



2017

Pendulum of Power Versus Command and Control: Intergovernmental Relations 81 Under the Clean Air Act and its Amendments

Yige Chen

Illinois Wesleyan University, ychen1@iwu.edu

Recommended Citation

Chen, Yige () "Pendulum of Power Versus Command and Control: Intergovernmental Relations 81 Under the Clean Air Act and its Amendments," *Res Publica - Journal of Undergraduate Research*: Vol. 22

Available at: <http://digitalcommons.iwu.edu/respublica/vol22/iss1/11>

This Article is brought to you for free and open access by The Ames Library, the Andrew W. Mellon Center for Curricular and Faculty Development, the Office of the Provost and the Office of the President. It has been accepted for inclusion in Digital Commons @ IWU by the editorial board of Res Publica at Illinois Wesleyan University. For more information, please contact digitalcommons@iwu.edu.

©Copyright is owned by the author of this document.

Pendulum of Power Versus Command and Control: Intergovernmental Relations 81 Under the Clean Air Act and its Amendments

Abstract

Development in U.S. politics has arisen through two controversial pathways: federalism and anti-federalism. Some scholars suggest that the two paths will create a balance of power over time. However, evidence from the environmental control of air pollution since the late 1960s falsifies this widely established claim. This paper examines the distribution of regulatory authority and intergovernmental relations between federal and local governments under the U.S. Clean Air Act and its Amendments.

Pendulum of Power versus Commanding Control:

Intergovernmental Relations under Clean Air Act and Its Amendments

Yige Chen

Abstract: *Development in U.S. politics has arisen through two controversial pathways: federalism and anti-federalism. Some scholars suggest that the two paths will create a balance of power over time. However, evidence from the environmental control of air pollution since the late 1960s falsifies this widely established claim. This paper examines the distribution of regulatory authority and intergovernmental relations between federal and local governments under the U.S. Clean Air Act and its Amendments.*

Introduction

First and foremost, this research will focus on the conflict between two contradictory ideas in U.S. politics, federalism and anti-federalism. The distribution of power between state and national levels of government is not always predetermined in accordance with established provisions of the U.S. Constitution (Lim 2014). On the contrary, the distribution of power between these two opposite political units could be regarded as a long-lasting seesaw battle. The distribution of power follows a dynamic in which one party could override the other over a given period, but neither side's advantage is permanent. Lim also argues that U.S. political development always transpires when a zero-sum game between federal and state authorities reaches a new equilibrium (Lim 2014). In such a process, power shifts inevitably happen not only between the state and federal level but also among different branches of authority on the same level.

However, enforcement of the Clean Air Act by states did not bring about a balance of power between the federal and the local governments. The federal government consolidated its authority, while the states were offered less authority over regulatory issues for controlling air

pollution. The author evaluates the impact of implementing the CAA on the distribution of power between the federal government and the states since the 1970s. Under the CAA Amendments published in 1977, the states were charged with drafting, promulgating, and enforcing their own local regulatory rules, based on local conditions, known as State Implementation Plans (SIPs). Thus, the states have a relatively strong statutory authority to determine and choose methods and strategies to fulfill federal statutory requirements, which are known as the National Ambient Air Quality Standards (NAAQS).

The federal government still reserves jurisdiction to review and approve states' plans as well as revisions according to Section 110 of CAA. There is a universal concern that without federal mandatory environmental standards, states will inevitably loosen their local environmental standards or fail to enforce their plans regarding local economic growth powered by polluting industries. In other words, a lack of minimum standards to comply with will cause a "race to the bottom" situation with less stringent local regulations, which will ultimately be detrimental to public health and environmental protection efforts (Potoski 2001). Nonetheless, as long as the federal government reserves the privilege to disapprove states' regulatory plans and revisions, the implementation scheme for pollution control under the CAA cannot be understood as a real devolution of power from the nation to the local level. Some scholars emphasize a "primacy" scheme, under which local agencies become primary agents for federal policies, but the federal government retains ultimate authority to supervise states' compliance efforts (Crotty 1987). The federal government does not endow local agencies with full-scale authority to reduce pollution, but such scheme involves "partial preemption" of states' autonomy over regulatory issues under the federal supervision (Crotty 1987).

Theory and Research Model

With the 1970s Amendments to the CAA, the federal government introduced more stringent national standards on pollutant emissions. The degree of states' compliance with federal standards can be measured by national and regional air quality trends over a given period of time. Since the 1970s, the CAA addresses six air pollutants called "criteria pollutants" that can be used as criteria to monitor air quality trends that have a detrimental influence on public health: sulfur oxides, particulate matter, carbon monoxide, ozone, oxides of nitrogen, and lead (EPA 2016).

In this article, I will use the USEPA National minimum standards for these six criteria pollutants as indicators to examine a hypothesis. I predict that state enforcement of federal regulations will have a substantial impact on the level of pollutants that are emitted into the air. If the local agencies strictly implement the federal requirements for reducing air pollutants, the pattern of response can be regarded as affirmative compliance with the federal order. In this case, there will be a significant reduction of air pollutants at both the national and regional levels. If the states do not follow the federal standards, or if they fail to enforce local implementation plans seriously, there will be no distinctive reduction of air pollutants. In this case, the efficacy of the federal regulations would be undermined by the negative local reaction. In other words, the federal government did not successfully establish or enhance its authority over regulation issues; and states found a way to disobey the federal requirements on controlling air pollution.

The Rise of New Regimes in U.S. Politics

The Clean Air Act exemplifies the need for coercive measures that come into force in

order to further the public need for better air quality. Eisner suggests coercion comes from a regulatory regime as a set of political-institutional arrangements that respond to changing demands of diverse social groups in a particular period. Since the 1960s through early 1970s, Eisner sees a “Societal Regime” with a primary end that would open up the regulatory process to public interest groups. The emergence of public concerns about environmental issues should be attributed to the appearance of post-materialist values and quality-of-life concerns (Eisner Chap 1 1993).

