

John A. Dove\*

# Antitrust enforcement by state attorneys general: institutional, legal and political considerations

**Abstract:** Since deregulation in 1980, there has been a major shift in antitrust enforcement to the states, specifically to state attorneys general (AGs). For advocates of deregulation, this move has had important unintended consequences. Specifically, it has allowed antitrust litigation to become hitched to the political incentives of AGs. Analysis of a panel dataset of all state antitrust actions between 1990 and 2008 suggests that antitrust enforcement by state attorneys general appears to follow electoral cycles, which is especially pronounced depending on specific institutional constraints that exist between the states.

---

\*Corresponding author: John A. Dove, Manuel H. Johnson Center for Political Economy, 137N Bibb Graves Hall, Troy University, Troy, AL 36082, USA, e-mail: jadove@troy.edu

## 1 Introduction

Although the federal government, through the Department of Justice (DOJ) and Federal Trade Commission (FTC), was once historically the *de facto* public enforcer of antitrust violations, this drastically changed during a deregulatory drive in the 1980s. Through this period and into today, enforcement has increasingly fallen on state governments, pursued almost exclusively by state attorneys general (AGs) as the consequence of federal deregulation. Federal deregulation, however, appears to have created a set of unintended regulatory consequences, most evident in the divergent incentives and constraints placed on state AGs and federal enforcers. Regulation has not disappeared so much as changed in scope and application. Electoral pressure faced by state AGs (as opposed to an unelected bureaucracy in the DOJ and FTC), who have been increasingly shown to seek higher office and pursue highly salient policy issues, has shaped a regulatory regime driven by AGs' political incentives rather than the public interest.

The position of state AG has changed over the years, with severe consequences for regulation. To put these changes into perspective, of 166 state AGs who served between 1980 and 1999, over 70 ran for either governor or U.S. Congress, while 20 others were appointed to a U.S. lower court seat or high ranking federal agency

position.<sup>1</sup> Overall, these changes have permitted state antitrust enforcement to revolve around those electoral incentives and both AG and gubernatorial election cycles, which may come as a detriment to overall economic efficiency. Although a large body of literature has explored federal antitrust enforcement,<sup>2</sup> much less has been done to understand systematically how these and other fundamental institutional and legal changes at the state level have affected antitrust enforcement.<sup>3</sup> Further, only recently has there been any formal work undertaken that analyzes the broader implications of state AG's enforcement decisions as part of a coherent policymaking agenda.<sup>4</sup>

This paper adds to this growing literature and examines these issues in regard to state antitrust enforcement decisions. In particular, this study provides a means by which to observe and determine the overall effect that the interactions between various statutorily and constitutionally provided differences: (1) term limit laws on the office, (2) partisanship as well as (3) state level *parens patriae* authority has had on both single, in-state and multistate antitrust enforcement with data made available from the National Association of Attorneys General (NAAG) and various other sources between 1990 and 2008.

I further study state antitrust enforcement during both AG elections and gubernatorial elections in which a sitting AG pursued his or her respective governor's office. Antitrust enforcement provides a means by which AGs are not only able to acquire relatively low-cost exposure for themselves through a highly salient policy issue, but can also distribute monetary awards for successful antitrust suits either directly or indirectly back to constituents. Overall, my findings suggest that state antitrust enforcement may be influenced by elections and electoral cycles not only for the office of attorney general but also by those AGs pursuing higher office. Thus, I find evidence that changing political incentives and legal constraints placed on this office affects the number, timing and type of antitrust actions pursued, where the type of action may be a single, in-state action or either the initiation or participation in a multistate case.

These issues have become increasingly important as a number of high profile antitrust actions over the recent past have involved relatively large-scale state enforcement. For example, in conjunction with the federal suit brought against Microsoft in 1998, twenty-eight state AGs also filed suit.<sup>5</sup> More recently seven

---

1 Provost (2010).

2 Posner (1970); Long, Schramm and Tollison (1973); Coate, Higgins, and McChesney (1990); Pittman (1992); Ghosal and Gallo (2001).

3 Two recent studies that attempt to identify some of these issues include Feinberg and Reynolds (2010) and Feinberg and Husted (2013).

4 Provost (2003, 2006); Lemos (2011).

5 Myers and Ross (2008).

states brought forth their own case also in conjunction with a Department of Justice investigation of the proposed merger between the telecommunications companies T-Mobile and AT&T.<sup>6</sup> Largely as a result of these state actions, the proposed merger was dropped.

Both these examples only highlight a growing trend in antitrust enforcement between state and federal regulators. Thus, it is now much more important to better understand some of the policy motives behind state antitrust enforcement, especially given what is, in many instances, an extreme divergence between state and federal policy goals and to thus attempt to better tailor the use and application of both federal and state antitrust enforcement in general, as has been highlighted in a number of recent studies.<sup>7</sup>

The remainder of the paper is structured as follows: Section 2 gives a brief history of the office of state attorney general, the changing institutional structure that has occurred over time within it, and how this has impacted the pursuit of state level antitrust violations. Section 3 describes the data and methodology employed to formally analyze the impact that electoral and institutional constraints have on state level antitrust enforcement. Section 4 provides the results and analysis, while Section 5 concludes.

## 2 A Brief history and institutional framework

The office of attorney general was a position carried over to the early American Colonies, preserved from the English legal system.<sup>8</sup> Prior to Independence, American Attorneys General were delegates of the English Attorney General, while after American Independence, the office continued at the state level, with most states granting either constitutional or statutory requirements for the creation or maintenance of the office. As the office stands today, there is great variation across states in regard to specific authority and powers. For example, forty-three state AGs are elected to their posts along partisan lines, while another seven states appoint their respective AGs.<sup>9</sup>

---

6 *CNN Money*, 1 September 2011, “AT&T and T-Mobile: Is the deal dead? No one knows.”

7 Barnes (1988); Rose (1994); Hahn and Layne-Farrar (2003); Dove (2010).

8 Harmon (1991); Myers and Ross (2008).

9 These seven states include Alaska, Hawaii, New Hampshire, New Jersey, Wyoming, Maine, and Tennessee. The first five states require the governor to appoint the AG, while Maine requires a secret ballot vote of the state legislature to fill the position. Tennessee allows the state supreme court to appoint an AG.

