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**DO LAWYERS INHIBIT ECONOMIC GROWTH?
NEW EVIDENCE FROM THE 50 U.S. STATES**

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Whether the activities of lawyers might hamper economic growth has been hotly contested over the past three decades. Contradictory conclusions have flowed from evidence that typically has focused on the impact of lawyers on the growth rates of countries. Disputes over definitions and samples that vary among countries have colored portions of these debates. We surmount many of these issues by adopting a 50-state panel covering the period 2005-2018 for the United States and by utilizing widely accepted variables regarding economic activity and who is considered a lawyer. Further, we utilize two distinct measures of the activity of lawyers and find that an increased presence of lawyers reduces per capita real economic growth. Separately, we also find that an increased presence of lawyers reduces the level of per capita real income.

Keywords: Lawyer Influence; Transactions Costs; Economic Growth
JEL Classification: K0, K4, L0

1. INTRODUCTION

Lawyers inspire polarity in public reactions to them and their activities. Some prefer to focus on the positive roles that lawyers may play in protecting the rule of law, defending constitutional rights, and ensuring the bedrock contractual and property rights that promote a civilized society and stimulate economic activity. The American Bar Association forthrightly states, “Our mission is to serve society by defending liberty and delivering justice” (American Bar Association, 2020) and organizations such as the Center for Constitutional Rights (2019) and the American Civil Liberties Union (2023) advocate for causes that large numbers of individuals regard as virtuous. When occupying such roles, lawyers may create and defend nonmarket goods such as free speech that have value but may not be overtly priced by a market system. Cross (1992) has offered cogent advocacy of these activities of lawyers and argues that they

contribute to economic growth.

The defenders/supporters of lawyers point out that legal actions can promote economic efficiency, for example, by enabling actions that force firms to internalize negative external economies they generate. Further, lawyers can facilitate the operation of private markets by enabling individuals and firms to cope more efficiently with changing circumstances, including resolving disputes and complying with government rules and regulations. Collectively, these actions reduce the levels of risk faced by individuals and firms and minimize their costs.

Times have changed. More than a quarter century has passed since Asimow (1996) plaintively penned "When Lawyers Were Heroes." Using plentiful examples from movies such as "Judgment at Nuremberg" and "To Kill a Mockingbird," Asimow chronicled the gradual erosion in esteem that already then had afflicted the legal profession.

Critics, often economists, argue that lawyers as a class and the clients they represent collectively often turn out to be rent seekers who generate costs and redistribute income but contribute little that is positive in an economic sense. Sundry observers have flayed lawyers and the legal profession for a variety of other failings, among them the assertions that there are too many lawyers (Magee, 1992) that they cost too much, that their work and the legal system usually favor the wealthy (Galanter, 1974), that some have conflicts of interest (Polinsky and Rubinfeld, 2003), that they divert resources from alternate and more valuable pursuits (Bok, 1983), that they artificially restrict entry into their profession (Maurizi, 1979), that they establish and support perverse, inefficient incentives that alter behavior (Maggee et al., 1989), and that too often they find themselves in the position of advocating and protecting a variety of evils (Zacharias, 2004). Cumulatively, shortcomings such as these generate a variety of ill effects, one of which might well be to lower the rate of economic growth.

The body of work of Mancur Olson (1965, 1982, 1992, 2000) continues to provide an intellectual basis for many current critiques of the legal profession. Olson's analysis of lawyers, however, was nuanced. He averred that "... society should be governed by 'the rule of law' and therefore needs lawyers" and that "one of the characteristics of good lawyers and good law is that they reduce uncertainty and conflict and thereby lessen the frequency with which people must go to court" (Olson, 1992, p.65). But he also concluded that lawyers and their work were characteristically bureaucratic and that as a group they exhibited rent-seeking behavior. Thus, a society could have too many lawyers, a point aggressively made by Magee (1992). A society with too many lawyers may suffer from slower economic growth and this will impose costs on the citizenry at large. These costs will attach even to individuals who never directly interact with a lawyer.

The presence of the "rule of law" long has been considered to exercise a positive influence on the economic growth of a country. Even so, as we proceed, it should not be lost that while there likely exists a positive correlation between the rule of law and the number of lawyers in a jurisdiction, these two magnitudes are not identical. Some number of lawyers in a jurisdiction usually is essential for the rule of law to exist but

common sense suggests that the relationship between the number of lawyers and the rule of law is subject to diminishing returns. Thus, when positive correlations between the rule of law and measures of economic welfare such as gross domestic product per capita are revealed (Bhagat, 2020, as an example), it does not follow that if we were to make an incremental increase in the number of lawyers that this would enhance the rule of law and thereby promote economic growth. Indeed, integrating the costs of employing excessive lawyers' services into the cost curves of firms elevates the variable, marginal, and total cost curves of those firms directly, an outcome that involves lower production and higher final commodity prices. Moreover, to the extent that injunctions, litigation, mediation, and negotiating impact firms' commodity delivery schedule and transit costs, production is further compromised on the firm's demand side. All this leads to diminished economic growth.

