-town commercial and corporate referrals. Both features favor larger, established firms and commercial and corporate practice, in lieu of government lawyers, solo practitioners, and fields such as criminal and domestic law. Corporate and commercial listings are accordingly over-represented in the Martindale–Hubbell sample, and we treat it as informative about the relative composition of practice and its evolution over time rather than as a representative cross-section of the profession in any single year. The sample covers a growing share of, but not all, practicing lawyers. Table A4 compares the digitized sample to the number of lawyers in the legal-services industry from the decennial Census of Population: coverage rises from roughly 7% in the early 1930s to nearly 30% by 1960.

Table A4: Digitized Martindale–Hubbell Sample vs. Census Lawyer Counts

Year	MH sample (lawyers)	Lawyers in legal services (Census)	Sample coverage
1931	9,779	132,468	7%
1940	15,075	129,355	12%
1950	24,906	133,873	19%
1960	43,834	157,863	28%

Notes: "MH sample" is the number of lawyers (members plus associates) in the digitized Martindale–Hubbell firm listings. "Lawyers in legal services" is the count of employed lawyers in the legal-services industry from the decennial Census of Population (1930, 1940, 1950, 1960); the 1931 sample figure is compared to the 1930 Census. Coverage is the ratio of the two.

Classification of Fields We classify each listing into a field of practice from its free-text practice-area description. The description is first parsed into atomic "law-type" tokens, and each token is mapped to a field through a fixed crosswalk. We choose the field categories to align with those of the Census of Services, so that the two sources can be compared directly. Table A5 lists the fields and representative keywords. Before assigning fields we discard purely procedural or venue descriptors—"federal," "state," "appellate," "chancery," "litigation," and the like, which describe

where or how a firm practices rather than in what field. A listing is classified as general practice in two cases: when none of its remaining tokens map to a substantive field, or when it mentions "general law" and five or more fields—a breadth we take to reflect a general practice rather than genuine specialization, in which case we set the individual field flags aside.

Table A5: Martindale–Hubbell Practice-Area Fields and Keywords

Field	Representative practice-area keywords
Corporate	corporation, corporate, business, partnership, merger, contract, securities
Banking & commercial	banking, bank, commercial, mercantile, savings, credit, secured
Insurance	insurance, casualty, surety, fire, life, liability, subrogation, indemnity
Real estate	real estate, real property, land, title, mortgage, zoning
Wills, estates & probate	probate, trust, estate planning, inheritance, guardianship, wills
Tax	tax, taxation, income, revenue, assessment
Patent	patent, trademark, copyright
Criminal	criminal
Domestic relations	domestic, family, divorce
Negligence	negligence, tort, personal injury, malpractice, medical, motor vehicle, damages
Government & regulatory	administrative, municipal, public utility, commerce, commission, interstate
General practice	"General Practice," "Practice in all Courts," or venue-only terms

Notes: Fields are assigned by mapping atomic practice-area tokens to categories aligned with the Census of Services. Keywords are representative, not exhaustive; a firm may appear in more than one field. Tokens denoting venue or procedural posture (federal, state, appellate, chancery, litigation) are treated as non-substantive and do not by themselves place a firm in a field. The Census of Services splits negligence into plaintiff- and defendant-side practice; the Martindale–Hubbell practice-area text does not distinguish the two, so "negligence" here is the combined field.

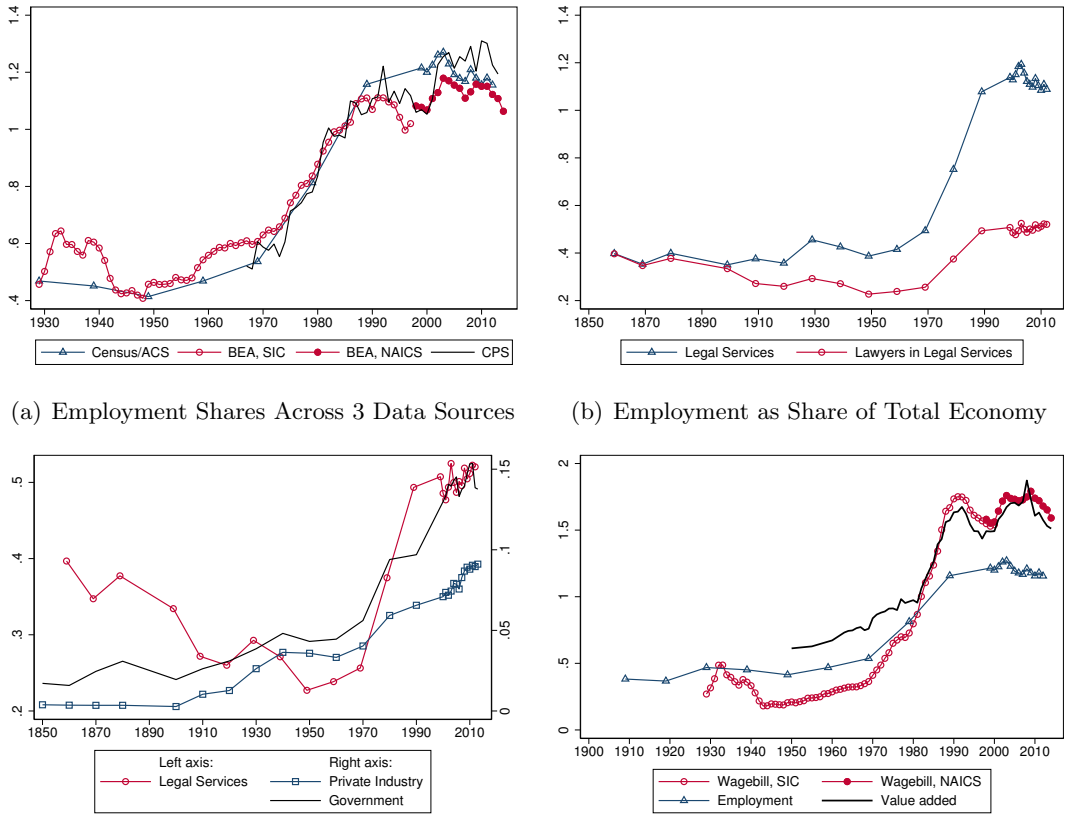
B Calculation of Series of Interest

In this appendix we provide details on the calculation for each series we reference in Section 3.

B.1 Employment Shares

We show that employment shares of legal services is consistent across definitions, and the phenomenon is specific to lawyers in legal services, as opposed to industry or government lawyers (Figures B1 and B2).

Figure B1: Employment Shares of Legal Services, Additional Series



(a) Employment Shares Across 3 Data Sources

(b) Employment as Share of Total Economy

(c) Lawyers in Legal Services, Industry, Govt (%)

(d) Emp. Shares, Value Added, and Wage Bill

Notes: In (a) we compare employment shares using Census, BEA, and CPS data. BEA series are employment shares in terms of full-time equivalents, using the *persons engaged* labor concept, which includes proprietors 1929–2015. The CPS series is in terms of hours shares, 1967–2013 In (b) we show employment measured in hours, and shares are within the entire economy (in Figure 1 these are shares in the private sector). Employment is sourced from the decennial Census from 1850–2000, and the American Community Survey from 2001–2015. The legal services series is the total employment in the legal services industry, as a share of the total employment in the economy, including the public sector. The lawyers in legal services series is the total employment of lawyers in the legal services industry, as a share of the total employment in the economy, including the public sector. In (d) we show the employment share in legal services against the wage bill and value added shares in the industry, from the BEA.

Figure B2: Employment Shares of Lawyers in Private Industry



(a) Lawyers in Industry, as % of All Lawyers (b) Lawyers in Industry, as % of Private Sector

Notes: Employment is sourced from the decennial Census from 1850–2000, and the American Community Survey from 2001–2015.

B.2 Relative wages of Lawyers in Legal Services

We define the relative wage of legal services as the ratio of the average labor compensation among all employees in legal services to that in the other industries, $w_{nonlegal}$: $\omega_{legal} = \frac{w_{legal}}{w_{nonlegal}}$. Here, we rely on BEA data to construct full-time equivalent wage series. Figure B3(a) shows that ω_{legal} drops from 1.13 in 1933 to 0.67 in 1943, after which it increases at a moderate rate until 1975, when it reaches the same level as in 1933. From 1980 to 1990 the relative wage in legal services increases sharply from 1.10 to 1.82, after which it remains approximately stable.[97] Note that ω_{legal} includes only wage income, not business income, and does not take into account law firm partners and other proprietors; we address this below.

We define the relative wage of lawyers within legal services, $\omega_{lawyer|legal}$, as the ratio of the average labor income among all lawyers within legal services to $w_{nonlegal}$. We compute $\omega_{lawyer|legal}$ in two ways. First, we use Census and ACS data for both the numerator and denominator, denoted $\omega^{Cen/ACS}_{lawyer|legal}$:

$$\omega_{lawyer|legal} = \frac{w_{lawyer|legal}}{w_{nonlegal}} \ . \tag{8}$$

When doing so we make a simple top-coding adjustment.[98]

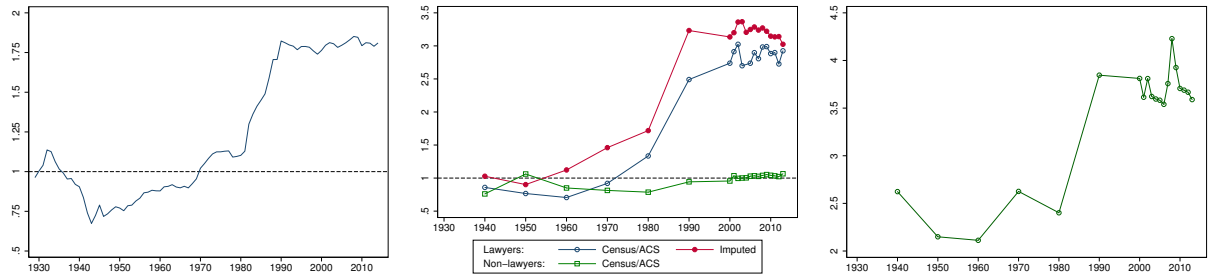
The second methodology is designed to address top coding in the Census wage data. Here, we combine Census/ACS data with BEA data to impute the relative wage of lawyers. The average wage in legal services is, in general,

$$w_{legal} = \lambda w_{lawyer|legal} + \ (1-\lambda)\, w_{nonlawyer|legal} \ , \tag{9}$$

[97] Relative wage data based on Censuses and the ACS broadly agree with this evolution; see Figure B4(a).

[98] We multiply top-coded wages by 1.5 in 1940–2002. From 2003 we do not adjust top coded wages in the ACS, which reports all wages up to the 99.5th percentile by state of residence; above this threshold wages are coded as the state mean of wages above the state-specific 99.5th percentile. We drop 2004 because it is an extreme outlier in terms of the number of top-coded wage observations. See Appendix A for more information on top coding in the censuses and ACS.

Figure B3: Relative Wages for Legal Services, Lawyers and Law Firm Partners



(a) Legal services (b) Lawyers and non-lawyers (c) Lawyers, including partners

Notes: The relative wage of legal services (in (a)) is the average wage in legal services divided by the average wage in the private sector, excluding legal services. This series uses BEA data on compensation of employees and full-time equivalent employment. The relative wage of lawyers and non-lawyers within legal services (in (b)) uses Census/ACS data on wages, relative to the average wage in the rest of the private sector. Relative wages of lawyers and law firm partners in legal services (in (c)) are imputed. The imputation uses the average wage and employment shares of non-lawyers employed in legal services from the Census/ACS together with the employment and average income of all persons engaged in legal services using BEA data.

where λ is the employment share of lawyers within legal services. We use Census/ACS data to compute the average wage of non-lawyer employees in legal services $w^{Cen/ACS}_{nonlawyer|legal}$, because we know that non-lawyers' wages are very rarely top-coded.[99] We also know the employment share of lawyers within legal services, $\lambda^{Cen/ACS}$, from the Census/ACS. Then, we use the BEA data to compute the average wage in legal services w^{BEA}_{legal}, which does not suffer from top-coding. Rearranging Equation (9) and using the series above we have:

$$\omega^{imputed}_{lawyer|legal} = \frac{w^{imputed}_{lawyer|legal}}{w^{BEA}_{nonlegal}} = \frac{w^{BEA}_{legal} - (1-\lambda^{Cen/ACS}) w^{Cen/ACS}_{nonlawyer|legal}}{\lambda^{Cen/ACS}} \cdot \frac{1}{w^{BEA}_{nonlegal}} \,, \tag{10}$$

where $w^{BEA}_{nonlegal}$ is average non-legal services wages using the BEA data.[100]

Figure B3(b) shows that relative wages of lawyers, using both methodologies, increase in 1960–1980, and then increase more sharply in 1980–1990. From 2000 and on both series are relatively flat, $\omega^{Cen/ACS}_{lawyer|legal}$ at around 2.85 and $\omega^{imputed}_{lawyer|legal}$ at around 3.2. Figure B3(b) also shows that there are hardly any relative wage gains for non-lawyers. Finally, we compute $\omega_{partners|legal}$ using BEA data on proprietors' income within legal services.[101] In Figure B3(c) we incorporate proprietors' income into $\omega^{imputed}_{lawyer|legal}$: we add proprietors' income to the numerator of ω^{BEA}_{legal} and take into account all

[99] Only 0.45% of non-lawyers in legal services report wages that are top coded (compared to 11% for lawyers); as above, we multiply top-coded wages by 1.5 in 1940–2002, and make no adjustments from 2003 and on.

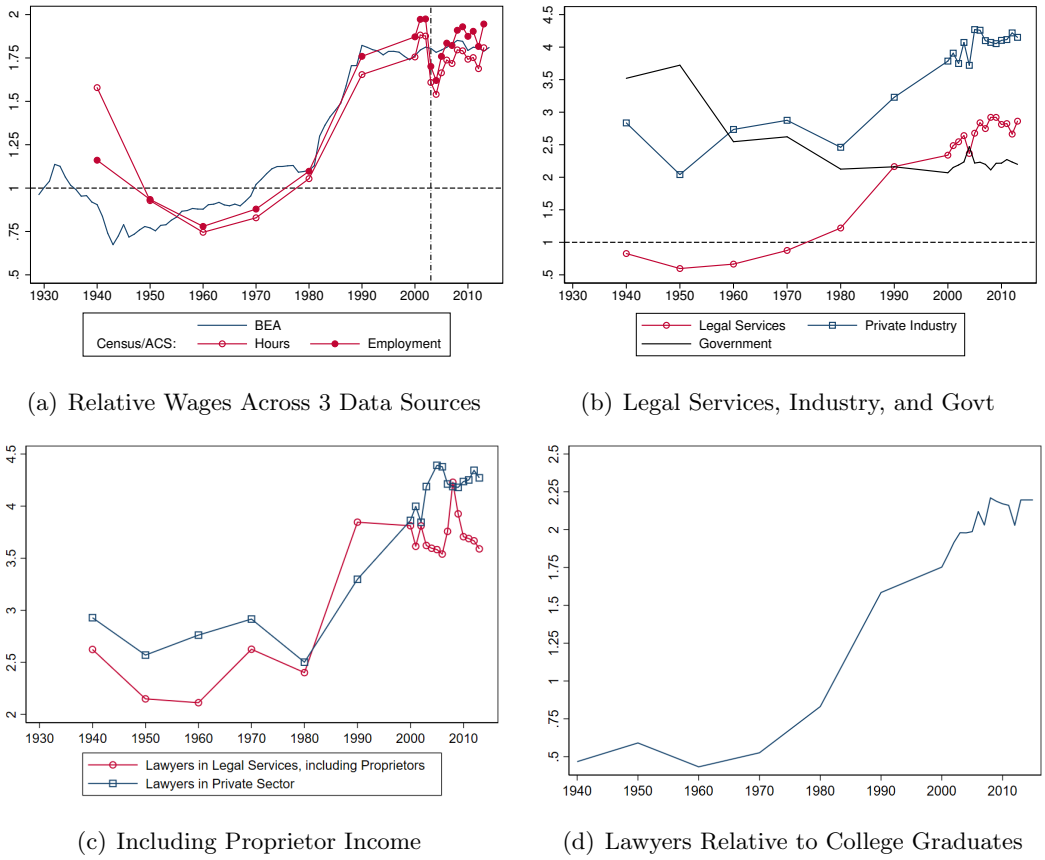
[100] One caveat with this approach is that the wage concept in the BEA data is labor compensation, while in the Census/ACS data several elements of compensation may not be represented. We have no way of correcting for this. Therefore, the accuracy of Equation (10) relies on the assumption that the share of missing compensation items in the $w^{Cen/ACS}_{nonlawyer|legal}$ series is small.

[101] Appendix Figure B5(a) shows that $\omega_{partners|legal}$ drops from 1929 to 1950, remains flat until 1960, and then increases almost linearly, except for one big drop during 1978–1986. This is not driven by the number of proprietors, but by a drop in proprietors income, which a pattern that we see across industries, thus is not specific to partners in the legal services industry (see Appendix Figure B5(b)). Using IRS data, both Sander & Williams (1989) and Rosen (1992) also find a drop in the proprietors' income in legal services around the same time that we do in the BEA data.

persons engaged in the denominator, rather than just employees (Appendix B). We find that this series mimics the lawyers' relative wage series in (b), but at a much higher level, reflecting the higher compensation of partners.

It is reassuring that these two series, using different methodologies and data, agree with each other so well.[102] Since $\omega^{imputed}_{lawyer|legal}$ does not suffer from top coding, it is higher than $\omega^{Cen/ACS}_{lawyer|legal}$, which applies an imperfect top coding correction. The series are closer at the end of the sample, when top coding in $\omega^{Cen/ACS}_{lawyer|legal}$ becomes less restrictive. Figure B4 shows further robustness across samples.