The office of attorney general has only recently come to prominence. In regard to antitrust enforcement, this change largely began with the passage of the Hart-Scott-Rodino Act in 1976 and Federal deregulation in the 1980s.<sup>10</sup> In general, this research points out that due to the decline throughout the 1980s of federal administrative and regulatory duties, an increasingly large gap in enforcement needed to be filled, and soon was by numerous state AG offices.

This enlarged the exposure that state AGs faced especially within the U.S. Supreme Court, where they were able to coordinate their activities and, as some have suggested, act as political entrepreneurs in order to argue for and increasingly win significant changes in federal law.<sup>11</sup> These activities also helped to increase the role of the National Association of Attorneys General (NAAG), in its capacity to act as a federal lobbyist.<sup>12</sup> Due to those changing circumstances, evidence has increasingly suggested that the office of state attorney general has simply become a springboard into higher office, with many filling the post as a means to advance political careers.<sup>13</sup>

These circumstances have created a set of incentives whereby AGs may potentially use state antitrust and consumer protection statutes for both political gain and greater political exposure before constituents, employing these statutes against out-of-state interests, generally as a means to redistribute awards directly to voters.<sup>14</sup>

The relevant question then would be how it is that state antitrust enforcement could be a tool potentially employed in order to achieve certain political ends. Unlike other potential outlets, decisions concerning antitrust enforcement have no executive or legislative oversight (as opposed to federal enforcement), thus leaving the sole discretion over enforcement and agenda control exclusively with the state AG.<sup>15</sup>

Another important feature associated with antitrust enforcement revolves around the increasing trend of granting *parens patriae* authority for cases, the ability to distribute awards *cy pres* back to injured parties, and also the growing role of NAAG's Multistate Antitrust Enforcement Task Force (MATF). Traditionally, *cy pres* was applied by courts to trusts whose pre-specified purpose was no longer relevant.<sup>16</sup> Within this context, *cy pres* granted the court the ability to put

---

<sup>10</sup> Clayton (1994); Spill, Licari, and Ray (2001); Ray and Spill (2002); Provost (2003, 2006).

<sup>11</sup> Morris (1986); Zimmerman (1998); Waltenburg and Swinford (1999); Ray and Spill (2002).

<sup>12</sup> Clayton (1994); Zimmerman (1998); Greve (2005).

<sup>13</sup> Posner (2004); Provost (2010).

<sup>14</sup> Waltenburg and Swinford (1999); Provost (2003); Posner (2004); Greve (2005).

<sup>15</sup> Lemos (2011).

<sup>16</sup> Farmer (1999).

such a trust to use in a manner that replicated as closely as possible the original intent of that trust. As granted to state AGs, application of *cy pres* generally provides sole discretion over the distribution of the unclaimed funds from a successful antitrust settlement. For example, twenty-three AGs recently settled with eleven international vitamin producers over allegations of price fixing, resulting in a \$225 million settlement, half of which was distributed to indirect purchasers of those products, the other half distributed *cy pres* as each AG saw fit.<sup>17</sup>

*Parens patriae* (translated to “parent of his country”) is a doctrine which grants an AG the ability to pursue antitrust violations effectively as a class action suit on behalf of the constituents of a state. It is this authority specifically that, a number of studies have suggested, creates an automatic incentive to undertake large-scale antitrust litigation.<sup>18</sup> Although the Hart-Scott-Rodino Act of 1976 granted all state AGs *parens patriae* authority to pursue antitrust violations under federal statute (overturning the common law precedent which prohibited it), the U.S. Supreme Court in a 1977 decision effectively overruled it.<sup>19</sup> This gradually led states to grant *parens patriae* to AGs under state law, which statutorily granted recovery of damages from indirect purchasers. This practice was further validated by the U.S. Supreme Court in 1989, which held that all state statutes permitting the recovery of damages from indirect purchasers were not preempted by federal law.<sup>20</sup> Thus, by 1990 thirty-four states had statutorily granted *parens patriae* authority, while by 2008 forty-five states had granted the authority.

Finally, in 1983 NAAG created the Multistate Antitrust Task Force (MATF), which greatly reduced the cost of pursuing antitrust violations by state AGs and increased both the ability to coordinate and streamline multistate actions. Under the guidance of the MATF state AGs who initiate and take a leading role in pursuing multistate antitrust actions are generally provided guidance and support from the agency. Further, once antitrust actions have been initiated and a case brought forward, the MATF passes all of the relevant findings to all other state AGs, who then provide their own resources and manpower through the MATF if they so choose.<sup>21</sup> In this manner state antitrust activity has become much less costly and easier to pursue for many states, especially when pursuing actions

---

<sup>17</sup> Myers and Ross (2008).

<sup>18</sup> Posner (2004); Greve (2005); Gifford (2008).

<sup>19</sup> *Illinois Brick Co. v. Illinois*, 431 U.S. 720 (1977). Here the Supreme Court ruled that indirect purchasers of goods and services were not eligible to collect damages using federal antitrust laws. Given that the majority of purchases made by both states and consumers are purchased indirectly, this ruling effectively denied *parens patriae* authority to state AGs in antitrust cases.

<sup>20</sup> *California v. ARC America Corporation* 490 U.S. 93, 101 (1989); Myers and Ross (2008).

<sup>21</sup> Myers and Ross (2008).

against large-scale firms that an individual state would otherwise be unable to enforce due to a lack of funds or manpower.

It would appear that it is through the means outlined above that state AGs have been able to better coordinate and undertake antitrust actions over the recent past. Further, it seems that antitrust activity is one of the few areas of law enforcement that most state AGs may pursue at their sole discretion, making decisions of whether or not to enforce an antitrust statute or violation an extremely important policy tool available to state AGs.

There are also a number of potential political ramifications associated with antitrust enforcement. As noted, 43 AGs are elected to their positions and the growing ambitions of many AGs have led some to nickname them “Almost Governor.”<sup>22</sup> In fact, between 1990 and 2008 there were 53 sitting AGs who simultaneously ran for the governor’s office of their respective state. Further, a large body of literature examining the aspirations of other public officials suggests that incumbent politicians seeking higher office leads to much greater risk taking, political entrepreneurship, and headline grabbing in general.<sup>23</sup>

Indeed, antitrust enforcement would seem to be a potential outlet for more ambitious AGs to pursue in their run for an AG or gubernatorial position, given the discretion afforded to an AG in enforcement as well as the distribution of awards from a successful case. Not only this, but antitrust actions have been shown to be some of the most salient policy issues.<sup>24</sup> This is so, as citizens are most likely to be directly affected by a given anticompetitive behavior. Since issue salience has been shown to consistently be a motivating factor for voters and citizens, this, coupled with the electoral incentives faced by an AG, may lead that individual to pursue such activities at strategic times.