Discussions of the impacts that lawyers have on society extend far beyond those noted here and a full treatment of the position and impact of lawyers would require volumes rather than a single journal article. Accordingly, we narrow our focus - do the number of lawyers present in a state and the amounts they are paid adversely affect the economic growth rates of the 50 states?

The remainder of this study is organized as follows. Section 2 briefly reviews previous empirical studies in this area. In Section 3, we take note of the deterioration of the economic status of the median lawyer in the United States because this presumably has some influence over their impact upon state economic growth rates. Section 4 describes our data and our estimating model. In Section 5, we present our baseline empirical estimation results. Section 6 supplies our instrumental variables estimations. In Section 7, we provide an overview of our findings.

2. RELATED EMPIRICAL WORK

Freeman (1975), Pashigian (1977), and Rosen (1992) have provided seminal analyses of labor markets for lawyers. The primary focal point of their research was the behavior of lawyers' real incomes as compared to those earned by other professionals. They did not tackle the impact that the number of lawyers in a state might have upon the economic growth rates of states.

Empirical work focusing on the impact of lawyers on economic growth nearly always has carried an international flavor and has analyzed the impact of lawyers on the growth rates of countries (Datta and Nugent, 1986; Magee, Brock and Young, 1989; Brock and Magee, 1989; Barro, 1991; Cross, 1992; Epp, 1992; Levine and Renelt, 1992; Knack and Keefer, 1995; Levine, 1997; Cameron and Thorpe, 2004). These studies are burdened by methodological problems that initially relate to the lack of data availability and subsequently to the quality of the data that are accessible.

Murphy, Brock and Young's (1989) work provides an example. The trio examined gross national product growth rates between 1970 and 1985 in 91 countries (an

admirably large sample) and then related these growth rates to the number of students enrolled in law schools expressed as a percentage of total college enrollments in 1970. They concluded that lawyer-heavy countries had lower rates of economic growth. Cross (1997) subsequently pointed out that the nature of law school enrollments varies significantly among countries, as does the reporting of those data. In many countries, law is pursued by undergraduate rather than graduate students and in many countries a majority of law school graduates do not choose to become lawyers. Thus, internationally speaking, law school enrollments are an inexact metric of the size of the legal profession. Further, the reliance of Murphy, Shleifer and Vishny's conclusion upon a single year's law school enrollments is difficult to justify within the context of economic growth. Thus, despite heroic efforts to pin down the impact of lawyers upon economic growth, this is not a definitive study. Indeed, analogous circumstances burden nearly every other internationally based study.

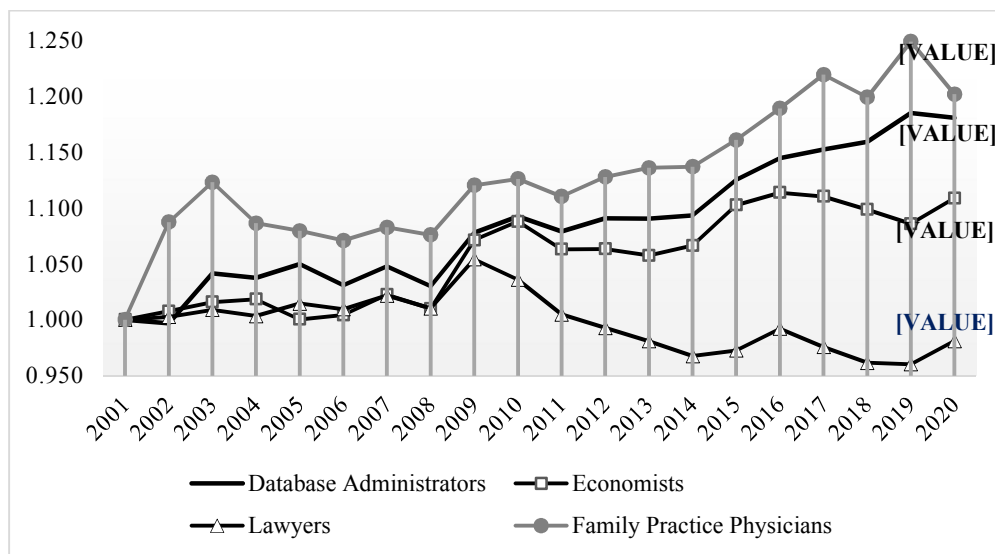
Insofar as research on the economic growth rates of America's 50 states, the research fields have lain fallow for an extended period of time. Laband and Sophocleus (1988) sought to measure the intensity of lawyer activity in the 50 states in two ways, first, by a simple count of the number of law firms in a state, and second, by the ratio of lawyers to bankers in a state. Both measures have weaknesses. The first measure is questionable because it effectively equates a single-person law firm in Montana with a giant law firm in New York City. The second measure has greater utility but the choice of bankers as the denominator for a gauge of lawyer intensity is debatable, given the fluidity attached to the definition of a banker. Are tellers in bank lobbies or drive-up windows bankers? Are customer service representatives truly bankers? Laband and Sophocleus concluded that increased lawyer intensity had a negative impact on states' economic growth rates; however, given the methodological issues just noted, this is not a conclusion that carries great weight.