Figure B4: Relative Wages of Legal Services, Additional Series



(a) Relative Wages Across 3 Data Sources

(b) Legal Services, Industry, and Govt

(c) Including Proprietor Income

(d) Lawyers Relative to College Graduates

Notes: In (a), all series are relative to non-legal services private sector. BEA relative wage series uses data on compensation of employees and full-time equivalent employment. Until 1997 data based on SIC; from 1998 data based on NAICS. Census/ACS series use data on wage bills and either hours worked (hourly relative wage, comparable to using FTE), or employment for observations that report non-missing wage bill information. Top coded wages are multiplied by 2 until 2002, inclusive; no adjustment is made from 2003 and on. The vertical dot-dashed line indicates the year 2003. In (b), wages of lawyers across sectors are relative to total non-lawyer wages. In (c) we include proprietors income. In (d), wages of lawyers are relative to college-graduate wages.

[102] Differences in denominators make it possible for both $\omega^{imputed}_{lawyer|legal}$ and $\omega^{cen/ACS}_{nonlawyer|legal}$ in Figure B3(b) to be above ω_{legal} in Figure B3(a) in early years. For example, in 1940 $\omega^{imputed}_{lawyer|legal} = 1.05$, $\omega^{cen/ACS}_{nonlawyer|legal} = 1.28$, and $\omega_{legal} = 0.9$. The reason is that denominator in $\omega^{cen/ACS}_{nonlawyer|legal}$ is $w^{cen/ACS}_{nonlegal}$, whereas in ω_{legal} it is $w^{BEA}_{nonlegal} > w^{cen/ACS}_{nonlegal}$.

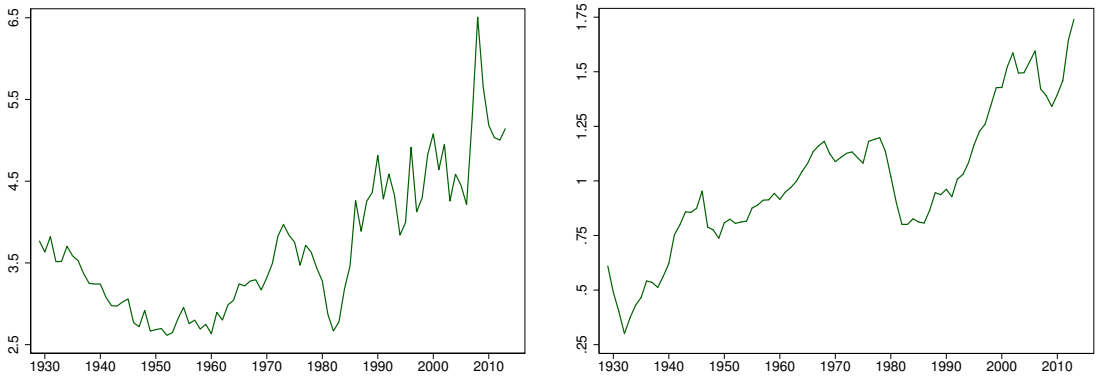
B.3 Relative income for Partners

Relative income for partners (proprietors) within legal services is defined as:

$$\omega_{partners|legal} = \frac{w_{partners|legal}}{w_{nonlegal}} \ . \tag{11}$$

The numerator of $w_{partners|legal}$ is proprietors income within legal services. Its denominator is the difference between full time equivalent employment of "persons engaged" and "employees". Here, we use BEA data on wages and proprietor's income.

Figure B5: Relative income of proprietors in the private sector



(a) Legal Services (b) All

Notes: Total proprietors' income in the private sector is divided by their full time equivalent employment (FTE) to obtain their income per FTE. This is divided by the average wage in the private sector, which is equal to labor compensation divided labors' FTE. Source: BEA. Series splits in 1997 as industry classification changes from SIC to NAICS. In this case, the splicing changes virtually nothing, as the SIC and NAICS series are almost equal in the years in which they overlap.

B.4 Decomposition of employment shares

In Section 3.3 of the main text we decompose changes in the aggregate employment share of legal services into between- and within-state components, using equation (1). Table B1 reports the results, for the employment share of legal services in total employment and for lawyers in legal services: within-state changes account for virtually all of the aggregate change in 1970–1990, while changes in the relative sizes of states contribute little, and almost always move in the opposite direction.

B.5 Decomposition of wages

We perform the following decomposition of relative wages:

$$\Delta\omega = \underbrace{\sum_i \Delta n_i \overline{\omega}_i}_{\text{Between}} + \underbrace{\sum_i \overline{n}_i \Delta\omega_i}_{\text{Within}} \ , \tag{12}$$

where $\Delta\omega$ is the aggregate relative wage change of either legal services ω_{legal} or lawyers $\omega_{lawyer|legal}$ over some period. The first sum, Between, captures the importance of compositional changes in state sizes, whereas the second sum, Within, captures the importance of within-state changes in employment share. We also apply the decomposition (12) for ω_{legal} where i denotes occupations Proprietors' income is not reported at the state-level, so we cannot perform the decomposition (12) for $\omega_{partners|legal}$. Despite similar appearance, the components of (12) are different from those in (1), and we list them for the case of state-decomposition of ω_{legal}. Here Δn_i is the change in state i's share of total legal services employment, $\overline{\omega}_i$ is the average relative wage of legal services within state i relative to the aggregate $w_{nonlegal}$, $\overline{n}_i$ is state i's average share of total legal services employment, and $\Delta\omega_i$ is the change in the relative wage of legal services within state i relative to the aggregate $w_{nonlegal}$. Table B2 reports the results.

B.6 Decomposition of fields

We perform the following decomposition of Lawyers' fields:

$$\Delta F = \underbrace{\sum_i \Delta n_i \overline{f}_i}_{\text{Between}} + \underbrace{\sum_i \overline{n}_i \Delta f_i}_{\text{Within}} , \tag{13}$$

where ΔF is the aggregate change in the share of lawyers in a given field in the U.S. from 1972 to 1992, i denotes a state, Δn_i is the change in the employment share of lawyers (regardless of field) in that state, $\overline{f}_i$ is the average field share of lawyers within state i during the period, $\overline{n}_i$ is the average lawyer share of state i, and Δf_i is the change in the field of law share within state i. The first sum captures the contribution of changes in the share of total lawyers in a state (the "between" share), whereas the second sum captures the importance of within-state changes in field of law share ("within"). Table B3 reports the results, and Table A3 describes the sample underlying the field decompositions.

Table B1: Decompositions of changes in employment shares across states

	A. Legal Services					B. Lawyers				
Period	Change	Between, %		Within, %		Change	Between, %		Within, %	
1880-1910*	-0.023	-0.001	5	-0.022	95	-0.105	-0.001	1	-0.104	99
1910-1930	0.079	0.015	19	0.064	81	0.021	0.008	38	0.013	62
1930-1950	-0.069	0.005	-7	-0.073	107	-0.066	0.003	-4	-0.068	104
1950-1970	0.107	-0.002	-2	0.109	102	0.029	-0.001	-5	0.031	105
1970-1990	0.584	-0.007	-1	0.591	101	0.237	-0.006	-2	0.243	102
1990-2010	0.026	-0.009	-36	0.035	136	0.011	-0.007	-62	0.018	162

Notes: The table reports decompositions of the Change in aggregate employment shares across states, using equation (1). We use employment of legal services and lawyers in legal services as a share of total employment in the economy. Change = Between + Within. The % are the percent of Between or Within in Change. *The Census of 1890 is not available. Sources: authors' calculations based on data from U.S. Censuses (1880-2000) and American Community Surveys (2010).

Table B2: Decompositions of changes in relative wages

A. Legal Services: Occupations

Period	Difference	Between, %		Within, %	
1940-1950	-0.140	-0.013	10	-0.127	90
1950-1960	-0.141	0.004	-3	-0.145	103
1960-1970	0.102	0.000	0	0.101	100
1970-1980	0.189	-0.023	-12	0.212	112
1980-1990	0.586	-0.029	-5	0.615	105
1990-2000	0.094	-0.012	-13	0.107	113
2000-2010	0.140	0.038	27	0.103	73

B. Legal Services: Geography, across states

Period	Difference	Between, %		Within, %	
1940-1950	-0.141	0.025	-18	-0.167	118
1950-1960	-0.140	-0.008	6	-0.131	94
1960-1970	0.102	0.002	2	0.100	98
1970-1980	0.189	0.003	2	0.186	98
1980-1990	0.586	0.008	1	0.577	99
1990-2000	0.094	-0.008	-8	0.102	108
2000-2010	0.140	-0.001	-1	0.141	101

C. Lawyers: Geography, across states

Period	Difference	Between, %		Within, %	
1940-1950	-0.087	0.028	-33	-0.115	133
1950-1960	-0.065	0.013	-20	-0.079	120
1960-1970	0.214	-0.001	-1	0.216	101
1970-1980	0.415	0.014	3	0.401	97
1980-1990	1.156	0.014	1	1.142	99
1990-2000	0.247	0.005	2	0.242	98
2000-2010	0.131	0.009	7	0.122	93

Notes: The table reports decompositions of the Change in relative wages of legal services (panel A and B) or relative wages of lawyers in legal services (panel C), using equation (2). We use top-coded wages, using the 1.5 top coding adjustment in all years pre-2003. Relative wages are relative to non-legal wages in the private sector. Panel A decomposes relative wage in legal services over legal services employment shares of occupations. There are four occupations we consider: Lawyers, Clerical Workers, Paralegals, and Other. Other encompasses everyone not in the first 3 classifications. Panels B and C decompose relative wages over states. Change = Between + Within. The % are the percent of Between or Within in Change. Sources: authors' calculations based on data from U.S. Censuses (1940-2000) and American Community Surveys (2010).

Table B3: Decomposition of changes in fields of law across states, 1972-1992

Field	Difference	Between, %		Within, %	
Banking	0.019	0.000	2.1	0.018	97.9
Corporate	0.016	-0.006	-38.2	0.023	138.2
Criminal	0.011	0.000	2.5	0.011	97.5
Domestic	0.007	0.000	1.7	0.007	98.3
Insurance	0.035	0.002	5.0	0.033	95.0
Negligence	0.049	0.000	-0.9	0.049	100.9
Patent	0.000	0.000	53.0	0.000	47.0
Real Estate	0.007	0.000	4.5	0.007	95.5
Taxation	-0.003	-0.001	16.0	-0.003	84.0
Wills	-0.023	-0.002	7.1	-0.021	92.9
Other	0.130	0.002	1.6	0.128	98.4
General	-0.249	0.004	-1.5	-0.253	101.5

Notes: These are calculating using MSA totals of lawyers by field from the Census of Service Industries. The MSA level data are aggregated to the state-level. The sample is limited to include only MSAs which were included in the Census publication in 1972 and 1992. We end up with 42 MSAs over 28 states (see Appendix Table A3 for a list of the MSAs and states). This means that the differences in 1972 and 1992 shares (ΔF) will not exactly match the changes we would calculated if we used the U.S. total data (Table 3). More details on the data source and construction of the sample are included in Appendix A.

C Legislative Uncertainty and the Demand for Lawyers

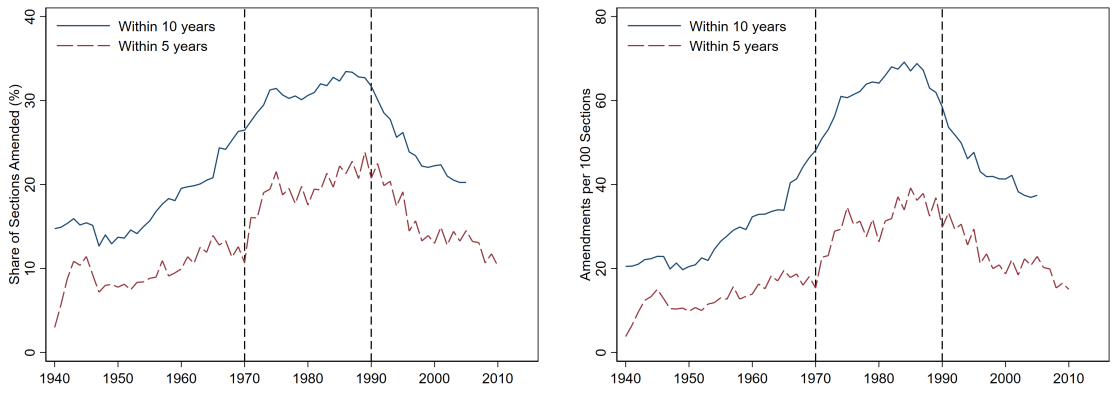
This appendix describes the construction of our measures of the uncertainty of the law, and reports the corresponding figures. It then shows how we use the uncertainty measure to calibrate our counterfactual.

C.1 Measures of Legislative Uncertainty

The forward amendment rate. The U.S. Code records, in each section's source credit, the date the section was enacted and every public law that subsequently amended it. We parse the source credits of the 48,738 sections of the 2015 edition of the Code. Each section is dated by its year of enactment, which allows us to reconstruct, for every year t, the stock of sections in force.[103]

For the stock of sections in force in year t, we count subsequent amendments, excluding amendments to sections enacted after t, so that the measure describes the law already on the books at t. We compute two versions. The *share* version is the share of sections in force in year t that are amended at least once within the following five or ten years. The *events* version counts amendment events per 100 sections in force, so a section amended three times contributes three events; it captures the intensity of revision, not only its incidence. The ten-year series end in 2005 and the five-year series in 2010, so that every window is complete within the 2015 edition. Figure C1 reports all four series. They trace the same inverted U: amendment activity is low and stable at mid-century, rises steeply from the mid-1960s, peaks for the stock of law in force in the mid-1980s, and falls back thereafter. The ten-year share version is the series used in the main text (Figure 6(b)); but we use the 5-year forward share for the 5 year prediction regressions (Table 2).

Figure C1: Forward Amendment Rate of the U.S. Code: Five- and Ten-Year Windows



(a) Share of Sections Amended

(b) Amendment Events per 100 Sections

Notes: This figure shows the forward amendment rate of Figure 6(b) for both five- and ten-year windows. In panel (a), the series is the share of the sections in force in year t that are amended at least once in the following five or ten years. In panel (b), the series is the number of amendment events in the following five or ten years per 100 sections in force in year t, so a section amended three times contributes three events. Amendments to sections enacted after year t are excluded. The ten-year series ends in 2005 and the five-year series in 2010, so that every window is complete in the 2015 edition. Dashed vertical lines mark 1970 and 1990.

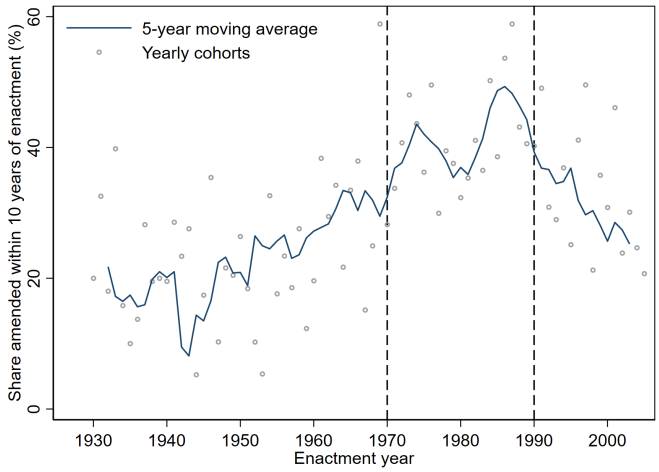
[103] Because the measure is built from a single edition, two caveats apply: sections repealed before 2015 are not observed, and wholesale recodifications (Titles 11, 17, and 49) reset enactment dates.

The cohort measure. The forward amendment rate is computed on the stock of law in force, so its level partly reflects the age composition of the Code: young sections are amended more often, and the legislative boom made the stock of the 1970s and 1980s unusually young. The cohort version of the measure holds age fixed. For the sections enacted in each year t (the enactment cohort), we compute the share amended at least once within ten years of enactment, so that every cohort is observed over the same first decade of life; the series is censoring-safe through the 2005 cohorts. Figure C2 plots the yearly cohorts together with a cohort-size-weighted centered five-year moving average. The cohort series traces the same inverted U as the stock-based series, peaking for the cohorts enacted in the mid-1980s.

Size and complexity of the U.S. Code. Figure C3 puts the amendment measure in context, using the point-in-time editions of the Code assembled by Jeong et al. (2026). The size of the Code—words and sections per capita—grows steadily over the whole period, and its linguistic complexity (entropy, and the corresponding perplexity) moves comparatively little after 1980. Length and linguistic complexity are markers of specification rather than of ambiguity—highly specified law is long and intricate, like the tax code, while open-ended law is often short—so the flat complexity series indicates that the post-1970 expansion of the Code did not come with commensurately more detailed drafting. It is the unsettledness of the law, rather than the size or language of the statutes, that varies over the 1970–1990 window.

Completeness in State legislation. Figure C4 reports the corresponding measures for state legislation, from the replication data of Ash et al. (2024): the volume of legislation introduced (pages per state and year), and the share of contingent provisions in the legal text, our ex ante measure of statutory ambiguity—fewer contingencies imply a less complete, more ambiguous law.

Figure C2: Amendment of the U.S. Code by Enactment Cohort



Notes: For the sections of the U.S. Code enacted in each year (the enactment cohort), the figure shows the share amended at least once within ten years of enactment. Hollow circles are yearly cohorts; the solid line is a cohort-size-weighted centered five-year moving average (pooling cohorts $t-2$ to $t+2$). Unlike the forward amendment rate of Figure C1, which is computed on the stock of law in force, the cohort measure compares sections at the same age, so it is unaffected by changes in the age composition of the Code. The series is censoring-safe through the 2005 cohorts of the 2015 edition. Dashed vertical lines mark 1970 and 1990.