Further, recent research also suggests that state AGs may increasingly use their antitrust authority against out-of-state interests in order to directly benefit in-state firms and constituents.<sup>25</sup> Specifically, Michael Greve<sup>26</sup> argues that antitrust enforcement by state AGs is largely a method of cross-border rent extraction, whereby individual AGs are able to increase out-of-state antitrust activity in order to redistribute resources and directly benefit in-state constituents, while only, at worst, indirectly imposing any resulting costs of that activity onto those same constituents. This is in contrast to in-state antitrust activity which may directly impact economic activity within a state and which may require constituents to

---

<sup>22</sup> Provost (2010).

<sup>23</sup> Herrick and Moore (1993); Provost (2003); Lemos (2011).

<sup>24</sup> Provost (2010).

<sup>25</sup> Zimmerman (1999); DeBow (2004); Posner (2004); Greve (2005).

<sup>26</sup> Greve (2005).

not only reap the benefit but also bear the full cost of those policy decisions. Moreover, through the growth of multistate antitrust activity and greater coordination between state AGs, there is an increased opportunity for many AGs to free-ride on many of these multistate cases, reducing the cost of pursuing such actions even further.<sup>27</sup>

Given all of this it would appear that the pursuit of antitrust activities may be heavily influenced by electoral aspirations and the timing of particular elections. Further, not only might the timing of an antitrust action be influenced by electoral concerns, so too might the type of action (whether it be an in-state, multistate participatory, or multistate lead action).

Overall, the significant changes to the relative costs and benefits of pursuing certain actions that result from the desire for higher office, the potential to free-ride cases, the salience of the issue, and the opportunity for cross-border rent extraction to directly confer benefits from specific antitrust actions on constituents while only indirectly passing the costs onto those same constituents, all suggest that a rational policy response by state AGs would be to change the timing of both in-state and multistate antitrust enforcement. Thus, we should expect that the probability of pursuing in-state antitrust actions will fall during electoral cycles, while multistate antitrust activity should increase. Further, given the relatively lower cost of pursuing multistate participatory action (due to the opportunity to free-ride those actions), it should be the case that the probability of pursuing such actions will be greater relative to a multistate lead action, especially given the upfront costs involved in the initiation of multistate actions compared to merely participating in those actions. The next section more formally examines these political ramifications and ambitions as well as how several of the legal and institutional constraints affect the timing and type of antitrust action pursued.

### 3 Data and methodology

In order to test the implications as laid above and to understand how the various incentives and constraints faced by state AGs have affected antitrust enforcement behavior, I have compiled data from the National Association of Attorneys General *Antitrust Litigation Database* between 1990 and 2008.<sup>28</sup> This source provides a comprehensive listing of all civil and criminal antitrust actions undertaken by

---

<sup>27</sup> Feinberg and Husted (2013).

<sup>28</sup> These data are freely available at: <http://app3.naag.org/antitrust/search/>.

the individual states. It further decomposes these data by year, the defendant and most importantly, whether the action was a single, in-state action or multistate action detailing the state(s) who initiated the action and those who eventually joined onto the case. It is the disaggregation of this final point which makes this dataset the most fruitful for the current work. Never before has it been possible to determine with any certainty which states initiated what type of suit and whether it was a single, in-state action, an initiation of a multistate suit or whether a state eventually participated in the multistate suit once others had initiated.

Obviously, disaggregating this variable in such a manner allows the analysis to proceed so as to actively determine which type of antitrust action matters. If, in fact, out-of-state actions do provide state AGs with the ability to accrue direct benefits onto constituents, while avoiding many costs from also being borne by those same constituents, then we would expect to see an increase in such antitrust actions. Further, given the potential to free-ride multistate cases, the least costly means then would be to participate in, rather than lead, those antitrust actions.<sup>29</sup>

Further, many times these multistate actions are pursued against relatively large firms that have a national impact (Microsoft, for example). Therefore, these multistate cases, whether a state leads or participates in them, would be the most salient for voters within a given state and would provide the most exposure for a given AG. Therefore, I would expect state AGs to participate in multistate cases more frequently, especially during an electoral cycle, and relative to lead multistate actions and also in-state actions.

As noted, pursuit of these actions may also be affected by a number of institutional and other political factors as well. The first I consider is whether or not a state AG has statutorily granted *parens patriae* authority. As noted, thirty-two states had such authority in 1990, growing to forty-five states by 2008. Further, given the power such authority grants an AG in his or her ability to bring forth what are effectively class action suits under antitrust statutes, such authority would, at the margin, change the relative cost-benefit structure toward more enforcement overall. Thus, it would be expected that *parens patriae* authority would increase overall enforcement activity.

Second, I also include term limits as an explanatory variable in order to see if this may have any influence on a state AG's behavior given the potential last period problem (i.e., shirking). Specifically, this last period problem is the situation under which a politician votes against the ideological preferences of his or her constituents.<sup>30</sup> Overall, this suggests that faced with a binding limit on holding

---

<sup>29</sup> This is suggested by Feinberg and Husted (2013).

<sup>30</sup> Zupan (1990); Bender and Lott (1996).

office, individual political behavior may be affected. Further, Colin Provost<sup>31</sup> suggests that term limited AGs may be more likely to run for higher office, as term limits eliminate the ability for a given AG to remain in office indefinitely. I have compiled this variable from *The Book of the States*<sup>32</sup> for the given years, which shows that in 1990 there were only two states (Alabama and Pennsylvania) which had term limits on the office, while by 2008 this had grown to seventeen states.

Lastly, I have included a variable to account for the party affiliation of each state AG. Again, numerous works have shown the influence that party affiliation may play within the political and judicial arena. Some research<sup>33</sup> indicates that federal judges appointed by Republicans appeared to rule against the Environmental Protection Agency more than Democratic appointees when faced with cases pertaining to environmental law. However, partisan effects on state AG behavior has been less clear. Colin Provost<sup>34</sup> finds no evidence to suggest that the party of a state AG affected his or her decision to undertake consumer protection cases. On the other hand, others<sup>35</sup> have found that Republican state AGs, especially those from states heavily dependent on tobacco were far less likely to join the multistate suit filed against the tobacco industry. Therefore, partisan effects may be far more ambiguous on an AG's decision to undertake antitrust cases.