Much is at stake in these internationally oriented economic growth studies because they carry with them strong implications for the best ways to promote global prosperity. However, nearly all international studies have been bogged down in a definitional swamp over issues such as who should be counted as a lawyer in a specific county and the questionable accuracy of the underlying data. One can sidestep most of these issues by focusing on the United States and relying upon Bureau of Labor Statistics data concerning lawyers and their incomes, and by utilizing Bureau of Economic Analysis data concerning state economic performance. We adopt this approach but make no claim that it entirely eliminates all disputes over data. Nevertheless, this two-pronged strategy represents a step forward in terms of the data reliability, which in turn enhances our ability to place trust in the analytical results.

3. THE CHANGING ECONOMIC ENVIRONMENT OF LAWYERS

The most influential "there are too many lawyers" studies (and rebuttals) were done in the 1990s and written at a time when the economic position of lawyers in the United

States was stronger than it is today. Consider Graph 1, which compares the growth in the real median incomes of individuals working in various occupations in the United States. Contrary to some public perceptions, the real incomes of lawyers were almost two percent lower in 2020 than they were in 2001. Contrast this to family practice physicians, whose median real income was 20.2% higher in 2020 than in 2001.



Note: 2001 incomes have been indexed at 100.

Source: Bureau of Labor Statistics (2021)

Figure 1. Comparing Changes in the Real Median Incomes of Lawyers and Other Occupations: United States, 2001-2020

Further, for more than a decade, the share of gross domestic product accounted for by legal services has declined (see Graph 2). Simply put, lawyers' share of the total income pie has been diminishing even while their numbers have been increasing. This suggests that the collective demand for lawyers in the United States has been price inelastic in recent years, a conclusion also reached by Cross (1997). An apparent reason for the decline in lawyers' economic fortunes is that there has been a decline in the use of several of the types of services they provide. Divorce rates have fallen¹ and the total number of federal district court civil and criminal case filings (adjusted for population)

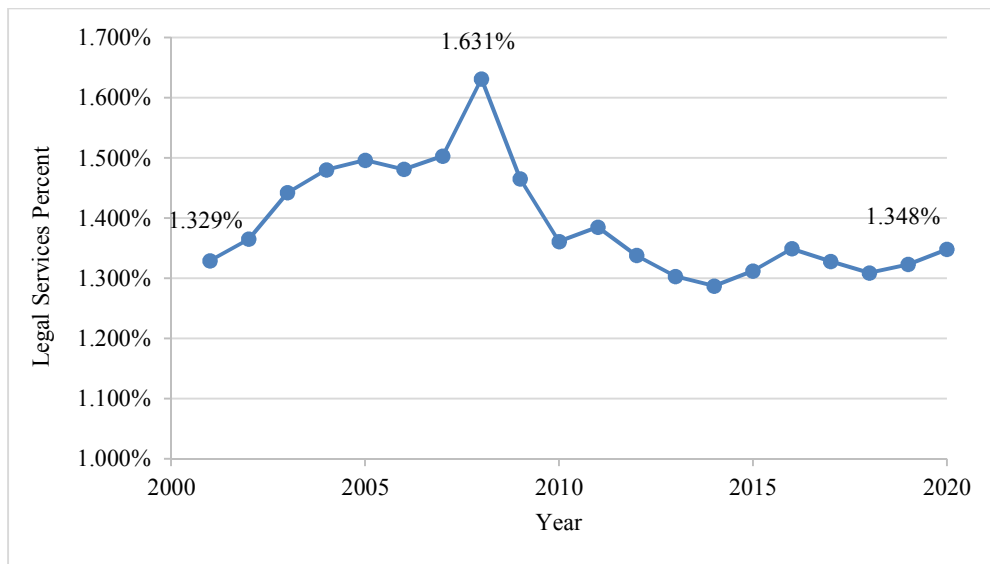
¹ We do not display these data because the National Center for State Courts National Center for State Courts, which collects these data, only has continuous annual data between 2012 (their earliest reporting year) and 2021 for fewer than one-half of the 50 states. The Court Statistics Project, www.courtstatistics.org.