To some extent, severe air pollution can be viewed as a negative externality or by-product of an industrial economy. Nevertheless, all sectors and groups outside the government either lack incentives or resources to handle this problem properly. Polluting industries are culpable, but focused on profitability. On the other hand, the public in general, who directly suffer from the hazards of air pollution, are incapable of defending their common interests because of the collective action problem (Olson 1971). Moreover, Eisner had suggested that regulatory issues are complicated and cannot be addressed without reliance on scientific and social-scientific expertise (Eisner Chap 6 1993). Further, the complexity of making environmental policies impedes more extensive public participation in regulatory politics because masses lack the requisite professional knowledge and skills. Thus it was an indispensable responsibility of the government as public administrator not to open up the regulatory processes to other parties. So, the negative impact derived from the rapid economic growth and improvements in industrial productivity can be adequately restricted. It is also reasonable to claim that in seeking to ensure the efficacy of the federal laws and policies on environmental issues, it is requisite to centralize national authority to frustrate the potential obstacles of protecting public health from environmental hazards. In this case, the federal

government could adopt flexible means to balance between benefits and costs for compliance, but this is impossible for other stakeholders, such as polluting industries and some states' governments. But, via interest groups, the people could bring citizen suits and exert strong pressure on regulatory agencies to advance enforcement of laws and regulations. Otherwise, governmental neglect of administrative duty might occur due to lack of public scrutiny.

Reagan's Efforts in Deregulation

During Reagan's presidency in the 1980s, federal deregulation objectively encouraged states' direct participation in regulatory issues and the development of innovative and constructive policies to resolve local environmental problems. Some states such as California, Michigan, and New York adopted more stringent local regulations than the federal standards to enhance control of pollutant emissions and to restrict polluting industries within the states' boundaries (Potoski 2001). However, the original intent of Reagan's deregulation policy was to relieve regulatory burdens on industries by federal regulators and to ensure the stability of the national economy rather than channel states into more radical and aggressive means for enforcing pollution control regulations. It is important to review how Reagan tried to enhance presidential control over the bureaucratic agencies and regulatory issues to address this discrepancy.

Reagan first attempted to depart from burdensome societal regime through the application of economic evaluation, such as cost-benefit analysis of regulation, to take compliance costs into account. This policy was conducted exclusively in the Office of Information and Regulatory Affairs (OIRA) at the Office of Management and Budget (OMB) in the White House. In this case, Reagan tried to use centralization of regulatory authority by the

president and oversight of the federal regulatory agencies to limit regulations (Harris & Milkis). Also, a draconian personnel policy (appointing those who skeptical of expansive regulations to run the regulatory agencies) and a massive budget cut were adopted to facilitate his ambition in deregulation.

However, Reagan's efforts at deregulation did not reverse the trends of expanded regulatory policies because in the 1990 CAA amendments, the federal regulatory authority was significantly expanded by his successor George H.W. Bush. So, Reagan's commitment to minimizing federal interference in regulation precipitated a reaction from his opponents-- particularly those environmental groups and regulatory agencies, and congressional subcommittees--who successfully frustrated the potential coalition between the president and polluting industries and reserved the public lobby regime intact with the promulgation of the 1990 CAA amendments.

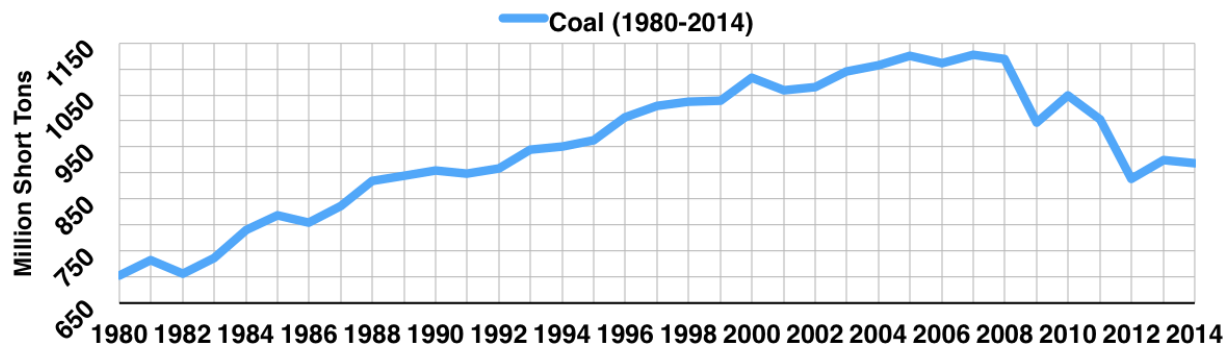
Regarding the impact of the change in the federal government during the Reagan period (1980-88), it is important to review the changes in the federal standards for the six criteria pollutants and data of air quality trends that is a reflection of the outcome of federal enforcement efforts under NAAQS of CAA (EPA 2016). If there were constant reductions of emissions since this period, it is conceivable that ideological change from the Reagan presidency did not significantly interrupt or undermine the efficacy of implementing federal regulations on controlling air pollution for public health. Indeed, the evidence does not indicate a race-to-the-bottom. Readers will see a constant reduction of pollutant emissions in both national and local levels present persuasive evidence of the degree to which the states, as executives of the federal policies, successfully and more efficiently enforced their plans.

Alternative Explanations besides Enforcement Actions

Of course, other alternative explanations of these reductions in air pollutants are available. There are some interruptive factors that may undermine the causal relationship between federal enforcement efforts and the improvement of air quality regarding reducing pollutants emission under NAAQS regulation. Indeed, the changing activities of polluting industries and local industrial transformation--notably the decline of the energy and manufacturing sector--can also be used to explain the improvement of air quality (Ringquist 1993).

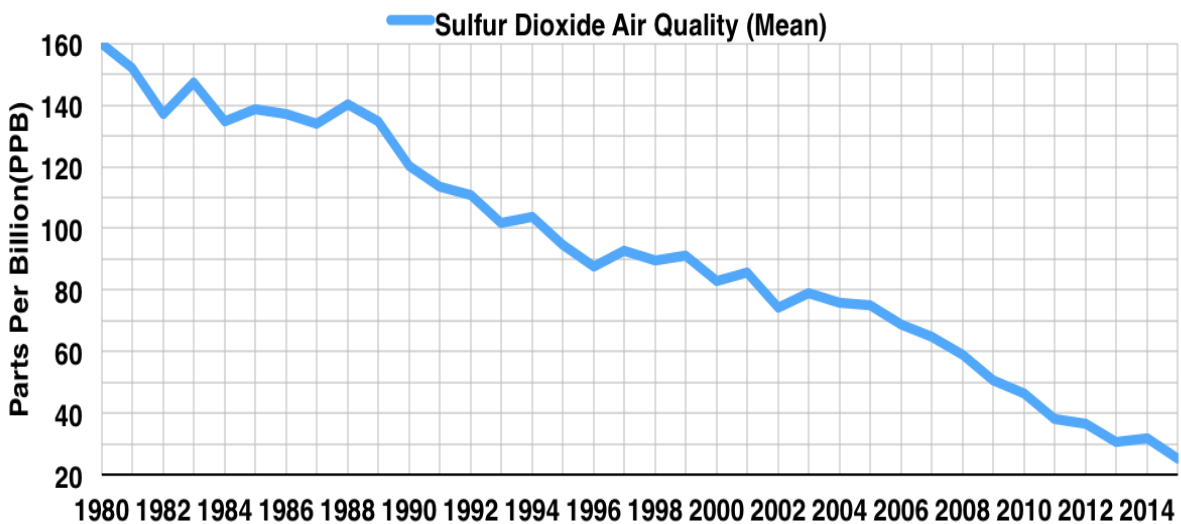
Regarding the effect of these factors on issues of reducing pollutant emissions, states' changes in fossil fuel consumption can be used as proxy indicators to explain the connection between the levels of fuel consumption and related pollutant emission, since these two factors are closely related. For example, as several fuel estimates from the 1960s through 2014 (USEIA) indicate, national consumption of coal was constantly increasing at least from 1980 through 2006 and began to decrease after 2007 (See Figure 1).