I have constructed a balanced panel dataset from which to empirically determine how exactly AG and gubernatorial elections, as well as certain legal and institutional constraints affect a state AG's decision to pursue antitrust violations using population averaged Poisson regression estimates.<sup>36</sup> The basic model is specified as follows:<sup>37</sup>

$$pr(Y_{it} = \lambda_{it} | x_{it}) = \frac{e^{-\lambda_{it}} \lambda_{it}^{y_{it}}}{y_{it}!} \quad (1)$$

Where  $i=1, 2, \dots, 50$ ;  $t=1990, 1991, \dots, 2008$

---

<sup>31</sup> Provost (2003).

<sup>32</sup> Council of State Governments (Various Years).

<sup>33</sup> Smith and Tiller (2002).

<sup>34</sup> Provost (2006).

<sup>35</sup> Spill, Licari, and Ray (2001).

<sup>36</sup> The population averaged model has been employed as a large number of states did not pursue any antitrust actions over the sample analyzed, meaning the variables were time invariant. Further, the over dispersion statistics suggested the use of a Poisson model over a negative binomial.

<sup>37</sup> This specification is largely derived from Hausman, Hall, and Griliches (1984) and Greene (2003).

and  $y_{it}$  is the list of all possible values for each of the independent variables to be discussed in greater detail below, while  $\lambda_{it}$  is the Poisson parameter. Taking the log of this Poisson parameter gives

$$\ln \lambda_{it} = X_{it} \beta \quad (2)$$

From equations (1) and (2) the log likelihood function ( $L$ ) can be written as

$$\ln(L) = \sum_{i=1}^{50} \sum_{t=1990}^{2008} (-\lambda_{it} + y_{it} \ln \lambda_{it} - \ln y_{it}!) \quad (3)$$

From equation (3) it is possible to derive the parameter estimates, while finding  $\frac{\partial E(y_{it} | X)}{\partial X}$  gives the marginal effects for each variable.

Overall, I run several sets of regressions, using each of the three different types of antitrust actions (in-state, multistate participatory, and multistate lead) as the dependent variable.<sup>38</sup> The main explanatory variables employed are (1) an election variable meant to capture whether a sitting AG was involved in any election (whether for AG or governor), represented by a 1 if yes and 0 otherwise, (2) a disaggregated election variable which shows whether or not an AG was up for election in a particular year (represented by a 1 if yes and 0 otherwise), (3) another disaggregated election variable which is whether or not a sitting AG simultaneously ran for governor of his or her respective state (again 1 if yes and 0 otherwise), (4) whether or not an AG had been granted state level *parens patriae* authority (1 if yes and 0 otherwise), (5) whether or not an AG was term limited (1 if yes and 0 otherwise), and (6) the party affiliation of each respective AG (with Republican AGs represented with a 1 and Democratic AGs a 0). I have also incorporated the four person median household income, unemployment rates, population density, the percentage of a state's population age 25 and above with a bachelor's degree, the percentage of a state's population that is male, and the percentage of the population that is white for each state as six socioeconomic control variables in the analysis. These are all a number of socioeconomic variables common to a large number of studies.

Two additional controls included are meant to minimize any issues of endogeneity and also to capture the size of a state AGs office. These variables are a proxy

---

**38** For the dependent variable the timing of these actions and when to actually count them is crucial. Generally, time and manpower is expended investigating the alleged violations before formal action is taken. However, I believe that it is the timing of this *formal* legal action that is most important and thus count an antitrust action in the dependent variable in the year in which a formal case was actually brought forth.

for citizen ideology and government expenditures as a percentage of gross state product (GSP) respectively. Obviously state AGs located in relatively larger states or with larger resources available to them will, *ceteris paribus*, engage in more antitrust enforcement. In order to capture this potential, I follow Robert Feinberg and Kara Reynolds<sup>39</sup> recommendation to proxy for a state AG's resources by looking at the overall size of the state government relative to GSP.

A second issue to address is the potential endogeneity that may exist between the dependent variable and each of the election variables analyzed. In order to mitigate this potential problem, I follow James Poterba and Kim Reuben<sup>40</sup> and include a variable to proxy for voter preferences. The inclusion of such a variable should reduce possible correlation that might exist between antitrust enforcement actions and the timing of elections. This happens as it minimizes any observed correlation between antitrust actions and electoral timing to a correlation between those variables and some omitted third variable, which is voter preferences in this instance. Here, as a measure of voter preference, I include the Berry et al.<sup>41</sup> state ideology index, which measures citizen ideology on an annual basis on a scale of 0 (most conservative) to 100 (most liberal).

As an important caveat, seven states appoint their AGs, meaning there is no election per se. In order to account for this in my initial results, these states will be assumed to follow the gubernatorial election of their respective states, as various studies have shown that AGs, when appointed, are much more closely aligned with the interests of the executive.<sup>42</sup>

For the gubernatorial election variable, I have compiled all of the state AGs who ran for governor while still holding their current office. This totals 53 AGs between 1990 and 2008 that fit this description. The information was collected from *the Gubernatorial Campaign Expenditures Database*, compiled by Thad Beyle and Jennifer M. Jensen.<sup>43</sup> Their database provides the most detailed breakdown of gubernatorial elections from 1968 to the present. Most important for this current work is the fact that their dataset provides the occupation of each gubernatorial candidate at the time of his or her running. Therefore, it differentiates between

---

<sup>39</sup> Feinberg and Reynolds (2010).

<sup>40</sup> Poterba and Rueben (1999).

<sup>41</sup> Berry et al. (1998).

<sup>42</sup> Lynch (2001); Marshall (2006). For robustness I considered two alternate specifications, one completely excluding all appointed AGs from the analysis, and the second assuming appointed AGs follow no election cycle. The obtained results showed almost no material difference to the baseline results reported below and, for the sake of space, have been excluded from the analysis. However these results are available upon request.

<sup>43</sup> Beyle and Jensen (Various Years); This database is freely available at: <http://www.unc.edu/~beyle/guber.html>.