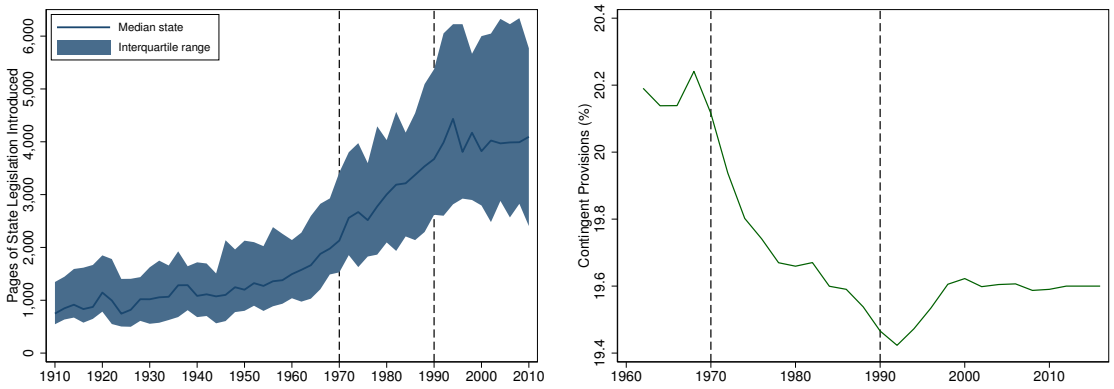
Figure C3: Size and Complexity of the U.S. Code



(a) Words per Capita (b) Perplexity

Notes: Series are computed from the point-in-time editions of the U.S. Code assembled by Jeong et al. (2026); editions are six-yearly from 1926 to 1988 and annual from 1994. Panel (a) shows the total word count of the Code per 1,000 residents. Then, we compute the linguistic entropy of the Code—the word-count-weighted mean across titles of the Shannon entropy of each title's word distribution—the language complexity measure of Katz & Bommarito (2014). Panel (b) shows the corresponding perplexity (2^H), the number of equally likely words that would generate the same uncertainty; it is a monotone rescaling of entropy. Dashed vertical lines mark 1970 and 1990.

Figure C4: State Legislation: Volume and Contingent Provisions



(a) Pages of State Legislation Introduced (b) Contingencies in State Legislation

Notes: Panel (a) shows the pages of legislation introduced per state and year: the solid line is the median state and the shaded band is the interquartile range across states. The average state introduced 2,914 pages in 1970 and 4,528 pages in 1990. Panel (b) shows the share of "contingent" legal provisions in state legislation. The source for both panels is the replication data of Ash et al. (2024), which measures contingent provisions from 1968–2016 and contingencies per sentence from 1962–2014; we splice the two series and use the spliced series before 1968 to extend the sample. Dashed vertical lines mark 1970 and 1990.

C.2 Uncertainty and the Counterfactual

Table C1 reports regressions, in levels, of employment shares on the lagged amendment rate, estimated annually over 1960–2013. Conditional on the pages of federal regulation, each additional amendment per 100 sections raises lawyers' employment share by 0.0011 percentage points. An elasticity (log-log) specification yields a smaller net-of-scope attribution of 3–5%. The levels estimates are statistically significant for both outcomes and stable across lag choices for the scope control, and they line up with an alternative attribution based on the share of contingent provisions in state legislation, which implies roughly 9–12%.

Table C1: Uncertainty of the Law and Demand for Lawyers

	Emp. Share, Lawyers (%)			Emp. Share, Legal Services (%)		
	(1)	(2)	(3)	(4)	(5)	(6)
Forward Amendment Rate$_{(t-10,t]}$	0.0057***		0.0011***	0.0150***		0.0024***
	(0.0011)		(0.0003)	(0.0028)		(0.0004)
Federal Regulation Pages p.c.$_{t-10}$		0.0018***	0.0016***		0.0049***	0.0044***
		(0.0001)	(0.0001)		(0.0001)	(0.0001)
R-squared	0.61	0.97	0.98	0.60	0.98	0.99
Observations	54	54	54	54	54	54

Notes: The table shows the relationship, in levels, between the forward amendment rate of the U.S. Code and employment shares, estimated annually over 1960–2013. The outcome variable is the employment share of lawyers in legal services in Columns (1)–(3) and the employment share of the legal services industry in Columns (4)–(6), in percent of private employment. The Forward Amendment Rate is the rate shown in Figure 6(b). lagged 10 years, so that the amendment window is fully realized before the outcome is measured. Federal Regulation Pages is pages of federal regulation per capita, our measure of the scope of the law, also lagged 10 years to be consistent with the amendment rate. These coefficients calibrate the counterfactual demand shifts in Figure 10: Columns (3) and (6) provide the net-of-scope attribution and Columns (1) and (4) the upper bound. An elasticity (log-log) specification yields net-of-scope coefficients of 0.048 (s.e. 0.035) for lawyers and 0.074 (s.e. 0.029) for legal services, implying an attribution of 3–5%. * p<0.1, ** p<0.05, *** p<0.01.

In order to compute rw_{legal}^{1970+} we start by writing the average wage in legal services as in equation (9), a weighted average of lawyers' and non-lawyers' wages, and adjust the wage of lawyers for the aggregate growth rate in college wages from 1970 to 1990 (about 6 percent in the data), denoted g. Then $rw_{legal}^{1970+} = \frac{\lambda w_{lawyer|legal}^{1970}(1+g)+\ (1-\lambda)w_{nonlawyer|legal}^{1970}}{w_{total}^{1970}} = \left[g\lambda_{legal}^{law}\left(w_{legal}^{law,1970}/w_{legal}^{1970}\right)+1\right] rw_{legal}^{1970}$.

For proprietors, the calculation is:

$$excess_{INCsh_{legal}^{1990}} = INCsh_{legal}^{1990} - SELFsh_{legal}^{1990} \cdot z_{legal}^{1970} = 0.04,$$

where $INCsh$ is proprietors' income share in total proprietors' income in the private sector, $SELFsh$ is self employment, and z is the ratio of average income of self employed in legal services relative to the average income of self employed in the private sector. The calculation implies that proprietors' income in legal services was 4 percentage points in excess of 1970. Comparing this to the actual $INCsh_{legal}^{1990}$, which was 10.3 percent, we have an excess payment of 39% to proprietors in legal (all of which we assume are lawyers).

D Litigation model

In this appendix we provide more details on the model. We start by summarizing the results of Hirshleifer & Osborne (2001), and highlighting the results that we build upon. In Section D.2 we provide the closed-form solution for the entry condition that we reference in the text, and in section D.3 we go through the model predictions for scope and uncertainty. In Section D.4 we solve the model for the fee-shifting regime. Finally, in Section D.5 we provide a discussion of defensive legal investment, and how it relates to our model of litigation.

D.1 Setup and the American-rule benchmark

The setup follows Section 4.4. A risk-neutral Plaintiff (p) and Defendant (d), with common knowledge of all parameters, choose litigation efforts L_p and L_d at cost $C_i = \gamma L_i$. The value of the lawsuit is $V_i = \pi J_i - C_i$, where $J_p = J > 0$, $J_d = -J$, and π is the probability that the plaintiff wins, determined by the Litigation Success Function

$$\frac{\pi}{1-\pi} = \left(\frac{L_p}{L_d}\right)^{\alpha} \frac{Y}{1-Y}, \tag{14}$$

which is equivalent to

$$\pi = \frac{L_p^{\alpha} Y}{L_p^{\alpha} Y + L_d^{\alpha}(1-Y)}. \tag{15}$$

To ease notation, define $y \equiv Y/(1-Y)$ and rename $L_p = p$, $L_d = d$, so that $\pi = p^{\alpha} y / \left(p^{\alpha} y + d^{\alpha}\right)$ and $1 - \pi = d^{\alpha} / \left(p^{\alpha} y + d^{\alpha}\right)$.

Under the American rule, where each side pays its own legal fees, Hirshleifer & Osborne (2001) show that the Nash equilibrium is symmetric: $\pi = Y$ and $L_p = L_d = \alpha\,(J/\gamma)\,Y(1-Y)$. Total cost for society is therefore $2\alpha JY(1-Y)$ (the judgment J is a transfer), and the equilibrium values of the lawsuit are $V_p = JY\,[1 - \alpha(1-Y)]$ and $V_d = -JY\,[1 + \alpha(1-Y)]$—the plaintiff's value underlying the entry condition.

D.2 Entry into litigation

We start by formalizing the entry stage of the model in Section 4.4. There is a mass of potential disputes, which we normalize to 1. It is useful to distinguish three probabilities: (1) the "natural" probability that a conflict in fact hurt the plaintiff; (2) the merit $Y \in [0,1]$, which is how the letter of the law interprets that probability—the probability that the court rules for the plaintiff absent any effort (or with equal effort, since then $\pi = Y$); and (3) the probability π that the plaintiff wins once equilibrium litigation effort is taken into account, through the LSF. The law is the mapping from conflicts into merit, and we describe the resulting distribution of merit across potential disputes by a CDF $G(Y)$.

The entry threshold. Entering litigation carries a fixed cost $F > 0$, incurred regardless of stakes or effort. Using the equilibrium value of the lawsuit for the plaintiff under the American rule, the plaintiff sues if and only if

$$V_p = JY\,[1 - \alpha\,(1-Y)] \geq F,$$

i.e., if and only if $\alpha Y^2 + (1-\alpha)Y - f \geq 0$, where $f \equiv F/J$. The economically relevant root is

$$Y^* = \frac{-(1-\alpha) + \sqrt{(1-\alpha)^2 + 4\alpha f}}{2\alpha}. \tag{16}$$

All disputes with $Y \geq Y^*$ are litigated, i.e., a proportion $1 - G(Y^*)$ of potential disputes. The threshold has the following properties (throughout, $0 < \alpha < 1$):

1. Y^* is increasing in F and decreasing in J. If $F = J$ then $Y^* = 1$ regardless of α, so we require $F < J$ for an interior threshold.[104]

2. As $\alpha \to 0$, $Y^* \to f$ (by L'Hôpital's rule), and at $\alpha = 1$, $Y^* = \sqrt{f}$.

3. Y^* is increasing in α. To see this, define $S \equiv \sqrt{(1-\alpha)^2 + 4\alpha f}$ and write $Y^* = (\alpha - 1 + S)/(2\alpha)$. Differentiating,
$$\frac{\partial Y^*}{\partial \alpha} = \frac{S - 1 + \alpha - 2\alpha f}{2\alpha^2 S},$$
whose sign is that of $S - (1 - \alpha + 2\alpha f)$. Both terms are positive, and squaring gives $S^2 - (1 - \alpha + 2\alpha f)^2 = 4\alpha^2 f(1-f) > 0$ for $0 < f < 1$. Intuitively, when the outcome is more sensitive to effort, the plaintiff anticipates a more expensive legal battle, which raises the merit required to make suing worthwhile.

Total cost. In the symmetric Nash equilibrium each litigated case costs $2\alpha JY(1-Y)$, so total litigation costs are

$$TC = \underbrace{[1 - G(Y^*)]}_{\text{extensive margin}} \cdot \underbrace{E\left[2\alpha JY\left(1-Y\right) \mid Y \geq Y^*\right]}_{\text{intensive margin}} = 2\alpha J \int_{Y^*}^{1} Y\left(1-Y\right) dG(Y),$$

which is the decomposition of total demand in equation (3) of the main text.

D.3 Model Predictions

We provide more details on the predictions that arise from our changes of interest: scope, uncertainty, and fee-shifting. We address fee-shifting in a separate section, because this involves a more intensive reworking of the model.

Expansion of the scope of the law. A dispute over conduct that the law does not cover has no legal basis: merit $Y = 0$, no matter the harm, and no amount of effort can win the case. We therefore represent the reach of the law by a mass point of G at $Y = 0$:

$$G(Y) = \begin{cases} G_0 & \text{if} \quad Y = 0 \\ G_0 + \widetilde{G}(Y) & \text{if} \quad 0 < Y \leq 1 \end{cases},$$

where $\widetilde{G}(0) = 0$, $\widetilde{G}(1) = 1 - G_0$ and $\widetilde{G}$ is non-decreasing, so that G is a CDF. An expansion of the scope of the law is a reduction in G_0, with the freed mass redistributed over $(0, 1]$. Since Y^* in (16) does not depend on G, the reduction in G_0 weakly increases $1 - G(Y^*)$—strictly, if the redistribution

[104] Priest & Klein (1984) estimate total litigation costs to be around one third of the stakes, so fixed costs alone are well below J.

places positive mass above Y^* (for example, if it is spread evenly over $(0,1)$). Litigation and its total cost therefore rise through the extensive margin, with no change in α or in the shape of $\widetilde{G}$.

Legislative ambiguity. We model ambiguity as a concentration of G toward $Y = 1/2$, where merit—how the letter of the law views the plaintiff's chances—is most uncertain. A convenient parameterization is the symmetric beta distribution,

$$g(Y) = \frac{1}{B(b,b)} \left[Y(1-Y)\right]^{b-1}, \qquad b \geq 1,$$

with mean and mode $1/2$ and variance $1/\left[4(2b+1)\right]$, which is decreasing in b. Beta$(1,1)$ is the uniform distribution; a higher b concentrates merit toward the contested middle.

Ambiguity raises the extensive margin as long as the entry threshold lies below the contested middle, $Y^* < 1/2$. From (16), $Y^* < 1/2$ requires $\sqrt{(1-\alpha)^2 + 4\alpha f} < 1$, i.e., $\alpha\left(\alpha + 4f - 2\right) < 0$, and thus

$$f < \frac{2-\alpha}{4}, \tag{17}$$

which is the condition in Section 4.4. Since $0 < \alpha < 1$, the bound varies between $1/4$ and $1/2$, so $f < 1/4$ suffices for any α.

The cost integrals have closed forms under the beta parameterization. Since $Y(1-Y)\, g(Y;b,b) = \left[B(b+1,b+1)/B(b,b)\right] g(Y;b+1,b+1)$ and $B(b+1,b+1)/B(b,b) = b/\left[2(2b+1)\right]$,

$$TC = 2\alpha J \cdot \frac{b}{2(2b+1)} \left[1 - I_{Y^*}(b+1,b+1)\right],$$

where $I_Y(a,b)$ is the regularized incomplete beta function; average cost per litigated case is $EC = TC/\left[1-G(Y^*)\right]$, and similarly $E[Y \mid Y \geq Y^*] = \frac{1}{2}\left[1 - I_{Y^*}(b+1,b)\right] / \left[1-G(Y^*)\right]$.

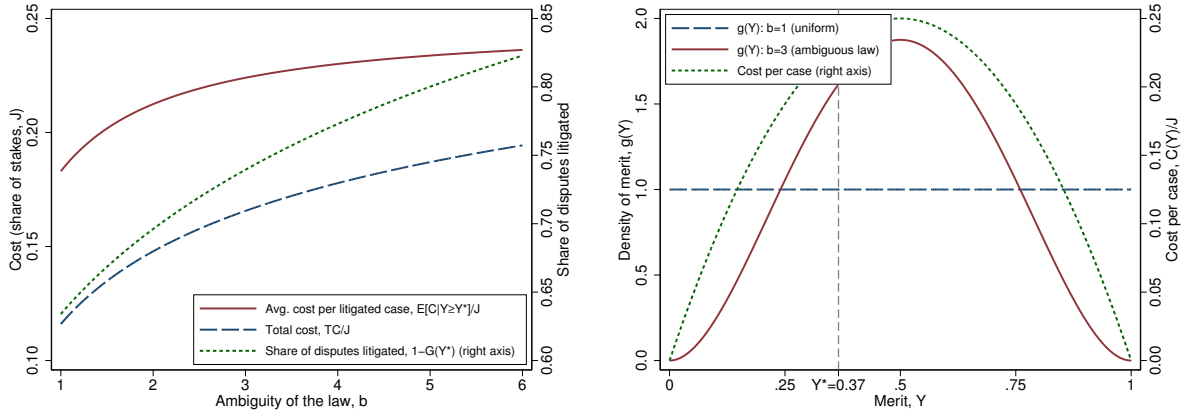
Table D1 evaluates these expressions at $\alpha = 0.5$ and $f = 0.25$ (so that $Y^* = 0.37$), normalizing $J = 1$. As ambiguity rises, more disputes are litigated, each litigated case is costlier on average, and total litigation costs rise—by two thirds moving from $b = 1$ to $b = 6$. Figure D1(a) plots the table's series, including the share of disputes litigated; Figure 7(a) in the main text reports the cost series. At the same time, the average merit of litigated cases falls (last column): ambiguity draws relatively weak cases into court, lowering the average quality of litigated cases. Figure D1(b) illustrates the mechanism: a higher b moves the mass of disputes above the entry threshold Y^* and toward $Y = 1/2$, exactly where the cost per case, $2\alpha JY(1-Y)$, is greatest.

Table D1: Legislative ambiguity: entry, costs, and case quality

b	$1 - G(Y^*)$	EC	TC	$E[Y \mid Y \geq Y^*]$
1	0.634	0.183	0.116	0.683
2	0.696	0.212	0.148	0.616
3	0.739	0.224	0.166	0.584
4	0.773	0.230	0.178	0.566
5	0.800	0.234	0.187	0.553
6	0.823	0.236	0.194	0.544

Notes: Merit is distributed Beta(b, b); a higher b means a more ambiguous legal environment. $1 - G(Y^*)$ is the share of disputes litigated; EC is the average cost per litigated case and TC is total litigation costs, both as a share of the stakes J; the last column is the average merit of litigated cases. Parameters: $\alpha = 0.5$, $F/J = 0.25$, so $Y^* = 0.37$.