has declined as well. Graph 3 displays the latter data. Episodic data published by the National Center for State Courts (2021) reveal that roughly similar patterns hold sway with respect to the number of population-adjusted cases brought inside in state and local courts.

Given the relative decline in the incomes of lawyers and in light of the waning demand for some services provided by lawyers, can it still be true that they exercise a negative influence upon economic growth? As we will see, the answer is “yes.” While the apparent surfeit in the number of lawyers in many of the 50 states may be dragging down their incomes and activity levels, it has not eliminated the negative impact they have exerted on the growth rates of their respective states.

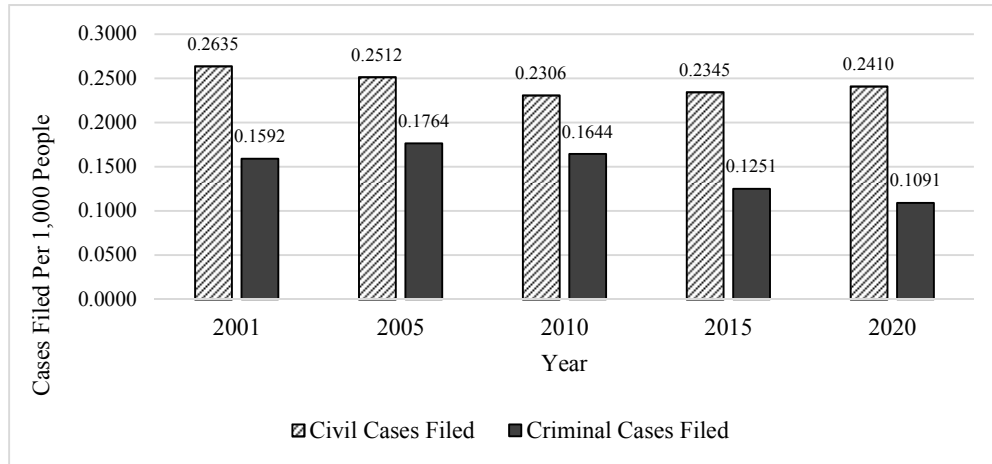
4. THE DATA AND THE MODEL

Our data consists of annual observations, for the 14 years between 2005 and 2018, for the 50 states. The District of Columbia is not included in the study because of data limitations. All financial variables are expressed in real terms and valued in terms of July 2020 prices. The model is in principle based on a variety of previous studies such as those listed in Section 1 above well as the studies by Compton et al. (2011), Hall et al. (2016, 2018), Shumway and Davis (2017), and Vedder (2015).



Source: Federal Reserve Bank of St. Louis (2021).

Figure 2. Share of Gross Domestic Product Devoted to Legal Services (NAICS 5411): 2001-2020



Sources: United States Department of Justice (2021) for cases and the Federal Reserve Bank of St. Louis (2021) for populations.

Figure 3. Median Number of Federal Civil and Criminal Cases Filed Per 1,000 People: The 50 States Plus the District of Columbia, 2001-2020

4.1. The Basic Hypothesis and Model Specifications

The fundamental hypothesis being tested is that the greater the economic and legal presence of lawyers in the economy, the greater the direct and indirect transactions costs, delays, bottlenecks, and other inefficiencies associated with property rights exchanges and other economic undertakings in that economy, *ceteris paribus*.

4.2. The Key Variables

Given the hypothesis stated above, the dependent variable in our estimations initially is:

$ECONGRRATE$ = Annual percent change in a state's real gross product per capita (Source: Federal Reserve Bank of St. Louis, 2021).

As part of the central hypothesis in this study, we adopt two alternative variables by which the presence of lawyers in each state is measured, namely:

$LAWYERSPER000$ = Number of lawyers in a state per 1,000 individuals (Source: Bureau of Labor Statistics (2021) and the Federal Reserve Bank of St. Louis).

$PCTGSPLAWYERS$ = Percent of state gross product expended on lawyers.