**Table 1** Summary statistics.

Variable	Observations	Mean	Std. Dev.	Min	Max
Single, in-state actions	950	0.337	0.855	0	9
Multistate participatory actions	950	1.067	10.39	0	6
Multistate lead actions	950	0.252	0.585	0	5
All elections (1=Election year)	950	0.267	0.443	0	1
AG election (1=Election year)	950	0.056	0.230	0	1
Gubernatorial election (1=Election year)	950	0.276	0.447	0	1
Parens patriae authority (1=Yes)	950	0.802	0.399	0	1
Term limits (1=Yes)	950	0.309	0.463	0	1
Party affiliation (1=Republican)	950	0.358	0.480	0	1
Unemployment rate	950	5.100	1.371	2.130	11.220
Median household income (per \$100,000)	950	0.501	0.080	0.304	0.736
Population density (per 1000)	950	0.180	0.246	0.001	1.174
% of the population with a bachelor degree	950	24.064	4.986	11.400	38.700
% of the population that is male	950	48.772	1.068	38.433	52.696
% of the population that is white	950	83.203	11.986	25.681	98.722
Citizen ideology	950	50.064	15.228	8.450	95.972
Government expenditures/GSP	950	156.214	40.863	85.178	358.954

whether an AG actually ran as an AG or as a former AG. Here I only consider those individuals who were currently AGs at the time of their decision to run.

Table 1 provides the summary statistics for all of the variables included.

## 4 Results, interpretation and implications

Overall, the results provide interesting insights into how differences in legal and political arrangements affect not only the pursuit of antitrust actions but also the type of action being pursued. Table 2 provides this information.

Columns 1 through 3 show the results for the variable capturing all elections, columns 4 through 6 show the results when just considering an AG election, while columns 7 through 9 list the results for a gubernatorial election. Further, I have noted the dependent variable in each column, with “In-State” referring to a single, in-state action, “Participate” referring to a multistate action in which a given AG participated, and “Lead” referring to an antitrust action led by a given AG and which ultimately became a multistate case. The coefficients reported are the marginal effects for each variable.

Table 2 Poisson results assuming an appointed AG follows his or her respective governor's election and is also of the same party.

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	In-state	Participate	Lead	In-state	Participate	Lead	In-state	Participate	Lead
All elections (1=Election year)	-0.0750* (0.0393)	0.232*** (0.0672)	0.0235 (0.0274)						
AG election (1=Election year)				-0.0709* (0.0392)	0.224*** (0.0692)	0.0255 (0.0281)	-0.0173 (0.0844)	0.317*** (0.103)	0.0109 (0.0482)
Gubernatorial election (1=Election year)									
Parents patriae authority (1=Yes)	0.0127 (0.0614)	0.0888 (0.0676)	0.0818** (0.0405)	0.0138 (0.0615)	0.0877 (0.0676)	0.0818** (0.0405)	0.0110 (0.0647)	0.0959 (0.0677)	0.0805** (0.0405)
Term limits (1=Yes)	-0.119* (0.0687)	0.158* (0.0911)	0.0321 (0.0363)	-0.120* (0.0688)	0.158* (0.0911)	0.0321 (0.0362)	-0.120* (0.0700)	0.148 (0.0920)	0.0326 (0.0366)
Party affiliation (1=Republican)	-0.107 (0.0713)	-0.105 (0.0787)	-0.0159 (0.0324)	-0.108 (0.0712)	-0.103 (0.0786)	-0.0156 (0.0323)	-0.111 (0.0720)	-0.106 (0.0809)	-0.0150 (0.0326)
Unemployment rate	0.0562* (0.0324)	-0.0864*** (0.0316)	-0.00135 (0.0124)	0.0563* (0.0325)	-0.0869*** (0.0316)	-0.00132 (0.0124)	0.0594* (0.0322)	-0.0897*** (0.0321)	-0.00212 (0.0126)
Median household income (per \$100,000)	-0.238 (0.711)	-1.038 (0.830)	-0.483 (0.307)	-0.244 (0.714)	-1.036 (0.828)	-0.483 (0.307)	-0.247 (0.730)	-0.858 (0.827)	-0.470 (0.314)
Population density (per 1000)	0.138 (0.200)	0.0503 (0.243)	-0.125 (0.0952)	0.133 (0.200)	0.0503 (0.245)	-0.125 (0.0950)	0.145 (0.204)	0.0218 (0.249)	-0.135 (0.0952)
% of the population with a bachelor degree	0.00408 (0.0106)	0.0257** (0.0127)	0.0101*** (0.00372)	0.00431 (0.0106)	0.0255** (0.0127)	0.0101*** (0.00371)	0.00610 (0.0108)	0.0226* (0.0124)	0.00966*** (0.00368)
% of the population that is male	-0.0616*** (0.0236)	0.165*** (0.0469)	0.0215 (0.0155)	-0.0618*** (0.0236)	0.166*** (0.0467)	0.0215 (0.0155)	-0.0642*** (0.0236)	0.164*** (0.0472)	0.0225 (0.0158)

(Table 2 Continued)

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	In-state	Participate	Lead	In-state	Participate	Lead	In-state	Participate	Lead
% of the population that is white	0.0104** (0.00454)	-0.00374 (0.00401)	-0.00184 (0.00182)	0.0103** (0.00455)	-0.00369 (0.00401)	-0.00184 (0.00182)	0.00981** (0.00453)	-0.00353 (0.00398)	-0.00181 (0.00179)
Citizen ideology	-0.00291 (0.00347)	0.0132*** (0.00409)	0.00704*** (0.00133)	-0.00289 (0.00347)	0.0132*** (0.00408)	0.00704*** (0.00133)	-0.00293 (0.00352)	0.0133*** (0.00421)	0.00711*** (0.00135)
Government expenditures/GSP	-0.00131 (0.00153)	-0.00695*** (0.00126)	-0.00273*** (0.000605)	-0.00131 (0.00154)	-0.00696*** (0.00126)	-0.00273*** (0.000604)	-0.00130 (0.00154)	-0.00685*** (0.00128)	-0.00275*** (0.000613)
Observations	950	950	950	950	950	950	950	950	950
Pearson overdispersion test	1.701	0.788	0.916	1.703	0.788	0.916	1.688	0.794	0.912

Robust standard errors in parentheses.  
 \*\*\*p<0.01, \*\*p<0.05, \*p<0.1.