Figure D1: Legislative ambiguity: entry, costs, and the merit distribution



(a) Entry and costs

(b) Merit distributions and cost per case

Notes: Panel (a) plots the series of Table D1: the average cost per litigated case, $E[C|Y \geq Y^*]$, and total litigation costs per potential dispute (both as a share of the stakes, J), and the share of disputes litigated, $1 - G(Y^*)$ (right axis), as the merit distribution Beta(b, b) concentrates toward 1/2. In panel (b), the solid and dashed lines show the density of merit, $g(Y)$, for Beta$(1, 1)$ (uniform) and Beta$(3, 3)$ (a more ambiguous legal environment); the dotted line (right axis) shows the total cost per litigated case, $C(Y)/J = 2\alpha Y(1 - Y)$, which is maximized at $Y = 1/2$; and the vertical line marks the entry threshold Y^*. Ambiguity moves dispute mass above Y^* and toward the contested middle, where litigation is most expensive. Parameters: $\alpha = 0.5$, $F/J = 0.25$, so $Y^* = 0.37$.

D.4 Asymmetric fee-shifting in favor of the plaintiff

In general, fee-shifting is asymmetric, in favor of the plaintiff, but it depends on the fee-shifting statute. For example, according to the civil rights fee-shifting statute the plaintiff pays for the legal fees of the defendant "if the litigation is unreasonable, frivolous, or meritless". This is in the spirit of the motivation of the fee-shifting statutes, which were enacted to help plaintiffs mount a case.[105]

The parameters of the problem are the same as in the baseline Hirshleifer & Osborne (2001) case, only the objective functions of the plaintiff and defendant change in order to reflect the asymmetric fee-shifting statute. This gives rise to asymmetry in optimal behavior.

The plaintiff's problem. The plaintiff chooses p to maximize

$$V_p = \pi J - (1-\pi)\gamma p.$$

The first-order condition yields

$$p = \frac{J}{\gamma}\frac{\alpha\pi}{1-\alpha\pi}. \tag{18}$$

The defendant's problem. The defendant chooses d to maximize

$$V_d = -\pi J - \gamma d - \pi\gamma p.$$

The first-order condition yields

$$d = \left(\frac{J}{\gamma} + p\right)\alpha\pi\,(1-\pi) \tag{19}$$

Using (18) in (19) gives

$$d = \frac{J}{\gamma}\frac{\alpha\pi}{1-\alpha\pi}\,(1-\pi)\,.$$

A few results emerge:

1. The plaintiff applies more effort than the defendant, by a factor of $1/(1-\pi) > 1$. The plaintiff takes into account directly only $(1-\pi)$ of the cost of p, while the defendant takes into account all of d and $(1-\pi)$ of the cost of p.

2. The probability that the plaintiff wins is greater than in the case with no fee-shifting. Using $d = p\,(1-\pi)$ in (14) gives

$$\frac{\pi}{1-\pi} = \left(\frac{1}{1-\pi}\right)^{\alpha}\frac{Y}{1-Y},$$

which implies that $\pi > Y$ because $(1/(1-\pi))^{\alpha} > 1$ for any $\pi \in (0,1)$.

[105] For completeness, we also solved the model under the symmetric "English rule," where the losing side pays the winning side's legal fees. Despite the symmetric treatment, equilibrium behavior is asymmetric: relative effort equals the odds of winning, $L_p/L_d = \pi/(1-\pi)$, and merit is amplified—the plaintiff's probability of winning lies below Y for $Y < 1/2$ and above it for $Y > 1/2$. Total cost is $\alpha J/(1-\alpha)$, independent of merit, and more than double the total cost under the American rule for any Y and $\alpha \in (0,1)$. Derivations are available upon request.

3. The plaintiff exerts more effort compared to the case with no fee-shifting: since $\pi > Y$,

$$p = \frac{J}{\gamma}\frac{\alpha\pi}{1-\alpha\pi} > \frac{J}{\gamma}\alpha\pi > \frac{J}{\gamma}\alpha Y\left(1-Y\right).$$

4. The defendant exerts more effort compared to the case with no fee-shifting, except when merit is very high. See Figure D2(b) below.

5. Total cost for society is higher than in the case with no fee-shifting (unless $Y = 0$). See Figure D2(c) below. Total cost for society is the sum of efforts times the unit cost of effort γ, since J is just a transfer:

$$\text{Total cost} = \gamma\left(p+d\right) = J\frac{\alpha\pi}{1-\alpha\pi}\left(2-\pi\right).$$

6. The plaintiff's effort p increases with her claim's merit Y. With $d = p(1-\pi)$, the LSF can be written as $Y/(1-Y) = \pi\left(1-\pi\right)^{\alpha-1}$, whose right side is strictly increasing in π (its derivative is $\left(1-\pi\right)^{\alpha-2}\left(1-\alpha\pi\right) > 0$), so π is increasing in Y. From (18), $dp/d\pi = \alpha\left(J/\gamma\right)/\left(1-\alpha\pi\right)^2 > 0$. Hence p increases with Y.

7. Effort for the defendant L_d is hump-shaped in the plaintiff's merit Y. Differentiating d with respect to π,

$$\frac{dL_d}{d\pi} = \alpha\frac{J}{\gamma}\frac{1-2\pi+\alpha\pi^2}{\left(1-\alpha\pi\right)^2},$$

which is positive for small π and negative for large π; since π is increasing in Y, defendant effort is hump-shaped in merit. Effort peaks at the economic root of $\alpha\pi^2 - 2\pi + 1 = 0$,

$$\pi = \frac{1-\sqrt{1-\alpha}}{\alpha},$$

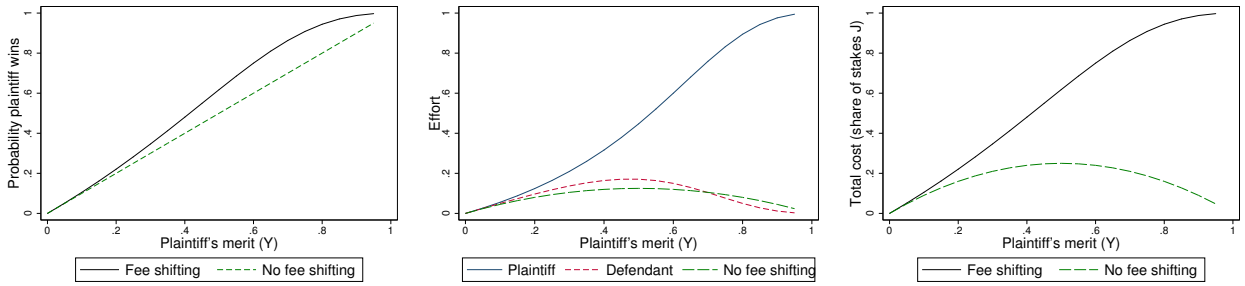
which rises from $1/2$ (as $\alpha \to 0$) to 1 (at $\alpha = 1$), and is increasing in α because $\left(1-\alpha/2\right)^2 > 1-\alpha$ for $\alpha > 0$. At the same time, for a given Y, π is also increasing in α: writing the LSF as $\Phi\left(\pi,\alpha\right) = Y/(1-Y) - \pi\left(1-\pi\right)^{\alpha-1} = 0$, we have $\Phi_\alpha = -\pi\left(1-\pi\right)^{\alpha-1}\ln\left(1-\pi\right) > 0$ (the log of a number between zero and one is negative) and $\Phi_\pi < 0$ from above, so $d\pi/d\alpha > 0$. The two forces offset, and the merit level at which defendant effort peaks remains close to $Y = 1/2$ for any α, as the numerical results confirm.

Numerical example. Figure D2 reports the outcomes of the numerical example. For this exercise we assume $\alpha = 0.5$. In all panels we set $\gamma = 1$ and $J = 1$, these parameters simply scale up or down the levels of the objects of interest. The figure shows how the outcomes of interest change, as we discussed above: (a) the probability that the plaintiff wins is greater than in the case with no fee-shifting, (b) effort (normalized by J/γ) is higher for the plaintiff than for the defendant,[106] and (c) we see that with fee-shifting the total cost of the lawsuit is greater than when there is no fee-shifting.[107]

[106] Effort for the plaintiff is always higher than her effort in the case with no fee-shifting, but when merit is high, the defendant makes less effort than in the case with no fee-shifting.

[107] The value of the lawsuit (not shown) is always positive for the plaintiff and negative for the defendant; above some level of merit the defendant's value is more negative than the stakes, $-J$, in which case the defendant prefers to concede without the legal battle.

Figure D2: Numerical results of fee-shifting model



(a) Probability plaintiff wins, π (b) Effort, L_p and L_d (c) Total cost, $C_p + C_d$

Notes: Numerical solution of the model with asymmetric fee-shifting in favor of the plaintiff, compared to the case with no fee-shifting (the "American rule"). Parameters: $\alpha = 0.5$, $\gamma = 1$, $J = 1$.

D.5 Extension to "Defensive" Legal Activity

The analysis so far is ex post: a dispute exists, and we ask whether it is litigated and how hard it is fought. But much of the demand for legal services is ex ante—precautionary investment that potential defendants make before any dispute arises, to reduce their exposure to future litigation. This includes retaining in-house counsel, drafting contracts, investing in regulatory compliance, and building documented human-resources procedures. We model this as a stage that precedes the litigation game.

Consider a potential defendant—a firm—that chooses defensive investment e before disputes arise. Defensive investment lowers the merit of potential claims against the firm: clear contracts, documented procedures, and compliance systems make future plaintiffs' cases weaker. In the model, a dispute that would have had merit Y instead has merit $Y - \rho(e)$, with ρ increasing in e. Defensive investment thus shifts the firm's distribution of potential disputes downward; let $\tilde{G}_e$ denote that shifted distribution. The firm chooses e to minimize total expected legal costs:

$$\min_{e} \quad \gamma_d\, e \;+\; \underbrace{\left[1 - \tilde{G}_e(Y^*)\right]}_{\text{prob. of being sued}} \cdot \underbrace{\mathbb{E}\left[\,\pi(Y)\, J + \gamma L_d^*(Y) \mid Y \geq Y^*\,\right]}_{\text{expected cost per filed case}}. \tag{20}$$

where the first term is the direct cost of "defensive" legal services and the second is expected litigation exposure: the probability that a claim against the firm still clears the entry threshold after defensive investment, times the cost of defending and (potentially) losing it. That per-case cost has two parts—the expected transfer $\pi(Y)\, J$ (the probability the plaintiff wins times the stakes) and the cost of defense effort $\gamma L_d^*(Y)$. Defensive investment reduces exposure through both factors: it lowers the probability of being sued and it lowers the expected cost of those suits that remain.

Each of the three channels above raises the firm's incentive to invest defensively:

- Expansion of *scope* brings new domains of firm conduct within the law, creating new potential claims and raising the return to compliance investment.
- *Uncertainty* concentrates potential disputes toward the contested middle, where litigation is most expensive. Facing more costly potential disputes, the firm invests more to push

its conduct below the entry threshold. Ambiguity in the legal text thus raises defensive investment.

- *Fee-shifting* raises the defendant's expected costs conditional on being sued (it now pays the plaintiff's fees as well as its own if it loses), directly increasing the value of avoiding litigation and hence defensive investment.

So the same legislative changes that raise reactive (litigation) demand also raise precautionary (defensive) demand.

This reconciles our account with the "defensive demand" view of Sander & Williams (1989). They argue that corporations source legal services defensively, as protection against litigation, and treat this as an alternative to a litigation-driven explanation. In our framework the two are not competing: defensive and litigation demand are two faces of the same response to a changing legal environment, both driven up by the scope expansion, rising ambiguity, and fee-shifting of legislation enacted from the 1960s onward.

E Economic deregulation

While the link between new legislation and demand for legal services is clear, it may be less straightforward to think about economic *de*-regulation increasing demand. It has been argued that "deregulation" is a misnomer: deregulation does not imply that there is no public regulation of an industry; instead, it introduces a different legal framework (Kearney & Merrill, 1998), i.e., deregulation is a change in the regulatory environment. When an industry is regulated, the regulator's role is simple: to control entry, review prices, and control the type or amount of product or service offered. When the industry becomes deregulated the role of the regulator changes to maximizing competition between providers. However, deregulation does not imply *laissez faire*. Rather, deregulation involves a change from clear limits on actions to a regime with a new set of rules that dictate and characterize the permissible actions of competitors.

The deregulation regime in the U.S. began in the 1970s and persisted through the 1980s and early 1990s. The consensus at the time was that regulation of prices and entry was keeping prices artificially high, benefiting incumbents in regulated industries and not consumers. After deregulation, many legal scholars decried the pattern of "regulation by litigation," arguing that the practical outcome of deregulation is often more regulation, sometimes by way of litigation.[108]

Economic deregulation events at the federal level affected transportation (air, rail, trucking), telecommunications (cable television, phone), financial services (banking, securities) and utilities (electric, gas, oil) industries. While the social regulation legislation discussed in the last subsection was passed in the late 1960s through the mid-1970s, economic deregulation events followed through the 1970s and 1980s, after which they became much less frequent, with only the Telecommunications Act of 1996 and the Gramm-Leach-Bliley Act of 1999 taking place in the 1990s.[109] The federal regulatory regime, as measured by pages of regulations per-capita, only increases during this period of deregulation (Figure 6(a)).

In short, deregulation can increase both the number of regulations that need to be taken into account and the complexity of the regulatory environment, therefore increasing uncertainty over legal outcomes. In contrast, when there was a regulator approving prices of each firm, there was little confusion over what price or terms may be allowed. Consider the regulation of the airline industry. Prior to the passage of the Airline Deregulation Act of 1978, the airlines had to file their tariffs with the regulator (the Civil Aeronautics Board). A few years after the deregulation act, the Civil Aeronautics Board was abolished and the airlines were able to charge whatever rates they would like. Using the Federal Judicial Center Integrated Database, we track the number of cases litigated that involve an airline as one of the parties. There is a prolonged period of high litigation activity in the industry during the 5-10 years following deregulation; litigation activity doubled after the Airline Deregulation Act.[110] Deregulation did not bring an end to litigation in the industry, in fact it lead to a significant increase.

[108] Friedman (1981) warned of this in the beginning of the deregulation regime. With the benefit of hindsight, Freyer (2010) summarizes the issue: "The deregulation movement partially limited private actions. Yet the unintentional result was to increase reliance upon private actions for enforcement of regulatory goals in business sectors where administrative or political oversight of business self-regulation was ineffective."

[109] See Table E1 for a detailed timeline, with the act or event name, date, and affected industry.

[110] In one high profile example, *American Airlines v. Wolens* (1995) disputed whether airline practices constituted a breach of contract. Of course, there are still regulations that apply to airlines: there are 741 results when one searches 'airline' in the current version of the Code of Federal Regulations.

Table E1: Timeline of Legislative Acts and Deregulation Events

Event	Date	Industry
Civil Rights Act	1964	Social Regulation
Voting Rights Act	1965	Social Regulation
Fair Housing Act	1968	Social Regulation
National Environmental Policy Act	1969	Social Regulation
Federal Communications Commission (FCC) Court Decisions	late 1960s-mid 1970s	Telecommunications
Occupational Health and Safety Act	1970	Social Regulation
Clean Water Act	1972	Social Regulation
Consumer Safety Act	1972	Social Regulation
CAB Liberalization of Entry and Discount Fare Experiments	mid 1970s	Airlines
Securities Acts Amendments	1975	Brokerage
Hart-Scott-Rodino Antitrust Improvements Act	1976	Antitrust
Execunet Decision	1977	Telecommunications
Airline Deregulation Act	1978	Airlines
Natural Gas Policy Act	1978	Natural Gas
ICC Liberalization of Truck Rates	late 1970s	Trucking
ICC Liberalization of Rail Rates and Contracting	late 1970s	Railroads
FCC Rulemakings and other Regulatory Proceedings	late 1970s	Cable Television
Decontrol of crude oil and refined products	starts in 1979	Petroleum
Motor Carrier Reform Act	1980	Trucking
Staggers Rail Act	1980	Railroads
Depository Institution Deregulation and Monetary Control Act	1980	Banking
Regulatory Flexibility Act	1980	Small Business
AT&T Settlement	1982	Telecommunications
Garn-St. Germain Depository Institutions Act	1982	Banking
Cable Television Deregulation Act	1984	Cable Television
FERC Order 1985	1985	Electric
Bus Regulatory Reform Act	1989	Bus
Americans with Disabilities Act	1990	Social Regulation
Civil Rights Act	1991	Social Regulation
FERC Order 1992	1992	Electric
Energy Policy Act	1992	Electric/Natural Gas
Telecommunications Act	1996	Telecommunications
FERC Order 1996	1996	Electric
Cramm-Leach-Bliley Act	1999	Banking

Notes: This is a timeline for the legislative acts and deregulation events discussed in Section 4 and Appendix E. The sources for the deregulatory events are Kearney & Merrill (1998) and Winston (1998).

F Alternative Explanations

F.1 Changes in Industry Composition

We build on the Leontief (1936) accounting model. The vector of value added by industry can be expressed as

$$v = V \cdot X = V(Ax + f) = v \cdot L \cdot f,$$

where V is a diagonal matrix of value-added intensities in gross output, x the vector of gross output by industry, A is the square matrix of input intensities, f is the vector of final good production (demanded by households, the government, gross investment, changes in inventories, and net exports), and $L = (I - A)^{-1}$ is the Leontief inverse matrix. We compute a counterfactual value added vector as

$$\widehat{v}^{1990} = V^{1970} \cdot L^{1970} \cdot f^{1990}$$

and compare the GDP shares arising from $\widehat{v}^{1990}$ to those in the 1990 data. $\widehat{v}^{1990}$ combines the structure of production in 1970 (input-output relationships and value added intensities) with demand for final goods in 1990. This generates a counterfactual vector of value added per industry that is consistent with the observed changes in demand, had the structure of production remained as in 1970. For example, the sum of the elements in $\widehat{v}^{1990}$ (as well as in the true v^{1990}) is equal to the sum of the elements in f^{1990}; the former is equal to GDP from the production approach, while the latter—from the expenditure approach.