Figure 1: *U.S. National Consumption of Coal (1980-2014)*



On the other hand, however, national trends in sulfur dioxide (SO₂) and Ozone concentration were continuously decreasing from the 1980s through 2015 (EPA 2016). The major source of Sulfur Dioxide is from the burning of fossil fuel by power plants, particularly for those facilities that are powered by high-sulfur coal. At least before 2007, there was not a case that a decrease of polluting fuel consumption like coal contributed to the reducing emission of criteria pollutants in the national level (see Figure 2).

Figure 2: U.S. National Trends in Sulfur Dioxide (SO₂) (1980-2015)



Nonetheless, the data shows an opposite trend that the emission of criteria pollutants was decreasing continuously but meanwhile, the reduction of polluting fuel consumption did not occur. There is still another alternative explanation for the occurrence of this contradictory phenomenon besides the federal and local enforcement efforts for reducing air pollution.

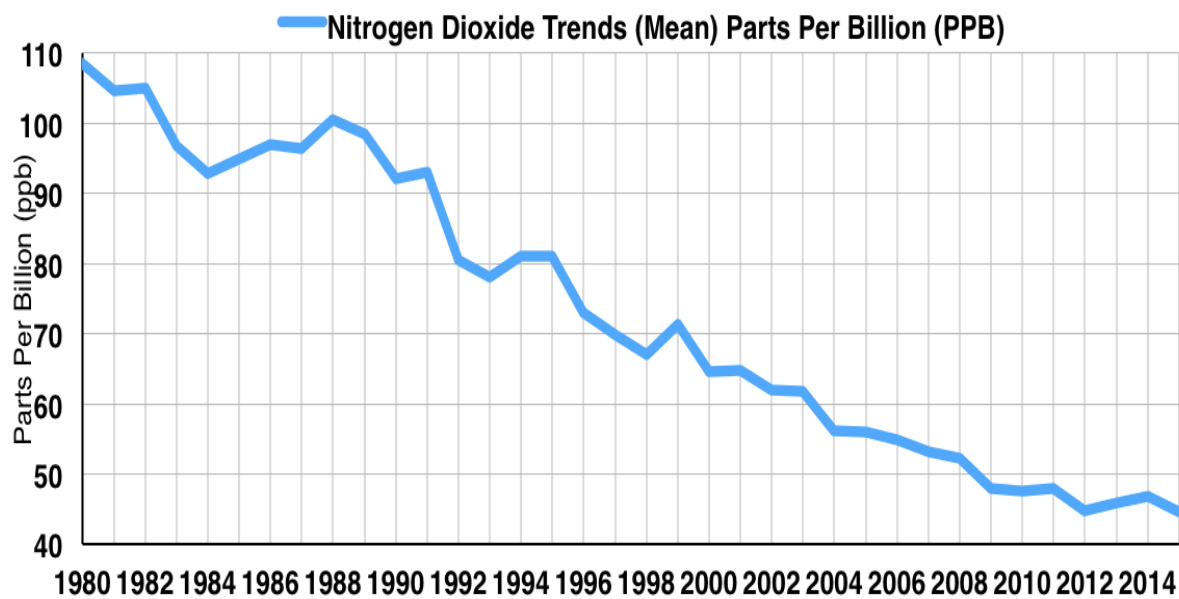
Combustion of low-sulfur coal, physical coal washing, and scrubbing technology are conceivable

mechanisms to lessen the emission of sulfur dioxide without substantially reducing coal consumption.

In seeking to control for this factor, other types of fossil fuel consumption should be taken into account as indicators in attempting to measure the relationship between sources of air pollution and respective changes of pollutants emission. In this case, trends in fuel consumption of distillate fuel oil (diesel) and motor gasoline from the 1980s through 2014 are selected as indicators of pollution sources (EIA 2016).

Another criteria pollutant of Nitrogen Dioxide is used to examine the relationship between the sources and the emission of air pollutant because the concentration of Nitrogen Dioxide in the air is mainly from the burning of fuel by motor vehicles and power plants. In this case, the emission of Nitrogen Dioxide underwent a continuous reduction since the 1980s through 2015 from nearly 110 ppm towards less than 45 ppm (see figure 3), for which shows 59 percent decrease in national average (EPA 2016).

Figure 3: U.S. National Trends in Nitrogen Dioxide (1980-2015)



On the other hand, however, fuel consumption of both diesel and motor gasoline was continuously increasing from 1980 through 2007 (See Figures 4 & 5 below), but after a short period of fall through 2011, it began to rise again (EIA 2016).

Figure 4: U.S. National Consumption of Distillate Fuel Oil (Diesel) (1980-2014)