As can be seen, the probability that a sitting AG will pursue a single, in-state antitrust action during any specified election year actually decreases for all election specifications. Specifically, for all elections the likelihood of pursuing an in-state antitrust enforcement decreases by 7.5%, for an AG election the likelihood decreases by 7.1%, and for a gubernatorial election the likelihood decreases by 1.7%. Although the first two results are significant at the 10% significance level, the final result is statistically insignificant. Finally, no other main variable of interest appears to be statistically significant, except for term limits, which shows that for any type of election, a term limit will decrease the likelihood of pursuing an in-state antitrust action by roughly 1.2%, each result being statistically significant at the 10% level.

For the variable representing *parens patriae*, it suggests that such authority will increase the likelihood of pursuing an in-state antitrust action by roughly 1.3% in column 1, by 1.4% in column 4, and by 1.1% in column 7. These results only suggest a marginal and statistically insignificant increase in the pursuit of in-state actions relative to those states that do not grant *parens patriae* authority to their individual AGs. Finally, the party affiliation variable would suggest that across the board Republican AGs are less likely to pursue in-state antitrust action; however, none of the results are statistically significant. Column 1 indicates that the likelihood that a Republican AG pursues a given in-state antitrust action decreases by 10.7%, while columns 4 and 6 find a decrease by 10.8% and 11.1% respectively.

For in-state antitrust actions the findings suggest the following relationships with each control variable.<sup>44</sup> First, as the unemployment rate increases by 1% point, the likelihood of pursuing a given antitrust action increases as well. As population density, the percentage of the population with a bachelor's degree, and the percentage of the population that is white increases, so too does the likelihood that a given AG will pursue an in-state antitrust violation. The remaining control variables: median household income, the percentage of the population that is male, citizen ideology, and state government expenditures as a percentage of GSP, appear that as they increase, the likelihood that an in-state antitrust action will be pursued actually decreases.

One interesting result which is worth discussing in more detail is found for citizen ideology. Here, states with more ideologically liberal citizens have a direct

---

**44** For the sake of brevity, I will only discuss the direction of the sign coefficient, and only for the results pertaining to in-state actions. The statistical significance of each result is listed in Table 2, and each result should be interpreted as they were for the main variables of interest, in other words, the increase or decrease in the likelihood that a given AG will pursue an in-state, multistate participatory, or multistate lead antitrust action.

impact on the decision to pursue a given antitrust action. Specifically, a one point increase in the citizen ideology score (meaning an increase in liberal ideology) shows that in-state antitrust actions decline for all election types, with all elections seeing the probability of an in-state action decreasing by 0.0029%, by 0.00289% for AG elections, and by 0.00293% for a gubernatorial election, though the results are statistically insignificant.

Further, for both participatory and lead actions, state AGs in more liberal states appear to be more likely to pursue an antitrust action during an election year, with all specifications statistically significant. This is important and suggests the significant role that voter preference (and potentially the median voter) might play in an AG's decision to pursue a specific antitrust action not just during an election but also over his or her entire career. Although deep consideration of this issue is beyond the scope of this current paper, it is worthy of additional exploration in future studies.

Next, columns 2, 5, and 8 all provide the results for multistate participatory actions pursued. For all elections, column 2 suggests that any given election will increase the likelihood of pursuing a multistate participatory action by 23.2%, an AG election in column 5 shows an increase in the likelihood of pursuing such an action by 22.4%, while the likelihood of pursuing a participatory action during a gubernatorial election (column 8) increases by 31.7%.

For the remaining main variables of interest, again only term limits resulted in statistically significant results, though all variables had economically significant results as well. Specifically, term limits also increased the likelihood that a given AG would participate in a multistate case from between 14.8% and 15.8%, but was only statistically significant in columns 2 and 5. *Parens patriae* authority also increased the likelihood of participating in a multistate case relative to those state AGs without such authority from between 8.8% and 9.6%, while again Republican AGs appear to be less likely to participate in such cases from between 10.3% and 10.6% depending on the specification.

The final specification analyzes whether or not a given state AG actually initiated what eventually became a multistate antitrust action. These results are found in columns 3, 6, and 9. Here the election variables indicate that during a given election, an AG will be more likely to initiate a lead action from between 1.1% and 2.6%, though these results are all statistically insignificant. For the remaining variables, the only one that showed statistically significant results was for *parens patriae*, while term limits and party affiliation maintained the same general direction as previously found on the sign coefficients.

Specifically, *parens patriae* authority would seem to increase the likelihood that an AG initiates what develops into a lead action from between 8.1% in column 9 and 8.2% in columns 3 and 6, relative to those state AGs without such

authority. Finally, term limits would appear to increase the likelihood of leading such an action from between 3.2% again in columns 3 and 6 and 3.3% in column 9, while Republican AGs decreased the likelihood of initiating lead actions from between 1.5% and 1.6%.

Overall, these results do seem to lend support to some rather interesting implications. Specifically, it would appear that influences on antitrust activity conducted by state AGs may indeed depend upon the type of activity being pursued. As suggested, an election reduces the likelihood of an AG undertaking an in-state antitrust action, whereas both AG and gubernatorial elections involving an AG have a strong impact on the decision to participate in multistate antitrust cases. The reduction of in-state enforcement might suggest that the potential political backlash an AG may face from constituents employed by the effected firm or from the industry itself could be part of the reason for this reduction in enforcement during elections.<sup>45</sup>

Further, participation in multistate actions has become less costly over time, especially with the support system created by NAAG's Multistate Antitrust Task Force. Moreover, with the increasingly prevalent use of *cy pres* distribution, state AGs have a means by which to potentially obtain awards from out-of-state firms and individuals and then directly pass those claims over to their constituents. Thus, a situation is created whereby any potential downside attached to enforcement would generally only indirectly fall onto constituents and in-state firms, while those same entities simultaneously are able to accrue the direct benefits.

It would also appear that an AG with *parens patriae* authority is a major factor in the decision to both initiate and participate in multistate actions. This seems unsurprising as with *parens patriae* authority an AG has the statutory power to bring what is essentially a class action lawsuit on behalf of his or her constituents and therefore potentially increase the expected payout from leading or participating in an antitrust suit. This is especially important for initiating large-scale cases, as antitrust action requires an AG's office to generally incur a substantial cost. However, by increasing the potential payout as *parens patriae* authority does through its class action provision, the potential benefit is greatly enhanced for those AGs who initiate large-scale cases against larger firms. Thus, while the cost of the action may increase, with *parens patriae* authority so too does the potential benefit from a successful antitrust suit.