We use the Input-Output "use" tables from the Bureau of Economic Analysis' (BEA) Industry Accounts. Consistent with other tabulations from the BEA, the GDP share of legal services was 0.7 percent in 1970 and 1.4 percent in 1990. Using $\widehat{v}^{1990}$ we find that the counterfactual GDP share of legal services in 1990 is 0.86 percent. Thus, changes in industry composition account for 23 percent ($= (0.86 - 0.7)/0.7$) of the rise of legal services' GDP share.

We use the same data to analyze changes in which industries absorb the (gross) output of legal services, including households and other final uses. The Input-Output tables report for each industry, and for legal services in particular,

$$x_{legal} = \sum_j Z^j_{legal} + f_{legal},$$

where x_{legal} is (gross) output of legal services, Z^j_{legal} is the output of legal services that is used by industry j (including legal services), and f_{legal} is the output of legal services that is purchased by final users, including households, the government, etc. (Dividing Z^j_i by x_j gives the elements in the i row in A above.) Dividing through by x_{legal} we have

$$\sum_j \frac{Z^j_{legal}}{x_{legal}} + \frac{f_{legal}}{x_{legal}} = \sum_j b^j_{legal} + b^{final}_{legal} = 1,$$

where b^j_{legal} is the share of legal services output that is purchased by industry j, and b^{final}_{legal} is the share legal services output that is purchased by households, the government, etc.

Comparing these share over time reveals that overall, industries have only modestly increased

their importance as clients of legal services: $\sum_j b^j_{legal}$ increased by only 1.3 percentage points, from 56.4 in 1970 to 57.7 in 1990. The industries that increased their share in legal services output the most (in percentage points) are:

Table F1: Top 10 industries increasing their share of legal services output

Industry	$b^j_{legal,1970}$	$b^j_{legal,1990}$	Δ
Retail trade	1.2	6.9	5.8
Real estate	3.1	5.6	2.5
Hospitals and nursing and residential care facilities	0.6	2.5	1.9
Insurance carriers and related activities	1.0	2.7	1.7
Ambulatory health care services	1.3	2.8	1.5
Food services and drinking places	0.4	1.5	1.1
Securities, commodity contracts, and investments	0.4	1.5	1.1
Computer and electronic products	0.4	1.4	1.0
Other transportation and support activities	0.2	1.1	0.9
Chemical products	0.7	1.5	0.8

We can use again the same data to investigate which industries increased their legal services input intensity the most. This is captured by the elements in the legal services row in the A matrix for each industry j:

$$a_{legal,j} = Z^j_{legal}/x_j.$$

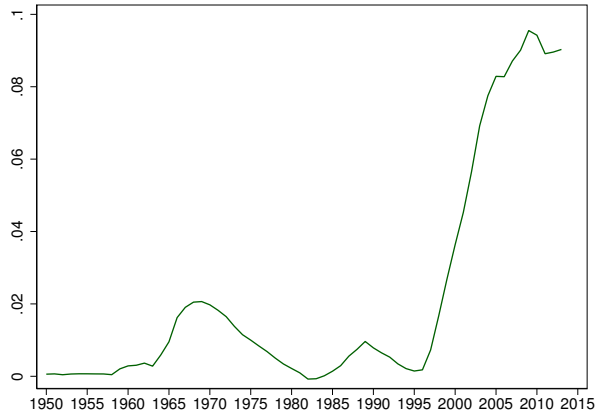
Comparing these $a_{legal,j}$ over time reveals that almost all industries increased their intensity of legal services inputs. The industries that increased their intensity of legal services input the most (in percentage points) are:

Table F2: Top 10 industries increasing their intensity of use of legal services input

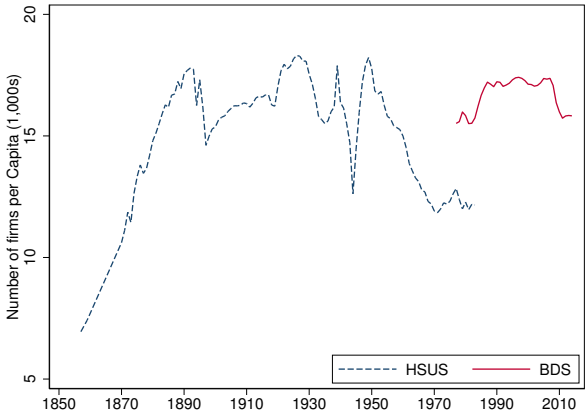
Industry	$a^j_{legal,1970}$	$a^j_{legal,1990}$	Δ
Other transportation and support activities	0.20	2.11	1.91
Waste management and remediation services	0.32	2.04	1.72
Data processing, internet publishing, and other information services	0.00	1.44	1.44
Securities, commodity contracts, and investments	1.02	2.33	1.31
Retail trade	0.13	1.31	1.18
Insurance carriers and related activities	0.40	1.18	0.78
Hospitals and nursing and residential care facilities	0.36	1.10	0.74
Publishing industries, except internet (includes software)	0.37	1.09	0.72
Air transportation	0.09	0.81	0.72
Food services and drinking places	0.12	0.72	0.60

F.2 Figures

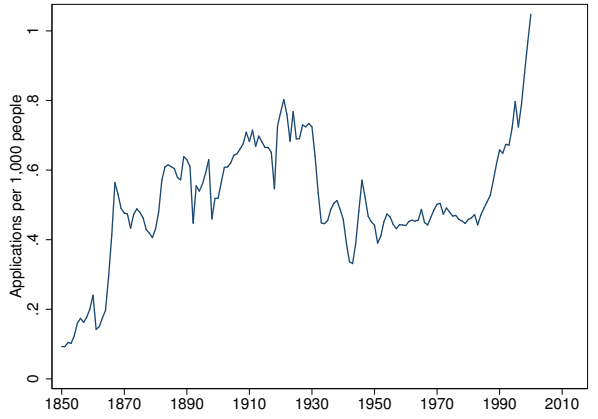
Figure F1: Alternative Explanations



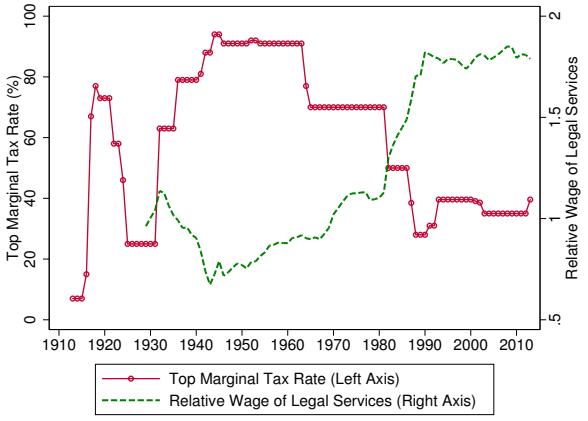
(a) Relative ICT intensity in Legal Services



(b) Number of Firms per Capita



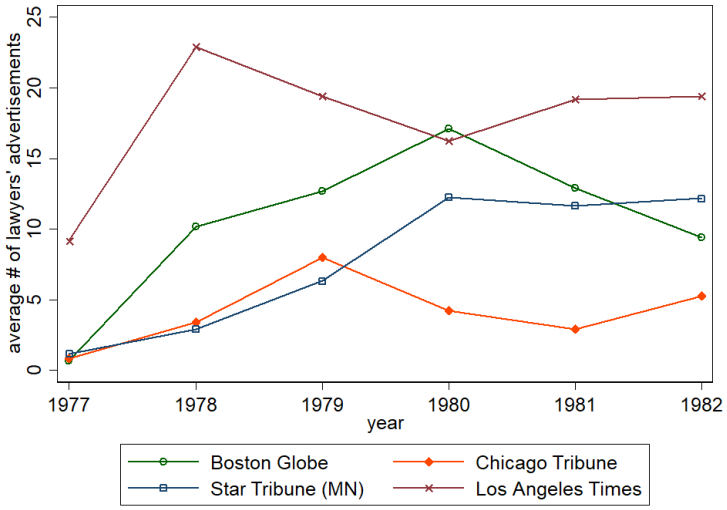
(c) Patent Application Intensity



(d) Top Marginal Tax Rates

Notes: Information and Communications Technology (ICT) intensity is calculated using data from the Bureau of Economic Analysis fixed assets tables. ICT intensity is measured as a share in the total capital stock. Relative ICT intensity of legal services is the ICT intensity of legal services, divided by the ICT intensity in total. All measured in constant 2009 prices. Number of firms in 1857–1983 is from the Historical Statistics of the United States (HSUS), and in 1977–2014 is from the U.S. Census' Business Dynamics Statistics (BDS). The number of firms in the HSUS are originally collected by the firm Dun & Bradstreet. Both firm counts are normalized by total U.S. population. Patent application intensity reports number of utility and design patent applications (source: U.S. Patent Office) divided by U.S. population in thousands. The top marginal tax rate series is the top marginal rate that applies to married couples filing jointly (source: U.S. Internal Revenue Service, IRS). The relative wage in legal services is the same as in Figure 1 and Figure B3(a)).

Figure F2: The Evolution of Legal Advertising Post-Bates



Notes: This figure shows the average number of legal advertisements in 4 newspapers, over a span of 6 years. We collect the data manually. For each newspaper, we sample the third week of January, April, July, and November. We take two days from that week, Wednesday and Saturday. Then we record the number of advertisements for lawyers that day. Figure F3 shows examples of these advertisements. Source: `Newspapers.com`.

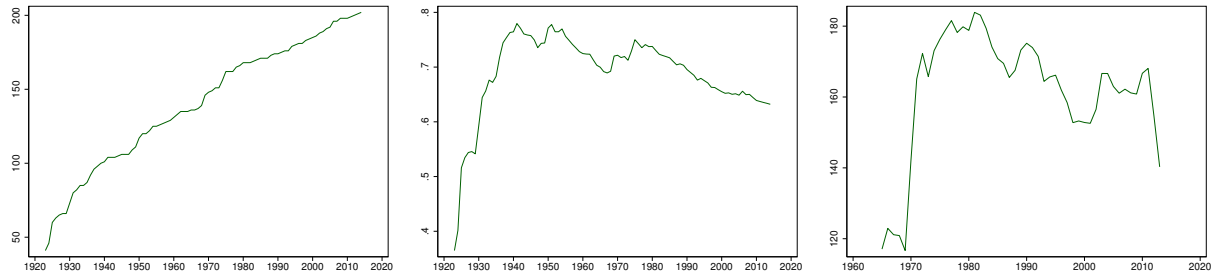
Figure F3: Examples of Legal Advertisements



(a) Boston Globe (b) Chicago Tribune (c) Star Tribune (MN) (d) Los Angeles Times

Notes: This figure shows examples of legal advertisements in the 1977-1982 period (immediately after the ABA changed their policy on legal advertising. Source: `Newspapers.com`.

Figure F4: ABA-Approved Law Schools and Enrollment



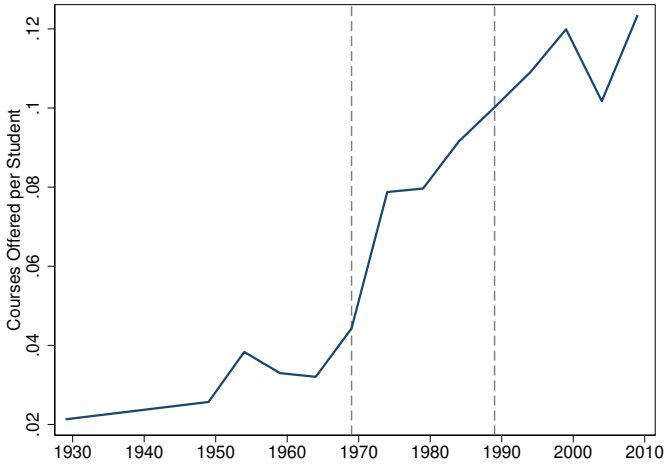
(a) Number of Schools

(b) Schools per Million People

(c) First-Year Enrollment per Million People

Notes: Panel (a) reports the number of ABA-approved law schools, from the American Bar Association (ABA). Panel (b) reports ABA-approved law schools per million people; population is from the U.S. Census Bureau (Historical Statistics of the United States before 1952, FRED after). Panel (c) reports first-year J.D. enrollment at ABA-approved law schools per million people; the ABA enrollment series begins in 1965.

Figure F5: Harvard Law School Courses Offered per Student



Notes: The number of distinct courses offered at Harvard Law School (Figure 5(a)) divided by J.D. enrollment, which is interpolated between the enrollment years reported in the text. Dashed vertical lines mark 1970 and 1990. The per-student series rises after the mid-1960s just as the raw count does, confirming that the expansion in course offerings is not driven by growth in the student body.

Figure F6: LSAT Takers, Enrollment and Law Degrees Awarded

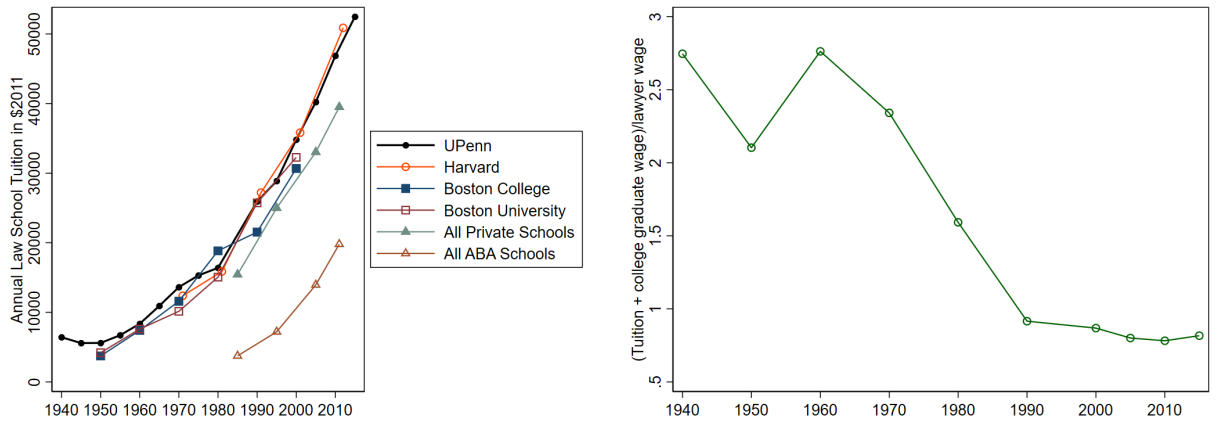


(a) LSAT Takers to Enrollment Ratio

(b) Law Degrees Awarded to Enrollment Ratio

Notes: Panel (a) reports the ratio of Law School Admission Test (LSAT) takers to enrolled students in law schools. Panel (b) reports the ratio of law school degrees awarded to the cohort enrolled three years before (years denote year of enrollment). Data on the number of LSAT takers are from the following sources: White (1984) for 1947–1982, the Manhattan Review (LSAT Prep Courses & Tutoring) for 1950, 1961, 1970, 1980 and 1985, and the Law School Admission Council (LSAC, which administers the LSAT from 1982) for for 1987 and on. Data on enrollment and degrees awarded are from the American Bar Association (ABA).

Figure F7: Law School Tuition and Relative Cost



(a) Law School Tuition

(b) Opportunity Cost to Expected Wages Ratio

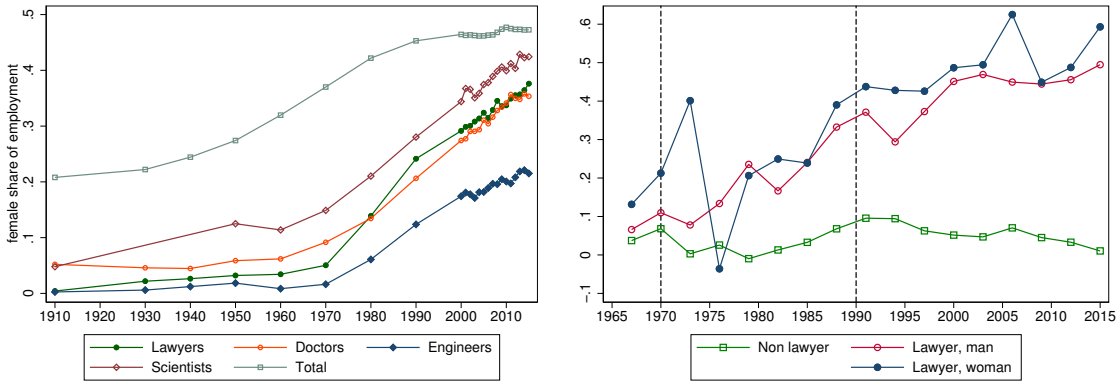
Notes: Panel (a) shows the annual law school tuition across a set of law schools that we can find data. Tuition is normalized to 2011 dollars. Panel (b) shows the "relative cost" of law school. We calculate the opportunity cost of one year of law school as Tuition + the average wage for a college graduate in year t. Then, we divided it by expected wages, as approximated by the average wage for a lawyer in year t. We use UPenn law school tuition rates, because this is the longest coverage we have on tuition. UPenn tuition rates come directly from the school archive (`https://archives.upenn.edu/exhibits/penn-history/tuition/`). The other tuition series come from academic papers (Cass & Garvey, 2003; Campos, 2012). Wages of lawyers and college graduates from the Census and ACS.