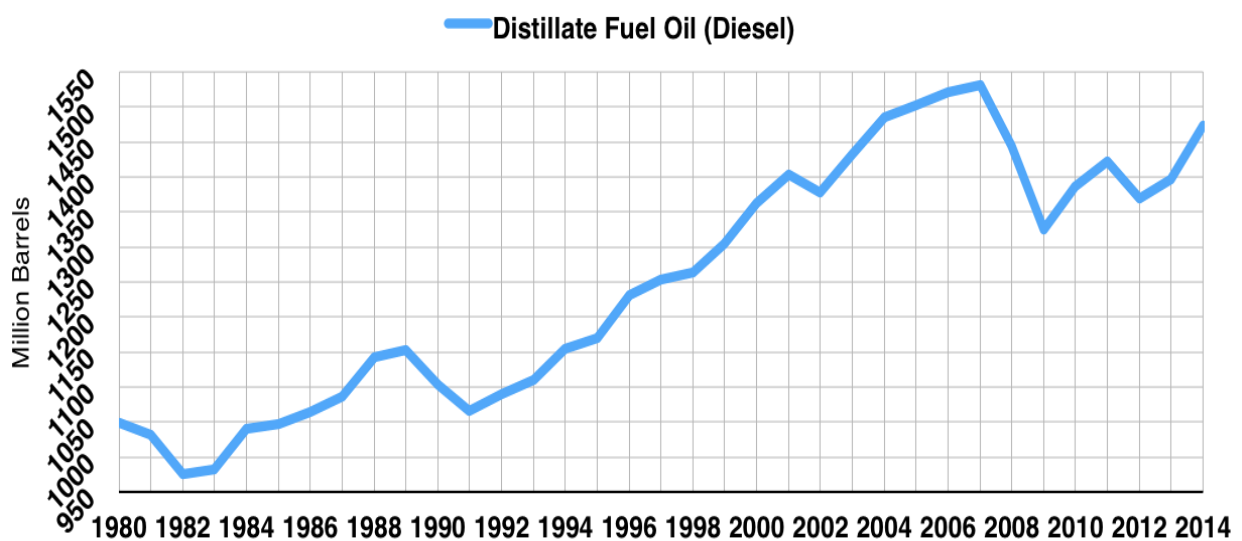
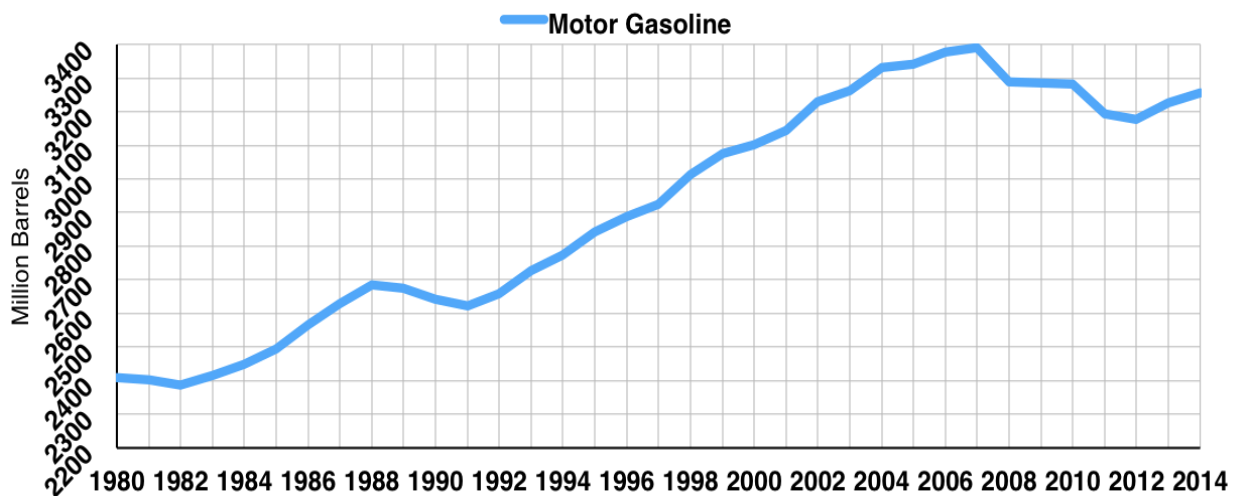


Figure 5: U.S. National Consumption of Motor Gasoline (1980-2014)



Therefore, the reduction of Nitrogen Dioxide in the air is not consistent but contrary to the increasing consumption of petroleum. It is conceivable that there is no positive connection between national fossil fuel consumption as critical sources of air pollution and trends for criteria pollutants concentration in the air.

Strength of Public Opinion

Before looking at the independent variables, one additional competing independent variable should be seriously considered. Perhaps the strength of public lobbyist and environmentalist groups exerted pressure on both the federal and states governments to enforce more stringent standards for reducing air pollution and protecting public health. In other words, public opinion might be a possible intervening variable. According to the theory by Harris and Milkis, it was the rise of public lobby regime and development of participant democracy that not only frustrated Reagan's efforts of deregulation, but also urged the states as the direct executives to enforce federal laws and regulations for the sake of public health (Harris & Milkis 1996). In this case, survey data of the public opinion on air quality and environmental pollution is an important indicator to measure if it is public pressure that encourages states' agencies to be more aggressive in enforcing federal pollution control regulations.

Figure 6: Public Opinions about Controlling Air Pollution (1980-2016)

According to a set of surveys since the 1980s through 2016 of public concerns about reducing air pollution¹(see figure 6), through comparison of respondents in percentage for those mostly concerned this issue, the results evince that there is a fluctuation of public opinion for the issue of controlling air pollution (Gallup 1980-2016). In this case, because the reduction of air pollutants did not follow the fluctuating pattern of public opinion, it is hard to attribute the outcome of controlling air pollution directly to the influence of strong public opinion.

Although public opinion regarding controlling air pollution does not show a constant pattern, public environmentalist groups, as representatives of public concerns, play a significant role in the policymaking process and its outcome. In the Reagan era, there was intensive controversy and debate about regulatory issues between auto industries and environmental groups, since representatives of the automobile manufacturers argued that the CAA of the 1970s supported by the environmental groups was too stringent and cumbersome. Several environmental groups, reorganized in 1980 as the National Clean Air Coalition, were critical

¹ Data of 1981 through 1983, 1985 through 1987, 1992 through 1996, 1998, 2003, and 2005 are missing.

participants in the amendment process in the late 1980s that ultimately culminated in the CAA Amendments of 1990 (Bryner 1995).