The results for party affiliation, although suggesting Republican AGs were less likely to pursue in-state actions, were all statistically insignificant. Interestingly,

---

<sup>45</sup> One additional consideration that would be worthy of future research is to develop an understanding of why, given the electoral incentives that exist, would an AG ever pursue antitrust actions in non-election years?

this seems to coincide with anecdotal evidence suggested by Iowa's Attorney General Tom Miller, who noted the difficulty for any AG of either party to turn down the large damage awards that are associated with a successful multistate action.<sup>46</sup>

Lastly, term limits also seemed to play a significant role in the decision to pursue both in-state actions (decreasing the likelihood), and in the decision to participate or lead in a multistate case (by increasing the likelihood). Although only a conjecture this may partly be influenced by the possibility that a number of those AGs may have concurrently been running for some other office, either at the state or federal level.<sup>47</sup> Although beyond the scope of this current work, a more detailed analysis of the pursuit of other or higher office beyond governor may be able to better shed light on this possibility.

## 5 Conclusion

Federal devolution during the 1980s made states the foci of antitrust enforcement. It also may have created a set of unintended consequences, whereby state AGs were increasingly able to pursue antitrust actions for political purposes rather than to achieve overall economic efficiency, due to the divergent incentives faced by state and federal enforcement agents. This paper has attempted to analyze how these changes have specifically impacted state level antitrust enforcement. I find evidence to suggest that relatively more politically ambitious state AGs (those AGs that ran for governor in their respective state) were more likely to increase the enforcement of and participation in multistate antitrust cases. Further, specific legal constraints including term limits and *parens patriae* authority also influence the type of antitrust actions a state AG pursues. These results appear unique and add greatly to the literature and existing debate about the proper scope of state level antitrust enforcement.

One specific debate that has developed regards the scope of federal and state antitrust enforcement over time, especially as federal enforcement in many areas has waned, while state enforcement has increased.<sup>48</sup> Much of this centers around two issues: (1) the divergence in policy goals between state and federal enforcers, and (2) the electoral effect, largely highlighted here. In regard to policy goals, a

---

<sup>46</sup> Greenblatt (2003).

<sup>47</sup> This is suggested by Provost (2010).

<sup>48</sup> Eisner (1991).

significant body of literature has shown that the policy goals between state and federal enforcers has increasingly become at odds with each other, with federal enforcers largely concerned with allocative efficiency resulting from a given activity, vs. state oversight, which has increasingly concerned itself with equity considerations.<sup>49</sup> Though much of this is beyond the scope of this current work (though worthy of greater future research), the growing trend in state enforcement does suggest a need to reconsider the overall sphere of both federal and state enforcement.

Further, considering the electoral effect, it is important to note that electoral considerations and aspirations may significantly influence the pursuit of state antitrust activity, and may indeed have nothing to do with overall economic efficiency. This is a lesser issue at the federal level, where antitrust oversight is handled through an unelected bureaucracy in both the FTC and DOJ. Given all of these issues, Richard Posner<sup>50</sup> suggested that both inter and intrastate commerce need to be reevaluated as it relates to general antitrust enforcement, and a greater delineation needs to be made along these lines. Specifically, he suggests that federal enforcement should only be concerned with interstate antitrust activity, while state enforcement only with intrastate.

These concerns may also fit within the economics of federalism, where it is suggested that governmental decentralization should occur only up to the point where all externalities from decentralization would be internalized.<sup>51</sup> In this context, it would seem that through greater multistate antitrust enforcement efforts, state AGs are able to internalize most benefits associated with successful actions, but then externalize all or most costs. This would be especially important from an electoral standpoint, but would theoretically lead to over-enforcement of antitrust activity, and may be detrimental to overall economic efficiency. Thus, a serious argument could be made to only allow federal oversight of such interstate antitrust activity. Though a full analysis of all of these issues cannot be addressed here, it does provide ample opportunity for future exploration.

**Acknowledgments:** The author would like to thank Christopher J. Coyne, Roger D. Congleton, Russell S. Sobel, participants at the Southern Economic Association's annual conference, as well as two anonymous referees for invaluable comments. Any errors or omissions that remain are the sole responsibility of the author.

---

<sup>49</sup> Flexner and Racanelli (1994); Rose (1994).

<sup>50</sup> Posner (2004).

<sup>51</sup> Inman and Rubinfeld (1997).

## References

- Barnes, David W. 1988. "Federal and State Philosophies in the Antitrust Law of Mergers." *The George Washington Law Review* 56 (2): 263–294.
- Bender, Bruce and John R. Lott Jr. 1996. "Legislative Voting and Shirking: A Critical Review of the Literature." *Public Choice* 87 (1–2): 67–100.
- Berry, William D., Evan J. Ringquist, Richard C. Fording, and Russell L. Hanson. 1998. "Measuring Citizen and Government Ideology in the American States, 1960–93." *American Journal of Political Science* 42 (1): 327–348.
- Beyle, Thad and Jennifer M. Jensen. Various Years. *Gubernatorial Campaign Expenditures Database*. Available from <<http://www.unc.edu/~beyle/guber.html>>. Accessed on 4 February 2014.
- The Book of the States*. Various Years. Lexington, KY: The Council of State Governments.
- Clayton, Cornell. 1994. "Law, Politics and the New Federalism: State Attorneys General as National Policy Makers." *The Review of Politics* 56 (3): 525–553.
- Coate, Malcolm B., Richard S. Higgins, and Fred S. McChesney. 1990. "Bureaucracy and Politics in FTC Merger Challenges." *Journal of Law and Economics* 33 (2): 463–482.
- DeBow, Michael. 2004. "State Antitrust Enforcement: Empirical Evidence and a Modest Reform Proposal." In *Competition Laws in Conflict: Antitrust Jurisdiction in the Global Economy*, edited by R. A. Epstein. Jackson, TN: AEI Press.
- Dove, John A. 2010. "Public Protection versus Public Choice: An Analysis of Merger Enforcement Behavior by State Attorneys General." *Journal of Public Finance and Public Choice* 28 (2–3): 115–132.
- Eisner, Marc A. 1991. *Antitrust and the Triumph of Economics: Institutions, Expertise, & Policy Change*. Chapel Hill, NC: The University of North Carolina Press.
- Farmer, Susan B. 1999. "More Lessons from the Laboratories: Cy Pres Distributions in *Parens Patriae* Antitrust Actions Brought by State Attorneys General." *Fordham Law Review* 68 (2): 361–406.
- Feinberg, Robert M. and Kara M. Reynolds. 2010. "The Determinants of State Level Antitrust Activity." *Review of Industrial Organization* 37 (3): 179–196.
- Feinberg, Robert M. and Thomas A. Husted. 2013. "Do States Free Ride in Antitrust Enforcement?" *Economic Inquiry* 51 (1): 997–1001.
- Flexner, Donald L. and Mark A. Racanelli. 1993–1994. "State and Federal Antitrust Enforcement in the United States: Collision or Harmony?" *Connecticut Journal of International Law* 9 (3): 501–534.
- Gifford, Donald G. 2008. "Impersonating the Legislature: State Attorneys General and *Parens Patriae* Product Litigation." *Boston College Law Review* 49 (4): 913–969.
- Ghosal, Vivek and Joseph Gallo. 2001. "The Cyclical Behavior of the Department of Justice's Antitrust Enforcement Activity." *International Journal of Industrial Organization* 19 (1–2): 27–54.
- Greene, William H. 2003. *Econometric Analysis*. Upper Saddle River, NJ: Prentice Hall.
- Greenblatt, Alan. 2003. "The Avengers General." *Governing Magazine*. Available from: <<http://www.governing.com/topics/politics/The-Avenger-General.html>>. Accessed 3 February 2014.
- Greve, Michael S. 2005. "Cartel Federalism? Antitrust Enforcement by State Attorneys General." *The University of Chicago Law Review* 72 (1): 99–122.
- Hahn, Robert W. and Anne Layne-Farrar. 2003. "Federalism in Antitrust." *Harvard Journal of Law and Public Policy* 26 (3): 878–921.