Table F3: New Entrants by Year

	Share of Lawyers (%)	
Years	Age > 30	Age ≤ 30
1967-69	86.44	13.56
1970-72	74.24	25.76
1973-75	68.21	31.79
1976-78	68.56	31.44
1979-81	68.15	31.85
1982-84	74.62	25.38
1985-87	77.33	22.67
1988-90	79.93	20.07
1991-93	82.49	17.51
1994-96	85.41	14.59
1997-99	85.19	14.81
2000-02	85.89	14.11
2003-05	89.32	10.68
2006-08	91.94	8.06
2009-11	89.50	10.50
2012-14	89.38	10.62
2015-17	88.94	11.06
Total	84.80	15.20

Notes: This table presents the share of lawyers by age. The year is the year of income accrual. These shares help interpret Figure 3(b), which shows how the wage premia evolve for young lawyers. Source: CPS March Annual Supplement, 1968-2017.

Figure F8: Women in Law

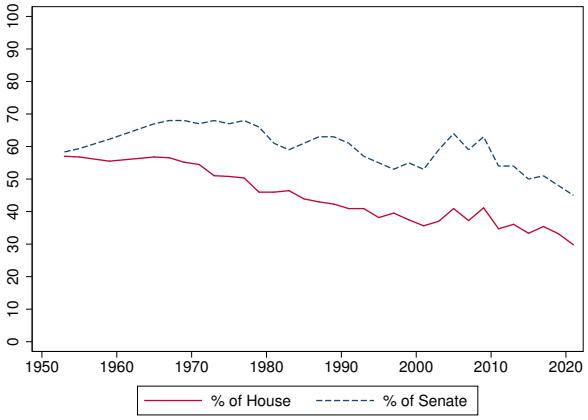


(a) Share of Female Lawyers

(b) Wage Premium for Female Lawyers

Notes: Panel (a) shows the share of lawyers that are women, compared to total employment and other high-skilled professions (doctors, natural scientists, and engineers). Source: U.S. Census and ACS. Panel (b) displays the estimates of the wage premium for male and female lawyers, and for non-lawyers. The figure shows the coefficients from estimating equation an equation like (2) for each three year period, t, where we include a coefficient α_t^{male} for male lawyers in legal services and α_t^{female} for female lawyers in legal services, and β_t captures, as before, the wage premium for non-lawyers working in legal services. The estimates are noisy in the first few years because there are so few female lawyers in the CPS sample; before 1979 less than 10% of lawyers in the sample are female. The dependent variable is log(annual wages). Source: CPS March Annual Supplement, 1968-2017.

Figure F9: Lawyers in Congress



Notes: This figure shows the percentage of members of the U.S. congress—house representatives and senators—that are trained as lawyers. Source: Brookings Institution's *Vital Statistics on Congress*.

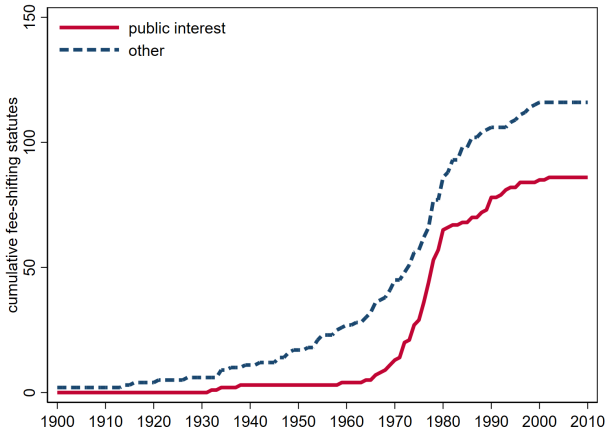
G Fee-Shifting and Litigation Outcomes

G.1 Descriptives on Fee-Shifting

Figure G1 shows the increase in fee-shifting statutes over time, by category (i.e., the type of law fee-shifting was assigned to.

Figure G1: Fee-shifting statutes by type

(a) Cumulative fee-shifting statutes, 1900–2010



(b) Statutes passed 1970–1990, by category

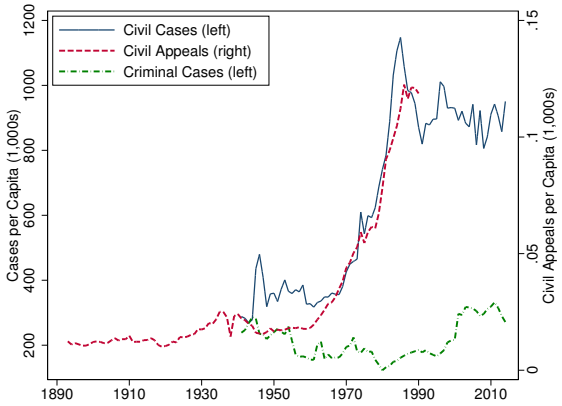
Category	Number	Percent
Environmental Protection	24	18.2
Employment	18	13.6
Economic Regulation	12	9.1
Federal Liability for Fees	11	8.3
Indemnification	11	8.3
Consumer Protection	10	7.6
Civil Rights	9	6.8
Sunshine and Privacy	7	5.3
Supervisory and Monetary Limitations	7	5.3
Consumer Safety	6	4.6
Federal Agency Participation	5	3.8
Intellectual Property	4	3.0
Common Fund/Substantial Benefit	4	3.0
Abuse of Process	3	2.3
Debtors' Estates	1	0.8
All	132	100.0

Notes: The classification of fee-shifting statutes and the timing of their passage are from Derfner & Wolf (2012). Panel (a) plots the cumulative number of statutes, separating those in "public interest" litigation categories—such as consumer protection, consumer safety, environmental protection, civil rights, and employment—from all others. Panel (b) reports the number and percent of statutes passed between 1970 and 1990 in each category; the public-interest categories account for about half of the total.

G.2 Descriptives on Litigation

Figure G2 shows the evolution of civil cases and civil appeals, on separate axes.

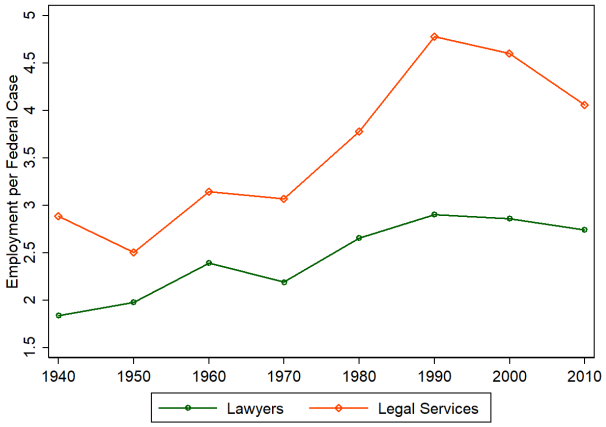
Figure G2: Litigation Intensity



Notes: This replicates Figure 4, but without splicing civil cases and civil appeals. Cases are normalized by total population in units of 1,000 people.

Figure G3 is the number of lawyers in the U.S. as a share of the number of federal cases filed, from 1940-2015. Table G1 shows the broad categories of civil cases between 1970 and 1990 (there are about 90 nature of suit codes in total, this aggregates them to broader categories). Figure G4 shows how the litigation acitvity for certain categories evolved after the passage of landmark social regulation.

Figure G3: Lawyers per Federal Case Filing



Notes: Cases include both civil and criminal. Cases in 1941–1999 are sourced from the Historical Statistics of the United States. We use the case filings in 1941 for 1940. Cases in 2000–2015 are from the Administrative Office of the U.S. Courts. The Lawyers series is total employment of Lawyers, per the decennial census, including lawyers in legal services, private industry and government.

Table G1: Nature of Suit in Civil Cases: 1970-1990

	% of Civil Cases		
Category	1970	1990	Δ
Civil Rights	5.52	9.13	3.61
Prisoner Petitions	17.92	20.80	2.88
Labor	4.66	6.71	2.05
Social Security	1.86	3.18	1.33
Real Property	3.61	4.39	0.78
Property Rights	2.46	2.65	0.18
Contracts	20.16	20.13	-0.03
Other Statutes	15.66	14.02	-1.64
Torts	28.06	18.98	-9.08

Notes: The table shows the per-capita civil filings, by nature of suit, in 1970 and 1990. The source of the data is the Federal Judicial Center Integrated Database. The nature of suit are defined by the federal court, and the plaintiff is required to choose a nature of suit when they file. There are 12 primary categories, as well as an "Other Statutes" catch-all. We include categories with less than 2% of the share of cases with the "Other Statutes" category (this includes Bankruptcy, Federal Tax, Immigration, and Penalty/Forfeiture).

Figure G4: Civil Case Filings and Social Regulation



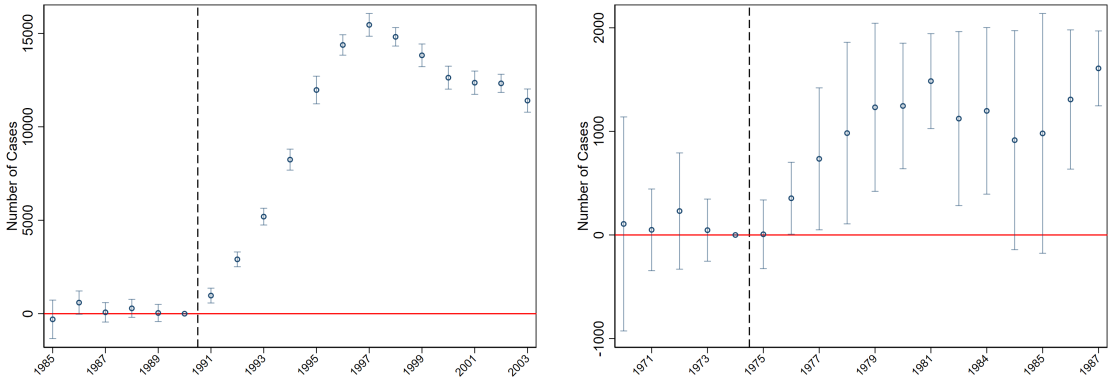
(a) Environmental Matters (b) Occupational Health and Safety

Notes: The figure shows the per-capita civil filings for two specific nature of suits that we can link to federal legislation: "Environmental Matters" and "Occupational Health and Safety." The year is the year the case was filed. The source of the data is the Federal Judicial Center Integrated Database.

G.3 Additional Results

The event studies of Section 5.2 concern the extensive margin—how many cases are brought. Figure G5 repeats that analysis in levels.

Figure G5: Legislation and Litigation Activity, in Levels



(a) Expansion of Scope: Civil Rights Act (1991) (b) Fee-Shifting: Amended Lanham Act (1975)

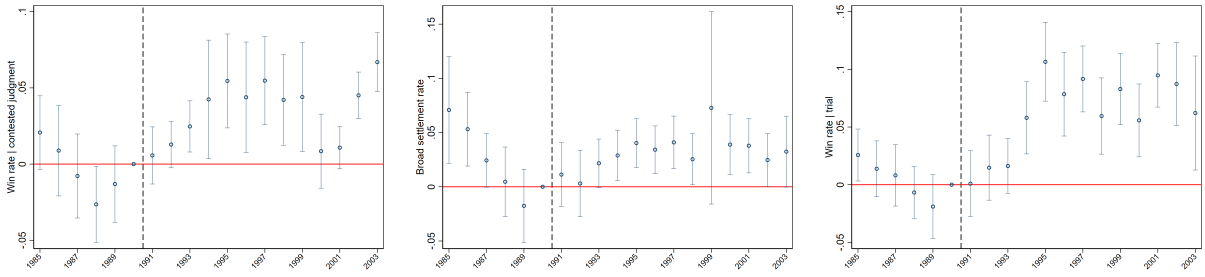
Notes: This figure shows the levels (number of cases) versions of Figure 8. Source: Federal Judicial Center Integrated Database.

Settlement and Judgment Outcomes We now turn to the intensive margin: how cases resolve. In order to study the outcome of a case, we condition on the case being contested, defining the merits win rate as the plaintiff's share of judgments reached on the merits (disposition by pre-trial motion, directed verdict, or trial), and separately measure the settlement rate.[111]

[111]The IDB's "judgment for plaintiff" field, taken over all terminated cases, is not a win rate. Roughly half of all plaintiff judgments are entered by default and a sixth by consent, and fewer than one in ten follows a trial.

These disposition fields are only reliably populated from 1978 onward, so all outcome analysis begins in 1978. We revisit the effect of the Civil Rights Act of 1991 on case outcomes. Figure G6 shows that, off flat pre-trends, all three rise after 1991: the settlement rate and the win rate—conditional both on a contested judgment and on trial—increase modestly and persistently. A scope expansion that broadens liability and remedies strengthens the underlying cases, so plaintiffs both settle more and win more when they litigate. In terms of the model of Section 4.4, scope expansion shifts the merit distribution G upward, while fee-shifting lowers the entry threshold Y^*; the two channels therefore make opposite predictions for the average merit of litigated cases—which is what we find.

Figure G6: The Civil Rights Act of 1991 and Case Resolution



(a) Win rate | contested judgment (b) Broad settlement rate (c) Win rate | trial

Notes: Event-study estimates (equation (5)) around the 1991 Civil Rights Act, comparing Civil Rights: Employment cases (nature of suit 442) to stable American-rule contract and tort control codes, by filing year, with nature-of-suit and year fixed effects and robust standard errors. Panels (a) and (c) are the plaintiff win rate conditional on a contested judgment and on trial; panel (b) is the broad settlement rate. Source: Federal Judicial Center Integrated Database.

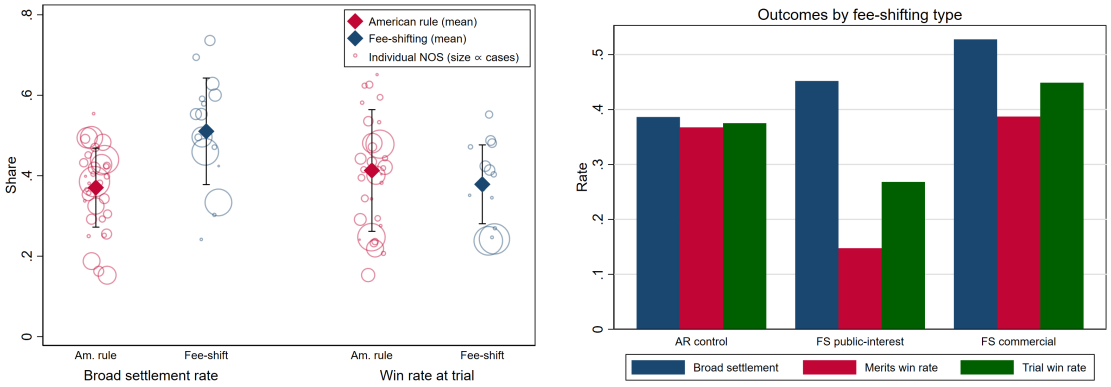
Fee-Shifting We find that fee-shifting is associated with substantially more settlement—about seven percentage points on a broad settlement measure—but not with a higher plaintiff win rate; if anything, the merits win rate is modestly lower (Figure G7(a)). Settlement is not in our model, where every filed case is litigated to judgment, but the model's cost structure points to how it should operate. Litigation costs are a pure joint loss to the parties, so there are always gains from settling. Those gains are larger under fee-shifting, where total costs per case more than double, and largest in high-merit cases, where the defendant's exposure to the plaintiff's fees is greatest. Fee-shifting should therefore produce more settlement, resolve the strongest cases privately, and leave a contested pool composed of the marginal cases drawn in by the lower entry threshold—so the merits win rate among contested cases falls even as filings rise (Priest & Klein, 1984).

The pattern is not uniform. In Figure G7(b) we split fee-shifting into public-interest statutes (civil rights, labor, ERISA, environmental) and commercial statutes (antitrust, RICO, and intellectual property). The low-win result is entirely a public-interest phenomenon: those plaintiffs win on the merits only about 15% of the time, while commercial fee-shifting cases win more than American-rule cases and settle the most. Fee-shifting operates as two regimes: a high-volume, low-win, settlement-prone public-interest bar and a high-stakes commercial bar.

A final piece of evidence isolates the effect of fee-shifting rules. In *Buckhannon Board & Care Home v. West Virginia* (2001), the Supreme Court abolished the "catalyst theory," holding that a plaintiff's lawyer can only recover fees from the defendant if the case is resolved through judgement

(instead of settled). This weakened the value of a private settlement in fee-shifting cases, while leaving American-rule cases untouched. We compare fee-shifting to American-rule case types before and after 2001, dating cases by their termination since the rule binds at resolution. The merits win rate in fee-shifting cases rises by about five percentage points on average and grows to roughly twelve points by 2007, off a flat pre-trend (Figure G8). The rise is robust to dropping any single case type, is concentrated in the years when post-*Buckhannon* filings come to dominate terminations, and appears precisely in the public-interest case types where the catalyst theory had been used, while being absent in commercial cases. Once a voluntary settlement no longer secured fees, plaintiffs pursued the merits judgments in order to secure the fee-shifted payments.