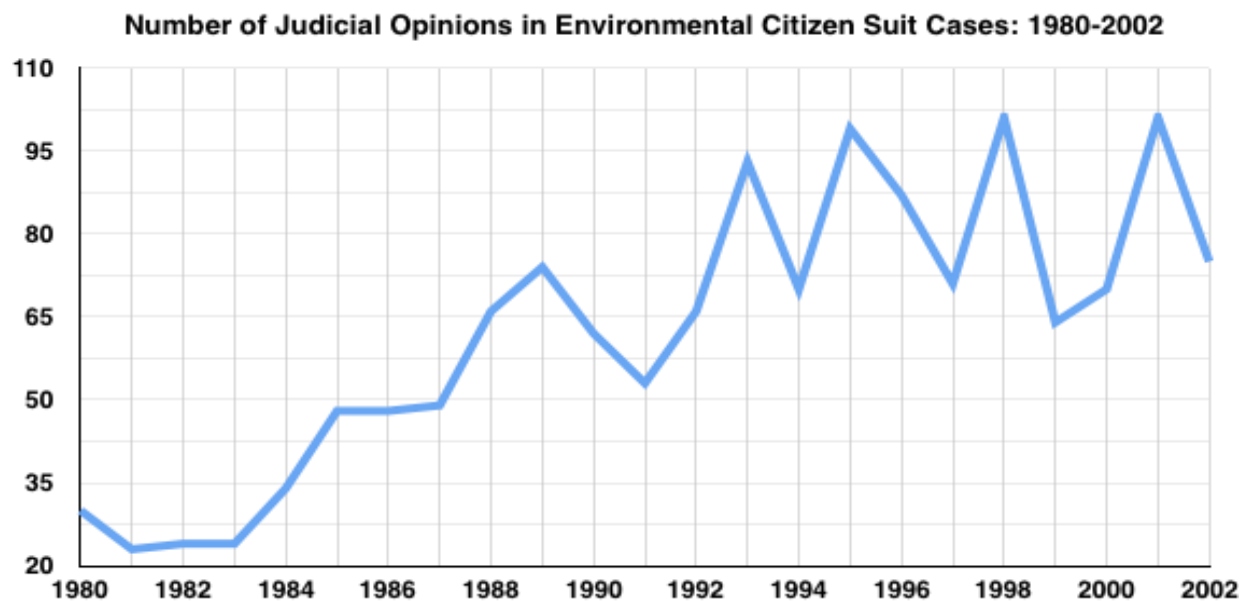
The introduction of the 1990 Amendments as an example symbolizes a triumph of the environmental groups' proposition in policymaking debates in two aspects. First, the 1990 Amendments substantially tightened mobile source emission standards, extending significant reductions in tailpipe emissions from motor vehicles, which are extremely unfavorable on behalf of auto industries desiring regulatory relief to reduce their costs (Hunton & Williams 2015). Additionally, the 1990 Amendments kept citizen suit provisions in the 1970 Amendments. Section 304 of the Act endows citizens' authority to file suit against both the EPA for failed performance of a "nondiscretionary duty" and individual sources for noncompliance with statutory requirements. (CAA 304)

Although public opinion on issues of environmental protection is not identical to efforts from the public lobbyist groups who indefatigably strive for promoting more stringent environmental regulations, member pressure is a potent political resource that can be manipulated by these groups (Ringquist 1993). During 1980 through the 1990s, public concerns for air pollution continuously increased from 36 percent in early 1980s to over 60 percent in 1989. Meanwhile, membership of environmental groups grew by over 3 million people by 1990, which is a 60 percent increase compared with levels in the 1980s (Mitchell 1990). After their culmination in 1990, both rates of public opinion and environmental membership declined almost simultaneously. Therefore, it is likely that a spike in the late 1980s did ephemerally have an influence on public interest groups, who substantially contributed to the policymaking outcome in 1990.

Moreover, according to the number of reported judicial decisions in environmental citizen

suits cases issued by federal courts, the cases had surged from 7 in 1973 to 30 in 1980, from 48 in 1985 to 101 in 1998, and dropped back to 75 in 2002 (James R. May 2003). Although the institutional innovation of citizen suits is not an impeccable proxy in public opinion, to an extent, they have some impact on motivating unelected governmental agencies to further enforcement of regulations and abatement proceedings.

Figure 7: *Number of Judicial Opinions in Environmental Citizen Suit Cases (1980-2002)*



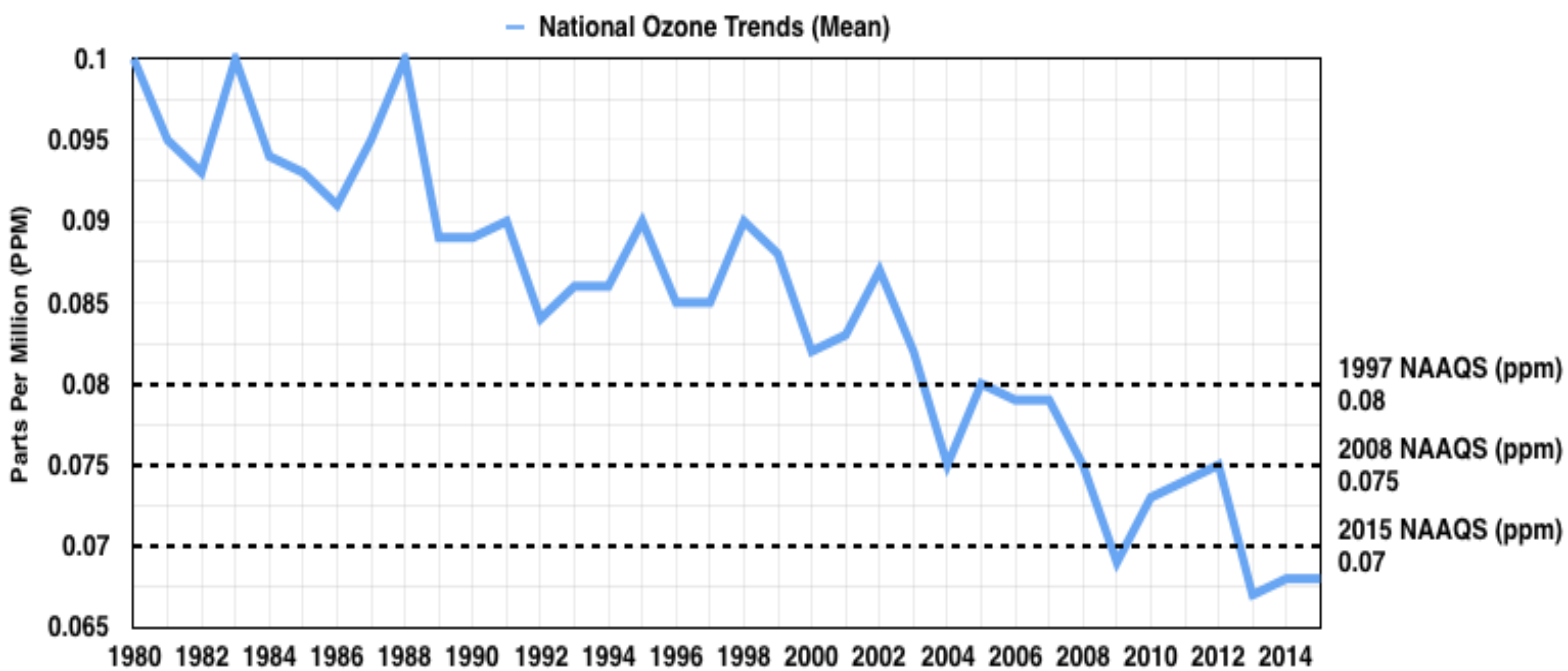
In general, the changes in fuel consumption, especially for fossil fuel such as coal and petroleum, are not plausible for potential causal effects on reduction of criteria pollutants concentration at the national level. The influence of public opinion, on the other hand, is more likely transient rather than a constant factor to the enforcement of environmental regulations.