Thus, our hypothesis is that $ECONGROWTHRATE$ is a decreasing function of $LAWYERSPER000$, *ceteris paribus*. Alternatively, our hypothesis can be stated such that $ECONGRRATE$ is a decreasing function of $PCTGSPLAWYERS$, *ceteris paribus*.

4.3. Control Variables

Based upon the economic growth literature summarized in Section 2 above, a number of control variables are adopted. These are, as follows:

NETMIGRATE = Net state in-migration rate to each state as a percentage of its population. We expect greater positive net in-migration into a state to spur that state's economic growth (Source: United States Census, 2021).

PCTBACHDEG = Percent of individuals in a state age 25 and over who have bachelor's degree or higher. It is expected that this variable will have a positive impact of economic growth (see, e.g., Temel, 2013; Mamun and Arfanuzzaman, 2020) (Source: United States Census).

ECONFRINDEX = Following Emara and Rebolledo (2021), we adopt the Fraser Institute's index of state economic freedom that weights fiscal policy 30.4%, regulatory policy 34.0%, and personal freedom 34.1%. The value of this index lies between 1 (for least free) and 10 (for most free). Following Cebula (1998), Cebula and Mixon (2014), and Emara and Rebolledo (2021), we hypothesize that economic growth is an increasing function of Overall economic freedom (Source: Fraser Institute, 2022).

STATEUNPRATE = Each state's annual average percentage unemployment rate. We expect that a higher unemployment rate will reduce economic growth rate (Source: Federal Reserve Bank of St. Louis, 2022).

PCTCOMMSOCIAL = Percent of state employment occupied by individuals working in community and social services. We hypothesize that greater employment in this sector could be a drag on economic growth; therefore, we expect a negative sign on the estimated coefficient for this variable (Source: Federal Reserve Bank of St. Louis, 2022).

PCTSTEM = Percent of state employment that consists of individuals working in STEM-related occupations (NAICS 15, 17 and 19). The presence of workers in STEM-related occupations such as engineering and computer science may spur Economic growth and hence, we expect a positive relationship between that employment and economic growth (Source: Federal Reserve Bank of St. Louis, 2022).

PCTREALEST = Percent of state employment devoted to real estate activity (NAICS 41). Vigorous real estate activity can be an economic driver, and we therefore expect a positive sign (Source: Federal Reserve Bank of St. Louis, 2022)

PCTTRANSP = Percent of state employment devoted to transportation (NAICS 53). Highly developed transportation systems spur economic growth. Therefore, we expect a positive sign on this estimated coefficient (Source: Federal Reserve Bank of St. Louis).

The models that we estimate initially are given by the following two specifications:

$$\begin{aligned}
 ECONGRRATE_{jt} = f(&LAWYERSPER000_{jt-1}, NETMIGRATE_{jt-1}, \\
 &PCTBACHDEG_{jt-1}, ECONFRINDEX_{jt}, STATEUNPRATE_{jt-1}, \\
 &PCTCOMMSOCIAL_{jt}, PCTSTEM_{jt-1}, PCTREALEST_{jt-1}, \\
 &PCTTRANSP_{jt-1}), \quad (1)
 \end{aligned}$$

where j refers to state j and t refers to year t and where the hypothesis being tested here is expressed as:

$$\frac{\partial \text{ECONGRRATE}_{jt}}{\partial \text{LAWYERSPER000}_{jt-1}} < 0. \quad (2)$$

The alternative version of the basic model is given by:

$$\begin{aligned} \text{ECONGRRATE}_{jt} = f(\text{PCTGSPLAWYERS}_{jt-1}, \text{NETMIGRATE}_{jt-1}, \\ \text{PCTBACHDEG}_{jt-1}, \text{ECONFRINDEX}_{jt-1}, \text{STATEUNPRATE}_{jt-1}, \\ \text{PCTCOMMSOCIAL}_{jt-1}, \text{PCTSTEM}_{jt-1}, \text{PCTREALEST}_{jt-1}, \\ \text{PCTTRANSP}_{jt-1}), \end{aligned} \quad (3)$$

In this specification, the hypothesis being tested is given by:

$$\frac{\partial \text{ECONGRRATE}_{jt}}{\partial \text{PCTGSPLAWYERS}_{jt-1}} < 0. \quad (4)$$

5. BASELINE EMPIRICAL ESTIMATION RESULTS

The baseline (preliminary) panel least squares estimation of equation (1) in linear form using period fixed-effects (dummy variables) and state fixed-effects (dummy variables) is provided in Table 1. The estimation in Table 1 reports robust standard errors. The F-statistic is statistically significant at the 1% level. All nine estimated coefficients exhibit the expected signs, with seven of the nine being statistically significant at the 1% level.