Figure G7: Fee-Shifting and Case Resolution

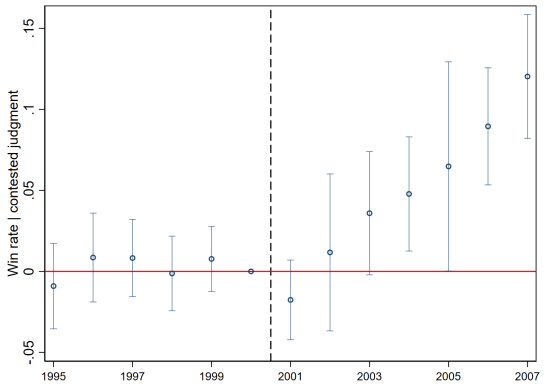


(a) Settlement vs. win rate, by fee-shifting status

(b) Outcomes by fee-shifting type

Notes: Federal civil terminations, 1978–2015, at the nature-of-suit level. Panel (a) plots the broad settlement rate against the plaintiff win rate conditional on trial, each nature-of-suit code one observation, for fee-shifting versus American-rule case types. Panel (b) reports the broad settlement rate, merits win rate, and trial win rate for American-rule controls, public-interest fee-shifting, and commercial fee-shifting case types. Source: Federal Judicial Center Integrated Database.

Figure G8: The *Buckhannon* Decision (2001) and the Merits Win Rate



Notes: The figure shows the difference-in-differences comparing fee-shifting to American-rule case types, by termination year. Specifically, this is an event study for the merits win rate around the 2001 *Buckhannon* decision, with nature-of-suit and calendar-year fixed effects and standard errors clustered by nature of suit.Source: Federal Judicial Center Integrated Database.

H Additional Figures and Robustness for Section 5

H.1 Section 5.1

Table H1: Employment Shares, Relative Wages, and Associate Lawyer Intensity: Full Specification

	Panel A: Employment and Composition					
	Δ Lawyer Emp. Share$_t$			Δ Associates per Partner$_t$		
	(1)	(2)	(3)	(4)	(5)	(6)
Δ Federal Regulation Pages$_{t-5}$	0.404***			0.377**		
	(0.113)			(0.153)		
Δ Fee Shifting Statutes$_{t-5}$		0.712***			0.356**	
		(0.113)			(0.141)	
Forward Amendment Rate$_{t-5}$			0.275			0.317**
			(0.235)			(0.131)
Δ Top Marg. Tax Rate$_{t-5}$	-0.300	-0.141	-0.172	-0.109	-0.041	-0.155
	(0.185)	(0.123)	(0.186)	(0.259)	(0.164)	(0.143)
Δ Top Corp. Tax Rate$_{t-5}$	0.321**	-0.109	-0.213	0.379*	-0.045	-0.007
	(0.128)	(0.131)	(0.201)	(0.207)	(0.130)	(0.143)
Δ Firms per Capita$_{t-5}$	0.480***	-0.005	0.077	0.095	-0.113	-0.119
	(0.100)	(0.087)	(0.136)	(0.130)	(0.103)	(0.096)
Δ Patent Application Intensity$_{t-5}$	-0.360***	0.123	-0.233	0.112	0.193	-0.077
	(0.101)	(0.083)	(0.176)	(0.115)	(0.160)	(0.127)
R-squared	0.64	0.59	0.23	0.17	0.14	0.11
Observations	54	91	91	54	80	80
	Panel B: Compensation					
	Δ Rel. Wage$_t$			Δ Rel. Wage (with income)$_t$		
	(1)	(2)	(3)	(4)	(5)	(6)
Δ Federal Regulation Pages$_{t-5}$	0.118			0.039		
	(0.098)			(0.239)		
Δ Fee Shifting Statutes$_{t-5}$		0.674***			0.484**	
		(0.101)			(0.191)	
Forward Amendment Rate$_{t-5}$			0.648***			0.335
			(0.196)			(0.237)
Δ Top Marg. Tax Rate$_{t-5}$	-0.380**	-0.259	-0.218	-0.604***	-0.487*	-0.438*
	(0.150)	(0.289)	(0.199)	(0.153)	(0.249)	(0.228)
Δ Top Corp. Tax Rate$_{t-5}$	0.274**	-0.059	-0.133	0.386**	0.104	-0.030
	(0.118)	(0.226)	(0.207)	(0.153)	(0.309)	(0.305)
Δ Firms per Capita$_{t-5}$	0.654***	-0.032	-0.082	0.349**	-0.083	-0.094
	(0.106)	(0.149)	(0.104)	(0.157)	(0.103)	(0.088)
Δ Patent Application Intensity$_{t-5}$	-0.437***	0.103	-0.449***	-0.292	0.102	-0.285
	(0.113)	(0.106)	(0.163)	(0.211)	(0.215)	(0.214)
R-squared	0.63	0.58	0.55	0.39	0.43	0.35
Observations	54	69	69	54	69	69

Notes: This table repeats Table 2, reporting the coefficients on the control variables, which are suppressed there. The dependent variables are changes in lawyers' employment shares, the ratio of associate lawyers to law firm partners, or relative wages from t to $t+5$. The predictive variables are in changes from $t-5$ to t; the forward amendment rate enters as the lagged level. All of the series are normalized to have mean 0 and standard deviations of 1. All standard errors are computed using Newey-West with up to five lags and are robust to heteroskedasticity. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Table H2: Employment Shares, Relative Wages, and Associate Lawyer Intensity: Civil Litigation

	Panel A: Employment and Composition	
	Δ Lawyer Emp. Share$_t$	Δ Associates per Partner$_t$
	(1)	(2)
Δ Civil Cases per Capita$_{t-5}$	0.545***	0.485***
	(0.126)	(0.088)
R-squared	0.41	0.22
Observations	91	80
	Panel B: Compensation	
	Δ Rel. Wage$_t$	Δ Rel. Wage (with income)$_t$
	(1)	(2)
Δ Civil Cases per Capita$_{t-5}$	0.674***	0.467***
	(0.113)	(0.143)
R-squared	0.66	0.46
Observations	69	69

Notes: This table repeats the specifications of Table 2 using civil litigation as the predictive variable. Civil cases are civil cases filed in U.S. district courts per capita beginning in 1950, spliced with civil appeals filed per capita before 1950. All standard errors are computed using Newey-West with up to five lags and are robust to heteroskedasticity. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

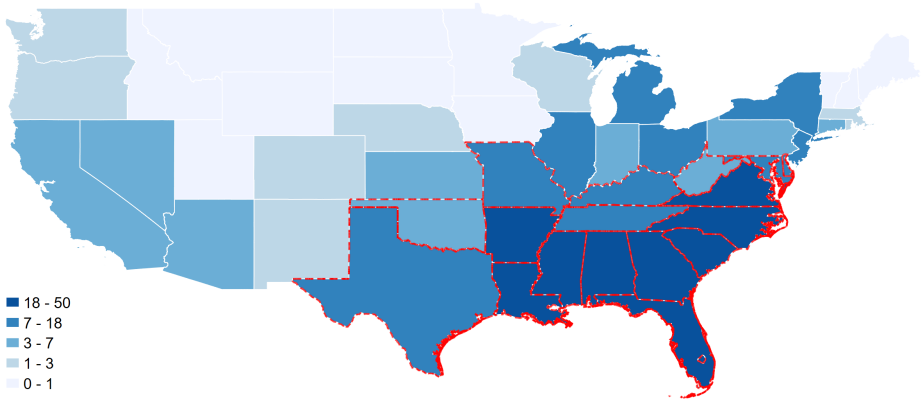
Table H3: Employment Share and Relative Wages of Legal Services

	Δ Legal Services Emp. Share$_t$			Δ Legal Services Rel. Wage$_t$		
	(1)	(2)	(3)	(4)	(5)	(6)
Δ Federal Regulation Pages$_{t-5}$	0.156*			-0.121		
	(0.087)			(0.191)		
Δ Fee Shifting Statutes$_{t-5}$		0.763***			0.082	
		(0.105)			(0.216)	
Forward Amendment Rate$_{t-5}$			0.403*			0.310*
			(0.204)			(0.164)
R-squared	0.73	0.67	0.30	0.27	0.38	0.43
Observations	54	91	91	41	67	67

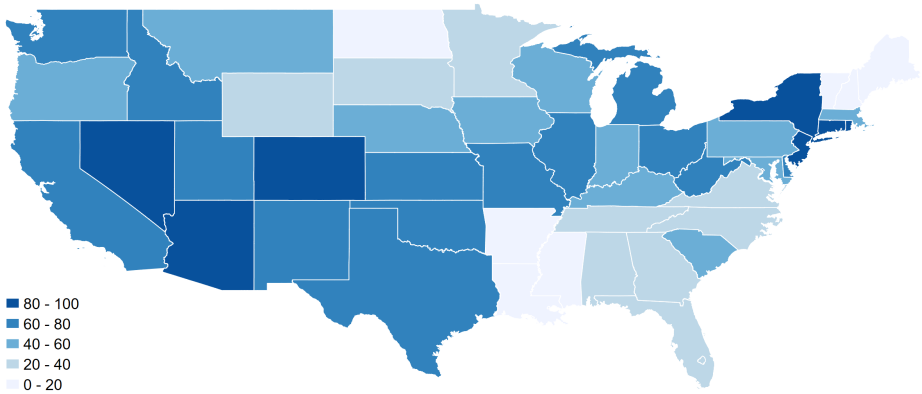
Notes: This table repeats the specifications of Table 2 for legal services industry outcomes. The dependent variables are changes from t to $t+5$ in the employment share of the legal services industry (Columns 1–3) and in the relative wage of the legal services industry, including proprietors' income (Columns 4–6). All standard errors are computed using Newey-West with up to five lags and are robust to heteroskedasticity. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

H.2 Section 5.3

Figure H1: Cross-State Variation in Exposure to Federal Legislation



(a) Black Employment Share, 1960 (%)



(b) CAA Non-attainment Exposure, 1970 (%)

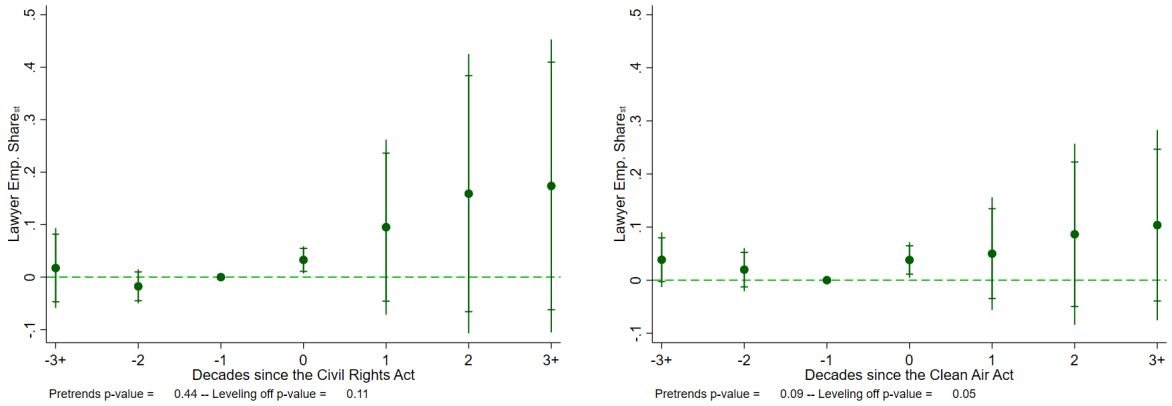
Notes: Panel (a) maps state's Black employment share in the 1960 Census, in percent of total state employment; states outlined with a dashed red border are Jim Crow states, defined as states that segregated schools by law prior to Brown v. Board of Education. In (b), maps the share of the state's 1970 manufacturing employment located in imputed TSP-non-attainment counties, in percent.

Table H4: Federal Legislation and State-level Demand for Legal Services

	Legal Svcs. Emp. Share$_{st}$		Rel. Wage, Lawyers in Legal Svcs.$_{st}$		Rel. Wage, Legal Svcs. Industry$_{st}$	
	(1)	(2)	(3)	(4)	(5)	(6)
Black Emp. Share$_{s,1960}$ × Post$_t$	0.284**	0.274***	0.002	-0.008	-0.025	-0.033
	(0.138)	(0.088)	(0.121)	(0.073)	(0.129)	(0.086)
CAA Non-Attainment$_{s,1970}$ × Post$_t$		0.168**		0.224		0.150*
		(0.069)		(0.140)		(0.083)
Controls	×	×	×	×	×	×
Observations	343	343	337	337	340	340
Within R-sq.	0.222	0.299	0.002	0.032	0.004	0.037
Mean dep. var.	0.803	0.803	1.865	1.865	1.299	1.299

Notes: This table replicates Table 3, but uses the legal services industry outcomes, instead of restricting to lawyers within legal services. * p< 0.1, ** p<0.05, *** p<0.01.

Figure H2: Exposure to Federal Legislation: Event Studies with Pre-Trend Diagnostics



(a) Civil Rights Act and Black Employment Shares (b) Clean Air Act and CAA Non-Attainment

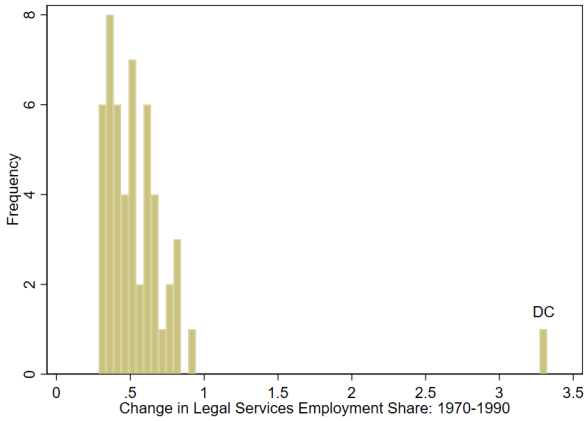
Notes: The figure reports the baseline event studies of Figure 9—the specifications of Columns (1) and (3) of Table 3—re-estimated with the panel event-study estimator of Freyaldenhoven et al. (2021) (the `xtevent` package). Event time is in decades: event time 0 is 1970, and the coefficient at event time −1 (1960) is normalized to zero, so in (b) the reference period is 1960 rather than 1970 as in Figure 9(b). The endpoints, labeled −3+ and 3+, accumulate all decades at or beyond that event time. The pre-trends p-value is from the joint Wald test that the pre-event coefficients are zero; the leveling-off p-value tests whether the post-event coefficients have stabilized.

Table H5: Federal Legislation and Litigation in the States

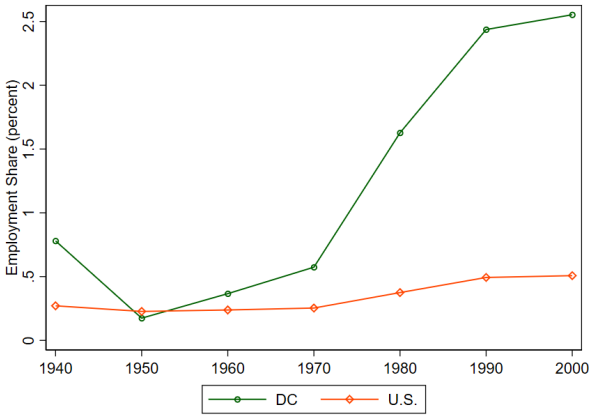
	Civil Rights Filings$_{st}$				Environmental Filings$_{st}$			
	Levels		asinh		Levels		asinh	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Black Emp. Share$_{s,1960}$ × 1980s	2.389	3.685*	-0.011	-0.005				
	(1.476)	(2.113)	(0.032)	(0.047)				
Black Emp. Share$_{s,1960}$ × 1990s	6.307*	9.447*	0.005	0.010				
	(3.513)	(5.005)	(0.038)	(0.054)				
CAA Non-Attainment$_{s,1970}$ × 1980s					0.029	0.020	0.023	0.003
					(0.026)	(0.047)	(0.019)	(0.030)
CAA Non-Attainment$_{s,1970}$ × 1990s					0.126	0.264*	0.066**	0.105**
					(0.078)	(0.156)	(0.025)	(0.041)
Controls		×		×		×		×
Mean Dep. Var.	9.76	9.76	2.69	2.69	0.41	0.41	0.34	0.34
Observations	1,519	1,519	1,519	1,519	1,519	1,519	1,519	1,519
Within R-sq.	0.261	0.313	0.001	0.001	0.020	0.053	0.018	0.035

Notes: This table examines litigation related to federal legislation: civil rights filings (nature-of-suit codes 440–444, Columns 1–4) and environmental filings (nature-of-suit code 893, Columns 5–8). Within each outcome, the first two columns use the level of per-capita filings and the last two its inverse hyperbolic sine. The levels coefficients measure differential absolute growth in filings, the asinh coefficients approximately differential proportional growth. Cases are assigned to the state of the district court where they are filed; the source of the case data is the Federal Judicial Center Integrated Database. Exposure measures are as in Table 3. Because the case data begin in 1970, there is no pre-passage period; the exposures are instead interacted with 1980s and 1990s indicators, so coefficients measure the differential growth of filings in more-exposed states relative to the 1970s. * p< 0.1, ** p<0.05, *** p<0.01.

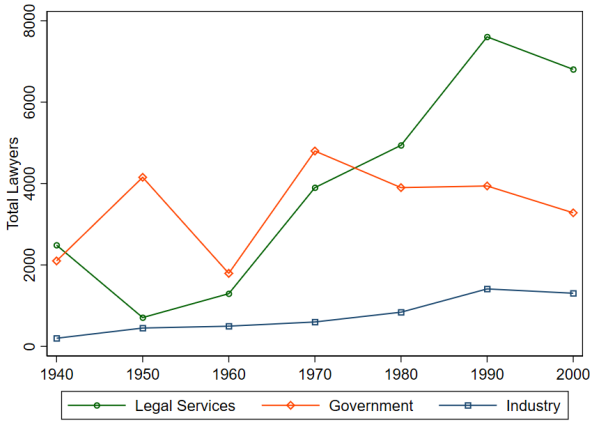
Figure H3: Lawyers in Washington, D.C.