Federal Enforcement Efforts

As I mentioned previously, provisions of more stringent regulations by the federal government are plausible for explaining the distinctive reduction of those criteria air pollutants at the national level, if controlling for the potential influences by the public pressure and estimates of national fuel consumption. Taking national trends in ozone concentrations as an example, the federal minimum standard for ozone emission was 0.12 ppm per hour in 1979 (EPA). After its introduction, from 1980 through 1996, national trends in ozone not only remained consistently below the federal minimum standard but also significantly reduced from 0.1 ppm towards 0.085 ppm (EPA 2016).

Since the 1990 Amendments of CAA, USEPA replaced the 1-hour ozone NAAQS with more stringent 8-hour NAAQS of 0.08 in 1997, 0.075 in 2008, and 0.07 ppm in 2015 (see figure 8). Meanwhile, since 2004 through 2015, national trends in ozone accordingly reduced from 0.075 ppm in 2004 to less than 0.07 ppm in 2015.

Figure 8: *U.S. National Trends in Ozone (1980-2015)*



Under the Amendments of 1990, the EPA strengthens the regulation of fuels and mobile sources to reduce tailpipe emissions with a more comprehensive framework. For example, the EPA introduced Reformulated Gasoline (RFG) program in 1995 that explicitly includes a statutory prohibition on leaded gasoline (EPA 2005). But long before the regulation of fuel and mobile sources, NAAQS had involved standards of the Lead (Pb) emission in 1978, and national trends of Lead concentration substantially decreased from 1.81 in 1980 to 0.42 through 1990 (see figure 9).

Figure 9: U.S. National Trends in Lead (Pb) (1980-2015)

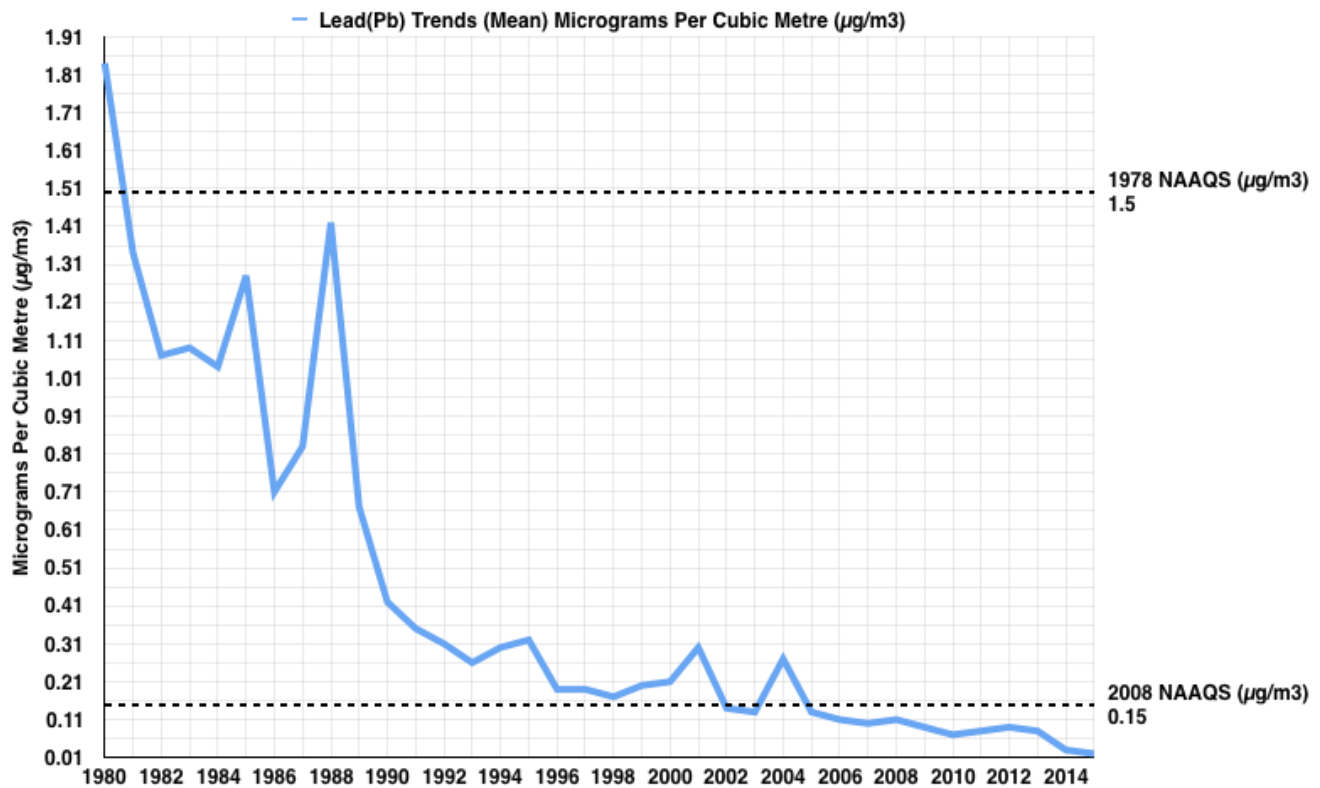
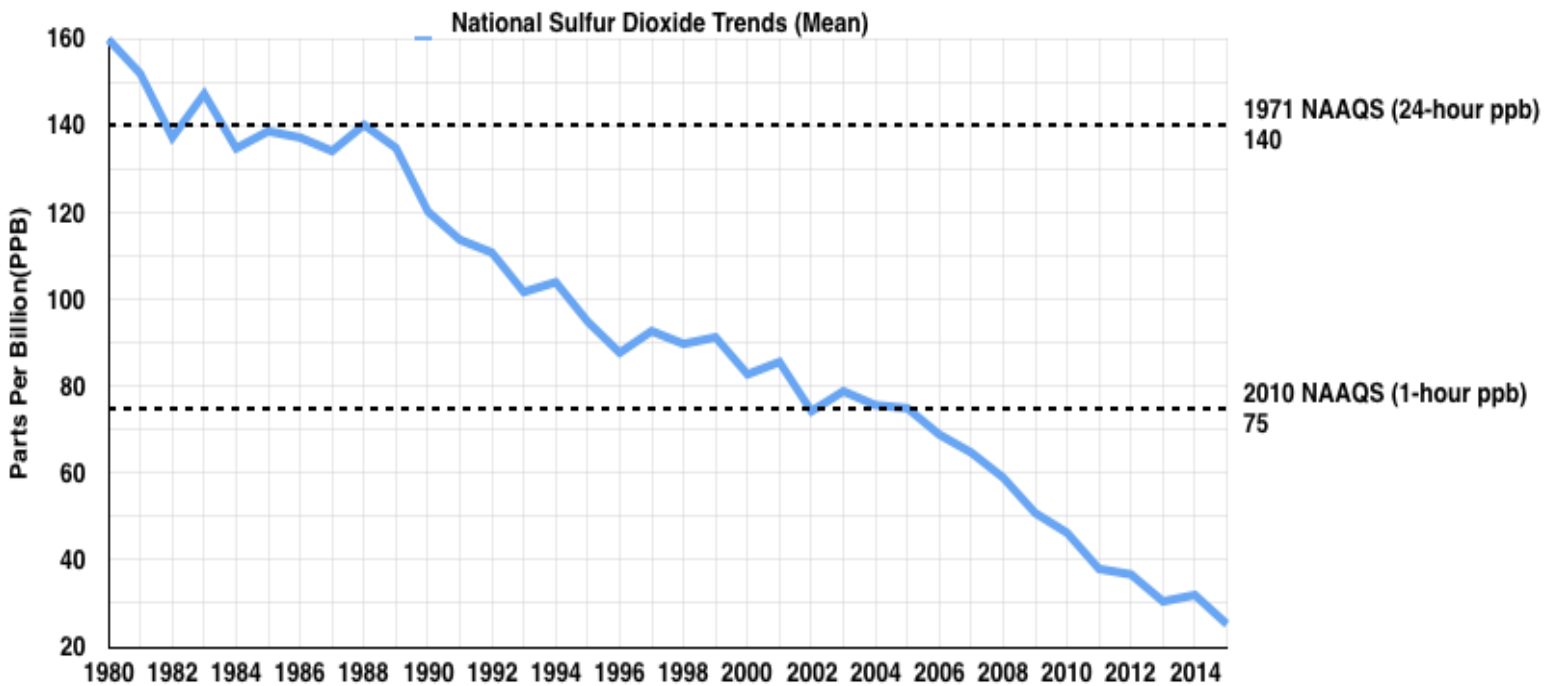