The economic growth rates of an individual state, as measured by *ECONGRRATE*, is a decreasing function of its unemployment rate and the percentage of its state employment in community and social services. On the other hand, the state-level economic growth rate is an increasing function of the percent of the state's employment devoted to transportation, the percentage of the state's employment consisting of individuals working in STEM-related occupations, the net in-migration rate, and the percent of the population who held a bachelor's degree or higher. In any case and more relevant to the objective of this study, based upon the findings shown in Table 1, the percentage growth rate of real per capita GSP in state j is (at the 1% statistical significance level) a decreasing function of the number of attorneys per 1,000 people residing in the state. This initial empirical finding is consistent with our hypothesis.

As indicated above, we also consider an alternative measure of the "presence" of lawyers/lawyer activity, namely, *PCTGSPLAWYERS*. This variable is adopted as a *facto* robustness test of our basic hypothesis. The period fixed-effects and state fixed-effects estimate of Equation (3) is provided in Table 2, where robust standard

errors are reported for each of the explanatory variables. In this estimate, all nine of the estimated coefficients exhibit the expected signs, with seven of the nine being statistically significant at the 1% level and one being statistically significant at nearly the 2.5% level. These results largely parallel those found in Table 1. In particular, the state economic growth rate is a decreasing function of its unemployment rate and the percentage of its state employment in community and social services. Furthermore, the state-level economic growth rate is an increasing function of the percent of the state's employment devoted to transportation, the percentage of the state's employment consisting of individuals working in STEM-related occupations, the net in-migration rate, and the percent of the population age 25 and over who held a bachelor's degree or higher, as well as the percent of the state's employment in real estate (unlike the insignificant finding for this variable in Table 1). Finally, and of course more relevant to the objective of this study, based upon the estimation result shown in Table 2, the percentage growth rate of real per capita GSP in state j is (at the 1% statistical significance level) a decreasing function of the percent of state gross product expended on lawyers. This empirical finding is also consistent with our hypothesis.²

Table 1. Considering the Number of Lawyers Per 1,000 People in Each State

Variable	Coefficient	t-Statistic	Prob.
$LAWYERSPER000_{jt-1}$	-0.0037	-5.51	0.0000
$NETMIGRATE_{jt-1}$	0.0021	5.70	0.0000
$PCTBACHDEG_{jt-1}$	0.0069	4.24	0.0000
$ECONFRINDEX_{jt-1}$	0.0005	0.09	0.9306
$STATEUNPRATE_{jt-1}$	-0.0175	-9.00	0.0000
$PCTCOMMSOCIAL_{jt-1}$	-0.0387	-3.11	0.0000
$PCTSTEM_{jt-1}$	0.0368	4.91	0.0020
$PCTREALEST_{jt-1}$	0.0812	1.64	0.1010
$PCTTRANSP_{jt-1}$	0.0302	6.10	0.0000
Constant	-64.08		
R^2		0.97	
Adj R^2		0.96	
F-statistic		286.19	
Prob(F-statistic)		0.0000	

Notes: Dependent Variable $ECONGRRATE_{jt}$. Method: Panel Least Squares. Years included: 2005-2018; State included: 50. Effects Specification: State Fixed (dummy variables); Period Fixed (dummy variables).

² Potential endogeneity issues exist if the right-hand-side variables are unlagged; however, note that in Tables 1 and 2, that those variables are all lagged one year to mitigate this possibility. Furthermore, we addressed potential endogeneity via two-stage least squares/instrumental variables estimation, as summarized in Table 3. The latter estimate did not alter our basic conclusions regarding the impact of lawyers on growth. Interestingly, nevertheless, the adoption on unlagged right-hand-side variables does not change our basic conclusions.

Table 2. Considering Lawyers' Incomes as a Share of State Gross Product

Variable	Coefficient	t-Statistic	Prob.
<i>PCTGSPLAWYERS</i> _{<i>jt</i>-1}	-0.1475	-3.51	0.0005
<i>NETMIGRATE</i> _{<i>jt</i>-1}	0.0021	5.74	0.0000
<i>PCTBACHDEG</i> _{<i>jt</i>-1}	0.0069	3.95	0.0001
<i>ECONFRINDEX</i> _{<i>jt</i>-1}	0.0038	0.57	0.5658
<i>STATEUNPRATE</i> _{<i>jt</i>-1}	-0.0191	-9.36	0.0000
<i>PCTCOMMSOCIAL</i> _{<i>jt</i>-1}	-0.0410	-3.07	0.0022
<i>PCTSTEM</i> _{<i>jt</i>-1}	0.0314	3.97	0.0001
<i>PCTREALEST</i> _{<i>jt</i>-1}	0.1148	2.19	0.0292
<i>PCTTRANSP</i> _{<i>jt</i>-1}	0.0357	6.65	0.0000
Constant	3.59		
R ²		0.97	
Adj R ²		0.96	
F-statistic		270.46	
Prob(F-statistic)		0.0000	

Notes: Dependent Variable *ECONGRRATE*_{*jt*}. Method: Panel Least Squares. Years included: 2005-2018; State included: 50. Effects Specification: State Fixed (dummy variables); Period Fixed (dummy variables).