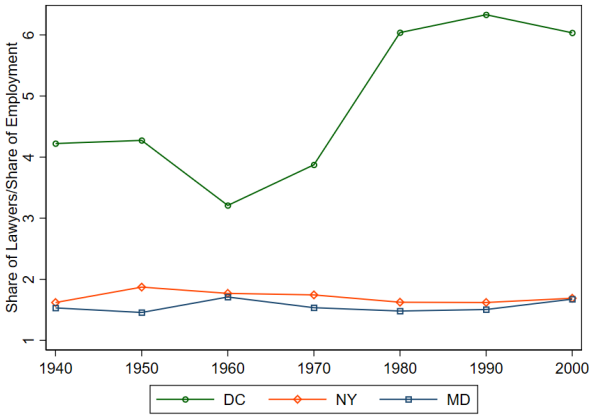
(a) State-Level Changes in Emp. Share



(b) Employment Share of Lawyers in Legal Services



(c) Number of Lawyers, by Type



(d) Lawyer Share by Employment Share in DC, NY, MD

Notes: Figure (a) presents the change in the share of legal services employment in each state, from 1970 to 1990. While all of the states experienced increases in the legal services employment share, DC is a clear outlier. Figure (b) presents the share of employment in DC that is employed as lawyers in legal services, As a reference, the employment share of lawyers in legal services in the entire U.S. is also included. Figure (c) compares the total employment of lawyers in DC by "type" (legal services, government, and industry). Finally, Figure (d) shows the comparative advantage of lawyers in DC: the share of lawyers in DC over the share of lawyers in the United States. The next two top states, by this measure, are NY and MD.

H.2.1 The Clean Water Act

We construct a state-level exposure measure capturing a state's exposure to the Clean Water Act: the share of the state's 1970 manufacturing employment located within 50 km of a navigable water—major interstate rivers, the Great Lakes, and the coastline—since plants near navigable waters are the direct dischargers subject to federal permitting.[112] Because the CWA passed in October 1972, after the 1970 census enumeration, the post period begins with the 1980 census. Even where the CWA binds, its institutional design gives it less scope to raise the demand for lawyers than the Clean Air Act. Its largest instrument was a subsidy, and its enforcement generated little of the uncertainty that drives legal effort in our framework. So we would expect smaller effects of the CWA on lawyer demand.

Table H6 reports the results for the specification of equation (6). States with exposure to navigable-water are differentially increasing in lawyer employment share. However, the event study in Figure H4 suggests that states with manufacturing near navigable water were already gaining lawyer employment share steadily between 1950 and 1970, and the post-1972 estimates simply continue that trajectory. Formally, allowing exposed states their own linear trend eliminates the estimate entirely (Column 3)—the trend term, not the post interaction, is what carries the correlation—and census-division-by-year fixed effects, which absorb regional trends, cut it by a third (Column 4). The CAA estimate, by contrast, survives both tests (Columns 5–6).

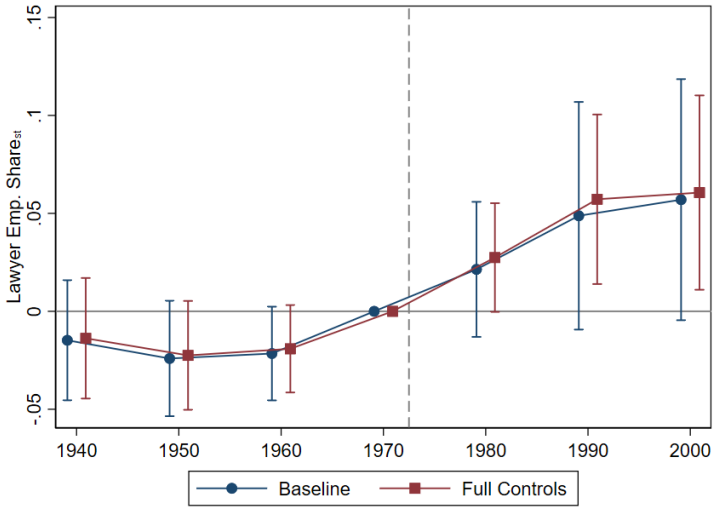
Table H6: The Clean Water Act and Lawyer Employment: Exposure Measures and Diagnostics

	Lawyer Emp. Share$_{st}$					
	(1)	(2)	(3)	(4)	(5)	(6)
CWA Navigable-Water Exp.$_{s,1970}$ × Post$_t$	0.058**	0.065**	0.043	0.041**		
	(0.027)	(0.025)	(0.031)	(0.016)		
CAA Non-Attainment$_{s,1970}$ × Post$_t$					0.065**	0.150***
					(0.026)	(0.054)
Controls		×	×	×	×	×
Exposure × Trend			×		×	
Division × Year FE				×		×
Observations	343	343	343	343	343	343
Within R-sq.	0.047	0.332	0.335	0.384	0.326	0.345

Notes: Levels difference-in-differences with state and year fixed effects; standard errors clustered by state. All exposure measures are standardized. CWA navigable-water exposure is the share of the state's 1970 manufacturing employment within 50 km of a major interstate river, Great Lake, or the coastline. CAA non-attainment exposure as in Table 3. The CWA post period begins in 1980 (the Act passed in October 1972); the CAA post period begins in 1970, as in the main text. Controls: manufacturing employment share × Post, Black employment share × Post, and Jim Crow × Post. * p< 0.1, ** p<0.05, *** p<0.01.

[112] Waterway geography from Natural Earth (10m river centerlines, lakes, and coastline); county centroids from the Census gazetteer; county manufacturing employment in 1970 from the BEA. The exposure measure is standardized.

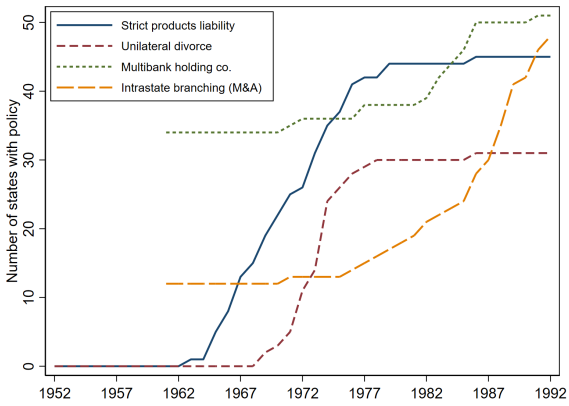
Figure H4: The Clean Water Act and Lawyer Employment Share: Event Study



Notes: Event-study version of equation (6) for the navigable-water exposure measure (standardized), interacted with census-year indicators; the omitted year is 1970 and the dashed line marks the passage of the Clean Water Act (October 1972). The full-controls series adds manufacturing employment share, Black employment share, and Jim Crow indicators interacted with census-year indicators. Exposed states trend upward already between 1950 and 1970, and the post-1972 estimates continue that pre-existing trajectory. Bars show 95% confidence intervals; standard errors are clustered by state.

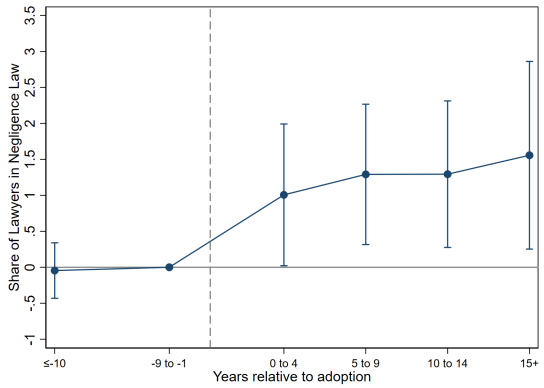
H.3 Section 5.4

Figure H5: Timing of state-level policy adoption

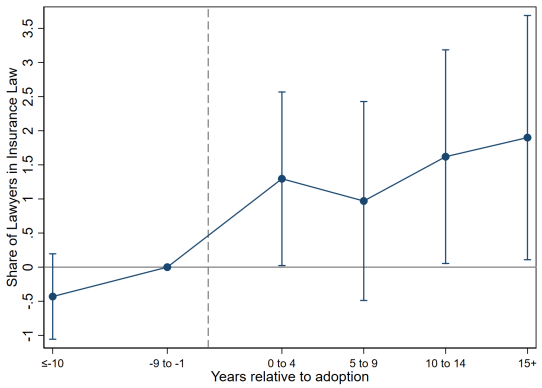


Notes: Each line reports the number of states with the policy in force, by year. Strict products liability is dated by each state's adoption of §402A of the Restatement (Second) of Torts (by court decision or statute); unilateral divorce follows Friedberg (1998) and Wolfers (2006); multibank holding companies permitted and intrastate branching via merger follow Mengle (1990) and Black & Strahan (2001). The two banking series begin in 1961, the first year of the deregulation coding, which left-censors states that permitted these policies before then.

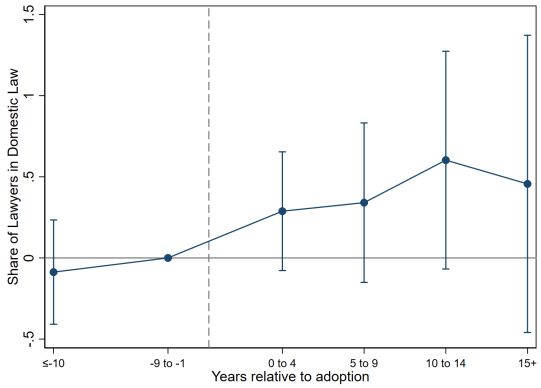
Figure H6: Event Studies for State-Level Field Results



(a) Negligence Lawyers and Product Liability



(b) Insurance Lawyers and Product Liability



(c) Domestic Lawyers and Divorce Law

Notes: Binned event studies of the field share on years relative to policy adoption, with state and year fixed effects and standard errors clustered by state (DC and MD excluded). Relative time is pooled into bins because of the 1964–71 gap between the Martindale-Hubbell and Census of Services samples and the five-year spacing of the latter; the -9 to -1 bin is the omitted reference and the ≤ -10 (Martindale-Hubbell) bin is the pre-trend check. Bars are 95% confidence intervals.

Table H7: Strict Products Liability and Negligence Lawyers,

	Plaintiff Negligence Share$_{st}$		Defendant Negligence Share$_{st}$		Negligence Share$_{st}$	
	(1)	(2)	(3)	(4)	(5)	(6)
Strict Products Liability$_{st}$	1.320***	1.353***	0.444	0.473	1.750*	1.819*
	(0.441)	(0.399)	(0.551)	(0.580)	(0.983)	(0.924)
Observations	493	493	493	493	493	493
Within R-sq.	0.073	0.112	0.007	0.020	0.039	0.068
Mean dep. var.	4.505	4.505	5.354	5.354	9.676	9.676

Notes: Two-way (state and year) fixed-effects regressions of the field share on the policy indicator and the total number of lawyers; standard errors clustered by state; DC and MD excluded. Columns (1)–(2) use the plaintiff-side negligence share, (3)–(4) the defendant-side share, and (5)–(6) total negligence; within each pair, the second column adds controls for other contemporaneous state legislation. * p<0.1, ** p<0.05, *** p<0.01.

Table H8: State Legislation and Fields of Law: Including DC and Maryland

	Field of Law Share$_{st}$			
	(1) Negligence	(2) Insurance	(3) Domestic	(4) Banking + Corp.
State legislation:				
Strict Products Liability$_{st}$	0.949*	1.483*		
	(0.496)	(0.759)		
Unilateral Divorce$_{st}$			0.470**	
			(0.193)	
Multibank Holding$_{st}$				1.469
				(1.013)
Intrastate Branching, M&A$_{st}$				0.757
				(1.017)
Observations	527	527	527	527
Within R-sq.	0.036	0.058	0.056	0.039
Mean dep. var.	4.450	4.290	1.758	12.317

Notes: This table repeats the baseline specifications of Table 4 without excluding DC and MD. Two-way (state and year) fixed-effects regressions of the field share on the policy indicator and the total number of lawyers; standard errors clustered by state. * p<0.1, ** p<0.05, *** p<0.01.

Table H9: State Legislation and Fields of Law: Callaway–Sant'Anna Estimates

	(1) Negligence	(2) Insurance	(3) Domestic	(4) Banking + Corp.
ATT	0.810	0.869	0.394	1.427
	(0.579)	(1.473)	(0.313)	(1.132)
Treatment	Prod. Liab.	Prod. Liab.	Unil. Divorce	Multibank Hold.
Observations	391	391	115	30

Notes: The table reports average treatment effects on the treated from the staggered-adoption estimator of Callaway & Sant'Anna (2021): group-time effects are aggregated with the "simple" aggregation, using not-yet-treated states as controls. Negligence and insurance use the full sample; domestic and banking + corporate use the Census of Services window (1972 onward), so states treated before 1972 are excluded. Standard errors clustered by state; DC and MD excluded. * p<0.1, ** p<0.05, *** p<0.01.

State	Year	Leading case or statute
Alabama	1976	*Casrell v. Altec Indus.*, 335 So.2d 128
Alaska	1969	*Clary v. Fifth Ave. Chrysler*, 454 P.2d 244
Arizona	1968	*O.S. Stapley Co. v. Miller*, 447 P.2d 248
Arkansas	1973	1973 Ark. Acts No. 111 (statute)
California	1963	*Greenman v. Yuba Power Prods.*, 377 P.2d 897
Colorado	1975	*Hiigel v. Gen. Motors*, 544 P.2d 983
Connecticut	1965	*Garthwait v. Burgio*, 216 A.2d 189
D.C.	1970	*Cottom v. McGuire* (approx.; no distinct point)
Florida	1976	*West v. Caterpillar Tractor Co.*, 336 So.2d 80
Georgia	1968	Ga. Code Ann. §51-1-11 (statute)
Hawaii	1970	*Stewart v. Budget Rent-A-Car*, 470 P.2d 240
Idaho	1974	*Shields v. Morton Chem. Co.*, 518 P.2d 857
Illinois	1965	*Suvada v. White Motor Co.*, 210 N.E.2d 182
Indiana	1973	*Ayr-Way Stores v. Chitwood*, 300 N.E.2d 335
Iowa	1970	*Hawkeye-Sec. Ins. v. Ford Motor Co.*, 174 N.W.2d 672
Kansas	1976	*Brooks v. Dietz*, 545 P.2d 1104
Kentucky	1965	*Dealers Transp. v. Battery Distrib.*, 402 S.W.2d 441
Louisiana	1971	*Weber v. Fidelity & Cas. Co.*, 250 So.2d 754
Maine	1973	Me. Rev. Stat. tit. 14, §221 (statute)
Maryland	1976	*Phipps v. Gen. Motors Corp.*, 363 A.2d 955
Minnesota	1967	*McCormack v. Hankscraft Co.*, 154 N.W.2d 488
Mississippi	1966	*State Stove Mfg. Co. v. Hodges*, 189 So.2d 113
Missouri	1969	*Keener v. Dayton Elec. Mfg. Co.*, 445 S.W.2d 362
Montana	1973	*Brandenburger v. Toyota Motor Sales*, 513 P.2d 268
Nebraska	1971	*Kohler v. Ford Motor Co.*, 187 N.W.2d 601
Nevada	1966	*Shoshone Coca-Cola v. Dolinski*, 420 P.2d 855
New Hampshire	1969	*Elliott v. Lachance*, 256 A.2d 153
New Jersey	1965	*Santor v. A&M Karagheusian*, 207 A.2d 305
New Mexico	1972	*Stang v. Hertz Corp.*, 497 P.2d 732
New York	1973	*Codling v. Paglia*, 298 N.E.2d 622
North Dakota	1974	*Johnson v. Am. Motors Corp.*, 225 N.W.2d 57
Ohio	1977	*Temple v. Wean United*, 364 N.E.2d 267
Oklahoma	1974	*Kirkland v. Gen. Motors Corp.*, 521 P.2d 1353
Oregon	1967	*Heaton v. Ford Motor Co.*, 435 P.2d 806
Pennsylvania	1966	*Webb v. Zern*, 220 A.2d 853
Rhode Island	1971	*Ritter v. Narragansett Elec. Co.*, 283 A.2d 255
South Carolina	1974	S.C. Code Ann. §15-73-10 (statute)
South Dakota	1973	*Engberg v. Ford Motor Co.*, 205 N.W.2d 104
Tennessee	1967	*Olney v. Beaman Bottling Co.*, 418 S.W.2d 430
Texas	1967	*McKisson v. Sales Affiliates*, 416 S.W.2d 787
Utah	1979	*Hahn v. Armco Steel Co.*, 601 P.2d 152
Vermont	1975	*Zaleskie v. Joyce*, 333 A.2d 110
Washington	1969	*Ulmer v. Ford Motor Co.*, 452 P.2d 729
West Virginia	1979	*Morningstar v. Black & Decker*, 253 S.E.2d 666
Wisconsin	1967	*Dippel v. Sciano*, 155 N.W.2d 55
Wyoming	1986	*Ogle v. Caterpillar Tractor Co.*, 716 P.2d 334
Never adopted: Delaware, Massachusetts, Michigan, North Carolina, Virginia		

Table H10: Year of Adoption of Strict Products Liability, by State

Notes: Each state's year of first adoption of strict products liability under §402A of the Restatement (Second) of Torts, together with the leading adopting decision (or statute). Both are taken from Vargo (1996), whose Part III surveys the case law and statutes of every state; we read that survey state by state and record the identified decision or statute and its year. Four states adopted by statute rather than by judicial decision (noted in the table); the District of Columbia is approximate, as Vargo (1996) identifies no single distinct adoption point; and five states never adopted §402A over our sample period. Aggregating these dates yields 21 states by 1970 and 36 by 1975, in line with contemporaneous counts of the doctrine's spread.