Figure 10: U.S. National Trends in Sulfur Dioxide (1980-2015)

Moreover, by EPA estimates, U.S. blood-lead levels decreased 78 percent from 1978 to 1991 as a result of EPA-imposed fuel controls, which is five years before the complete ban of lead gasoline (EPA 2005).

At the regional level, it also follows the hypothesis that the federal minimum requirement is useful for controlling criteria pollutant emissions in both national and regional levels. For instance, regional trends of sulfur dioxide in the mid-west central continuously reduced from over 110 ppb in 2001 to 74 ppb through 2009 (see figure 11)². In 2010, the EPA replaced the previous standard of 140 ppb with the more stringent 75 ppb, but the central region was one of the latest that met the newest national minimum standards until 2009. Soon after the revised federal minimum standards, mid-west Central underwent a rapid reduction of sulfur dioxide

² USEPA assigns country into nine climate regions; the Central (Ohio Valley) region involves MO, IL, OH, KY, WV, and TN.

emissions from 66 in 2010 to 35 ppb in 2015, which is approximately consistent with the national trends of sulfur dioxide abatement.

Figure 11: U.S. Regional Trends in Sulfur Dioxide (2000-2015)

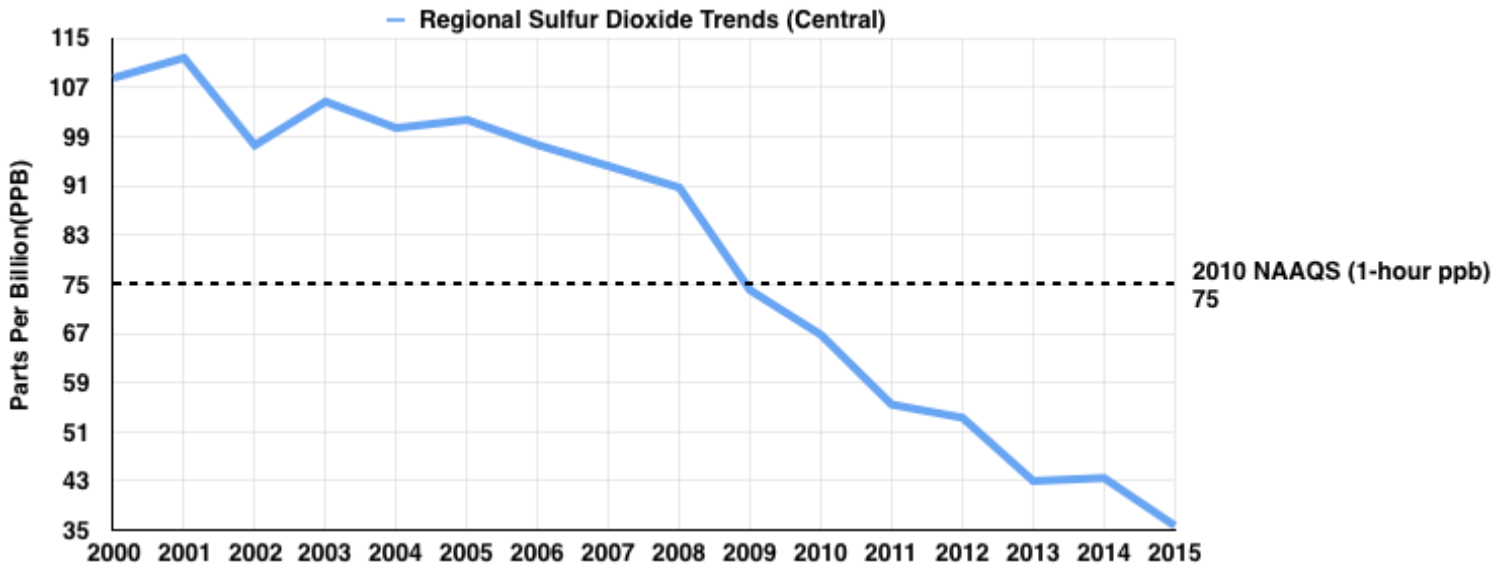
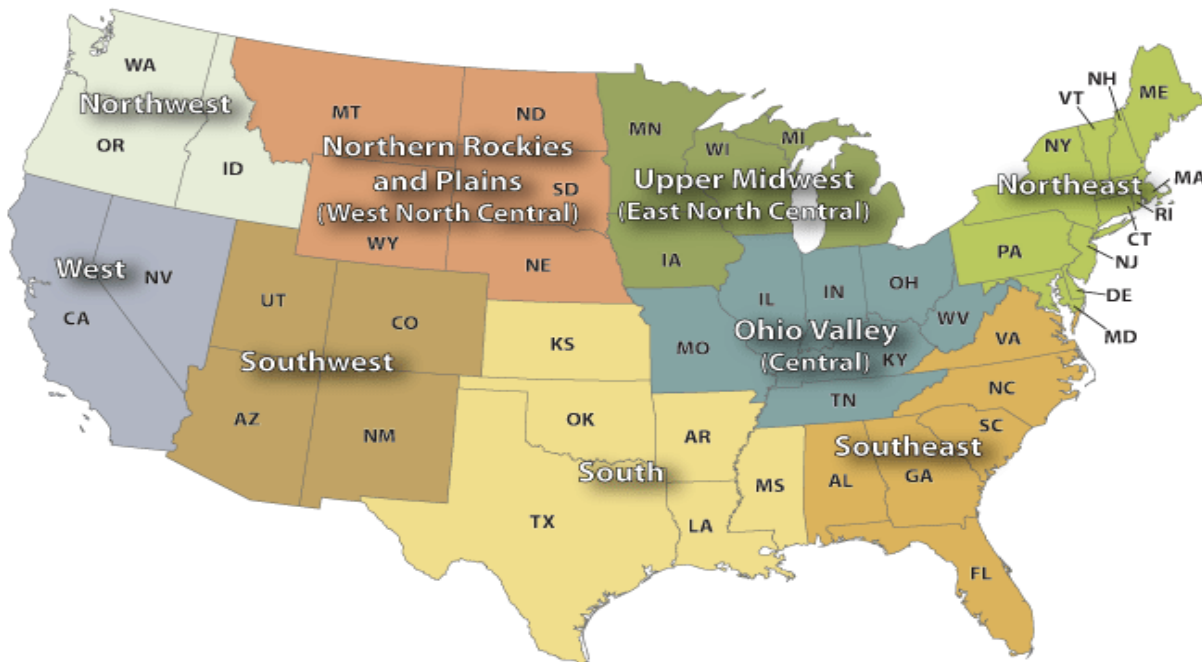