- Harmon, Robert B. 1991. *State Attorneys General: A Bibliography and Survey*. Monticello, IL: Vance Bibliographies.
- Hausman, Jerry, Bronwyn H. Hall, and Zvi Griliches. 1984. "Econometric Models of Count Data with an Application to the Patents-R&D Relationship." *Econometrica* 52 (4): 909–938.
- Herrick, Rebekah and Michael K. Moore. 1993. "Political Ambition's Effect on Legislative Behavior: Schlesinger's Typology Reconsidered and Revisited." *Journal of Politics* 55 (3): 765–776.
- Inman, Robert P and Daniel L. Rubinfeld. 1997. "Rethinking Federalism." *The Journal of Economic Perspectives* 11 (4): 43–64.
- Lemos, Margaret H. 2011. "State Enforcement of Federal Law." *New York University Law Review* 86 (3): 698–765.
- Long, William F., Richard Schramm and Robert Tollison. 1973. "The Economic Determinants of Antitrust Activity." *Journal of Law and Economics* 16 (2): 351–364.
- Lynch, Jason. 2001. "Federalism, Separation of Powers, and the Role of State Attorneys General in Multi-state Litigation." *Columbia Law Review* 101 (8): 1998–2032.
- Marshall, William P. 2006. "Break up the Presidency? Governors, State Attorneys General, and Lessons from the Divided Executive." *The Yale Law Journal* 115 (9): 2446–2479.
- Morris, Thomas. 1986. "States before the U.S. Supreme Court: State Attorneys General as *amicus curiae*." *Judicature* 70: 298–305.
- Myers, Emily and Lynne Ross, eds. 2008. *State Attorneys General Powers and Responsibilities*, 2nd ed. Washington, DC: National Association of Attorneys General.
- Pittman, Russell. 1992. "Antitrust and the Political Process." *Empirical Studies in Industrial Organization* 16: 147–160.
- Posner, Richard A. 1970. "A Statistical Study of Antitrust Enforcement." *Journal of Law and Economics* 13 (2): 365–419.
- Posner, Richard A. 2004. "Federalism and the Enforcement of Antitrust Laws by State Attorneys General." *The Georgetown Journal of Law & Public Policy* 2 (5): 5–16.
- Poterba, James M. and Kim Rueben. 1999. "State Fiscal Institutions and the U.S. Municipal Bond Market." In *Fiscal Institutions and Fiscal Performance*, edited by J. M. Poterba and J. von Hagen. Chicago: University of Chicago Press.
- Provost, Colin. 2003. "State Attorneys General, Entrepreneurship, and Consumer Protection in the New Federalism." *Publius: The Journal of Federalism* 33 (2): 37–53.
- Provost, Colin. 2006. "The Politics of Consumer Protection: Explaining State Attorney General Participation in Multi-State Lawsuits." *Political Research Quarterly* 59 (4): 609–618.
- Provost, Colin. 2010. "When is AG Short for Aspiring Governor? Institutional Structure, Policy Making Dynamics and Ambition in the Office of State Attorney General." *Publius: The Journal of Federalism* 40 (4): 569–596.
- Ray, Leonard and Rorie Spill. 2002. "The States in Federal Appellate Court: Litigation Trends Over Time." *The Justice System Journal* 23 (1): 97–108.
- Rose, Jonathan. 1994–1995. "State Antitrust Enforcement, Mergers, and Politics." *The Wayne Law Review* 41 (1): 71–134.
- Smith, Joseph L. and Emerson H. Tiller. 2002. "The Strategy of Judging: Evidence from Administrative Law." *Journal of Legal Studies* 31 (1): 61–82.
- Spill, Rorie L., Michael J. Licari and Leonard Ray. 2001. "Taking on Tobacco: Policy Entrepreneurship and the Tobacco Litigation." *Political Research Quarterly* 54 (3): 605–622.
- Waltenburg, Eric N. and Bill Swinford. 1999. "The Supreme Court as a Policy Arena: The Strategies and Tactics of State Attorneys General." *Policy Studies Journal* 27 (2): 242–259.

- Zimmerman, Joseph F. 1998. "Interstate Cooperation: The Roles of the State Attorneys General." *Publius: The Journal of Federalism* 28 (1): 71–89.
- Zimmerman, Joseph F. 1999. "Why State Attorneys General Should have a Limited Role in Enforcing the Federal Antitrust Law of Mergers." *Emory Law Journal* 39 (1): 305–336.
- Zupan, Mark A. 1990. "The Last Period Problem in Politics: Do Congressional Representatives not Subject to a Reelection Constraint Alter Their Voting Behavior?" *Public Choice* 65 (1–2): 167–180.