6. INSTRUMENTAL VARIABLES/IV ESTIMATION

There are potential endogeneity issues associated with the estimation result provided in Section IV above. To address this issue, we now provide instrumental variable estimation results for the model. The specification is the following:

$$\begin{aligned}
 ECONGRRATE_{jt} = f(&LAWYERSPER000_{jt}, NETMIGRATE_{jt-1}, \\
 &PCTBACHDEG_{jt-1}, ECONFRINDEX_{jt}, STATEUNPRATE_{jt}, \\
 &PCTCOMMSOCIAL_{jt}, PCTSTEM_{jt-1}, PCTREALEST_{jt-1}, \\
 &PCTTRANSP_{jt-1}), \quad (5)
 \end{aligned}$$

In this re-specification of our model, seven of the nine explanatory variables are lagged one period. In addition, two of the explanatory variables, the variable of primary interest in this study, *LAWYERSPER000*_{*jt*}, and the percentage unemployment rate, *STATEUNPRATE*_{*jt*}, are both unlagged. Since these two variables are contemporaneous with the dependent variable, *ECONGRRATE*_{*jt*}, the possibility of simultaneity bias arises. In order to account for this potential endogeneity problem, we adopt instrumental variables. In particular, in order to account for this endogeneity problem, we introduce instrumental variables: the natural log of the ABA Bar passage rate in state *j* lagged two years (*ABAPASS*_{*jt-2*}) for the variable *LAWYERSPER000*_{*jt*}, and variables representing

both the labor force participation rate ($LFPR_{jt-2}$) and research and development outlays as a percent of gross state product in state j ($R\&D_{jt-2}$), also lagged two years, for the variable $STATEUNPRATE_{jt}$. Consistent for the requirements for a valid instrument, each of these instruments is highly correlated with its respective explanatory variable, whereas the lag significantly reduced their correlation with the system error term. The instrumental variables/IV estimation of Equation (5) is provided in Table 3.

The two-stage least squares results summarized in Table 3 largely parallel those in Tables 1 and 2. In this estimation, the F-statistic is significant at the 1% level attesting to the soundness of the specification, whereas the J-statistic is significant at beyond the 5% level, attesting favorably to the exogeneity of the instrumental variables. Overall, five of the estimated coefficients are statistically significant at the 1% level, and two are significant at the 5% level. Arguably, the most notable outcome change is the rise in positive statistical significance for the economic freedom variable, a finding that is consistent with the recent findings in Emara and Rebolledo (2021). Most importantly, of course, is the coefficient t on the variable $PCTGSPLAWYERS_{jt}$. As shown in Table 3, it is negative and statistically significant at the 1% level. Thus, the impact of the law profession as measured here on the per capita growth rate of real GSP (Gross State Product) is negative, as hypothesized above. In closing this section of the study, it is observed that this same conclusion, namely, the finding of real economic growth per capita being a decreasing function of the presence of lawyers, is obtained when estimating the model in equation (5) by two-stage least squares with the variable $PCTGSPLAWYERS_{jt}$ adopted in lieu of $LAWYERSPER000_{jt}$.

Table 3. 2SLS Estimation Results

Variable	Coefficient	t-Statistic	Prob.
$LAWYERSPER000_{jt}$	-0.0109	-2.64	0.0085
$NETMIGRATE_{jt-1}$	0.0025	2.23	0.0262
$PCTBACHDEG_{jt-1}$	0.0067	4.64	0.0000
$ECONFRINDEX_{jt-1}$	0.0195	2.56	0.0106
$STATEUNPRATE_{jt}$	-0.0055	-1.67	0.0987
$PCTCOMMSOCIAL_{jt-1}$	-0.0412	-2.67	0.0077
$PCTSTEM_{jt-1}$	0.0555	5.90	0.0000
$PCTREALEST_{jt-1}$	0.0101	0.15	0.8805
$PCTTRANSP_{jt-1}$	0.0409	4.89	0.0000
Constant	3.7		
F-statistic		219.28	
Prob(F-statistic)		0.0000	
Prob(J-statistic)		0.0393	

Notes: Dependent Variable $ECONGRRATE_{jt}$. Method: Panel Least Squares. Years included: 2005-2018; State included: 50. Effects Specification: State Fixed (dummy variables); Period Fixed (dummy variables).

7. OVERVIEW

Lawyers, along with economists, computer scientists, farmers, accountants, engineers, and social workers are among those workers whose efforts and effects ritually are stereotyped, often humorously and sometimes unfairly. We will spare readers a recitation here of jokes about how many lawyers it takes to screw in a light bulb. Nevertheless, in this paper, we do not shrink from addressing another almost stereotypical concern concerning lawyers, namely, that they and their work can constitute an economic drag on society. We find reasonable evidence that finds this allegation to be true among the 50 states.

Table 4. Per Capita Real Gross State Product: A Different Perspective

Variable	Coefficient	t-Statistic	Prob.
$LAWYERSPER000_{jt-1}$	-0.2827	-5.05	0.0000
$NETMIGRATE_{jt-1}$	0.0612	5.35	0.0000
$PCTBACHDEG_{jt-1}$	0.3568	2.63	0.0087
$ECONFRINDEX_{jt-1}$	0.4572	0.89	0.3763
$STATEUNPRATE_{jt-1}$	-1.2925	-8.01	0.0000
$PCTCOMMSOCIAL_{jt-1}$	-3.0733	-2.98	0.0030
$PCTSTEM_{jt-1}$	2.8350	4.56	0.0020
$PCTREALEST_{jt-1}$	6.8907	1.68	0.0939
$PCTTRANSP_{jt-1}$	1.8616	4.52	0.0000
Constant	-47.62		
R^2		0.96	
Adj R^2		0.95	
F-statistic		182.09	
Prob(F-statistic)		0.0000	

Notes: Dependent Variable $PCRGSP_{jt}$. Method: Panel Least Squares. Years included: 2005-2018; State included: 50.. Effects Specification: State Fixed (dummy variables); Period Fixed (dummy variables).

Our review of the literature revealed no lack of studies concerning the effects of lawyers on economic growth, but we also found that nearly all previous work on this issue has been international in character. Very little research has focused on the impact of lawyers on the economic growth of the 50 states, which is our focal concern. Using two different measures of lawyer's intensity, we discovered that an increase in the number of lawyers per capita has been negatively associated with the economic growth rates of the 50 states, 2005-2018. Further, when lawyers are compensated more and their share of the national income increases, this also has had a negative impact upon state economic growth rates. These findings are compatible with our panel 2SLS estimation as provided in Table 3.

These conclusions held true even after we controlled for nine possibly relevant influences on state economic growth rates and despite the fact the median lawyer's real income has been stagnant or declining for most of this century. Moreover, we find similar results if the focus is on the *level* of real gross product per capita *per se* ($PCRGSP_{jt}$) rather than the growth rate thereof, $ECONGRRATE_{jt}$. This is demonstrated by the fixed-effects estimate shown in Table 4, which is based upon the same model as Table 1 except for the focus on the new dependent variable, $PCRGSP_{jt}$.

Clearly, in this *de facto* robustness test, the estimation results in Table 4 are compatible with those found in Table 1. Most relevantly, the *level* of real per capita GSP is found to be a decreasing function of the number of lawyers per 1,000 population. Thus, the lawyer impact appears to be reflected not only in terms of per capita real GSP growth rate terms, as shown in Tables 1, 2 and 3, but also in real per capita GSP levels.³

Our findings support the controversial contention that many states may suffer from a surfeit of lawyers. "Surfeit" here we take to mean two things. First, it reflects the reality that the median lawyer has been unable to maintain her real income in recent years. By itself, this suggests (though does not prove) a degree of oversupply. Second, this judgment recognizes that lawyers as a group appear to exercise a drag on state economic growth rates.⁴

Though we agree that many of the tasks undertaken by lawyers are valuable and support economic and social activity, our evidence suggests that the circumstances we have outlined may exemplify "too much of a good thing." Diminishing returns appear to apply to the good things that lawyers can accomplish for society.

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³ This same finding is also obtained if the measure of lawyer presence is $PCTGSPLAWYERS_{jt-1}$.

⁴ Notably, these negative effects are present even though lawyers' real incomes in the United States have fallen since the turn of the century, and the demand for various of the services they provide has been declining on a population-adjusted basis for most of the past decade. This evidence, along with the negative impact of lawyers on economic growth, suggests that the United States currently fields more than the optimal number of lawyers.

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