Figure 12: Map of U.S. Climate Regions

U.S. Climate Regions



To the extent, national trends in ozone, lead, and sulfur dioxide concentrations explicitly exhibit the efficacy of the federal enforcement efforts regarding provisions of more stringent regulations, because of a considerable reduction of pollutant emissions, which did not violate the federal minimum standards (see figure 11). Sulfur Dioxide concentrations at the regional level evince a similar trend (see figure 11). In general, it is rare that particular criteria pollutants in a single year exceeded the federal minimum standard requirements, which serve effectively as a benchmark to control pollutants emissions.

Conclusion

First of all, national trends of criteria pollutants evince the strength of federal enforcement efforts. It also proves that the race-to-the-bottom in controlling air pollution at the local level did not occur as predicted by public good theory. Indeed, many states exceeded federal minimum standards in a wide variety of local clean air programs (Potoski 2001). Furthermore, it is hard to attribute these enforcement efforts to the pressure from public opinion, which is ephemeral and lacks durable impact. On the other hand, the role of environmentalist groups on regulatory issues is still inconclusive, and more empirical evidence is required to measure its influence.

One aspect for future study could be to consider other federal air pollution control programs besides NAAQS, and how these federal regulations are implemented at the local level through SIPs. Is there any local reaction to the expanded federal authority or do power shifts actually or rarely happen? Moreover, the Trump Administration is currently launching a campaign against federal regulations through a draconian personnel policy to appoint those skeptical of expansive regulations but in favor of deregulations. So, it is contended to wait and

see how he will promote a comprehensive regulatory relief. It is unknown whether or not he will he attempt to devolve more regulatory power to the states at the local level.

References

Barry, Brian, and Russell Hardin. 1982. *Rational Man and Irrational Society?: An Introduction and Sourcebook*. Beverly Hills: Sage Publications.

Council for Environmental Quality. 1980. "Public Opinion On Environmental Issues, Jan, 1980." *Resources for the Future*. Cornell University, Ithaca, NY: Roper Center for Public Opinion Research, IPOLL.

Crotty, Patricia Mcgee. 1987. "The New Federalism Game: Primacy Implementation of Environmental Policy." *Publius* 17.2 (1987): 53-67. *JSTOR*.

Eisner, Marc Allen. 1993. *Regulatory Politics in Transition*. Baltimore: Johns Hopkins UP.

EPA. 2016. "Basic Information about NO₂." *EPA*. Environmental Protection Agency. Web.

EPA. 2016. "Lead Trends." *EPA*. Environmental Protection Agency. Web.

EPA. 2016. "NAAQS Implementation Process." *EPA*. Environmental Protection Agency, 29 Feb. Web.

EPA. 2016. "NAAQS Table." *EPA*. Environmental Protection Agency. Web.

EPA. 2016. "National Air Quality: Status and Trends of Key Air Pollutants." *EPA*. Environmental Protection Agency. Web.

EPA. 2016. "National Trends in Lead Concentrations in 1980-2015." *EPA*. Environmental Protection Agency. Web.

EPA. 2016. "National Trends in Nitrogen Dioxide Concentrations in 1980-2015." *EPA*. Environmental Protection Agency. Web.

- EPA. 2016. "National Trends in Ozone Concentrations in 1980-2015." *EPA*. Environmental Protection Agency. Web.
- EPA. 2016. "National Trends in Sulfur Dioxide in 1980-2015." *EPA*. Environmental Protection Agency. Web.
- EPA. 2016. "Nitrogen Dioxide Trends." *EPA*. Environmental Protection Agency. Web.
- EPA. 2016. "Ozone Pollution." *EPA*. Environmental Protection Agency. Web.
- EPA. 2016. "Ozone Trends." *EPA*. Environmental Protection Agency. Web.
- EPA. 2016. "Sulfur Dioxide Basics." *EPA*. Environmental Protection Agency. Web.
- EPA. 2016. "Sulfur Dioxide Trends." *EPA*. Environmental Protection Agency. Web.
- EPA. 2016. "Table of Historical Lead (Pb) National Ambient Air Quality Standards (NAAQS)." *EPA*. Environmental Protection Agency. Web.
- EPA. 2016. "Table of Historical Nitrogen Dioxide National Ambient Air Quality Standards (NAAQS)." *EPA*. Environmental Protection Agency. Web.
- EPA. 2016. "Table of Historical Ozone National Ambient Air Quality Standards (NAAQS)." *EPA*. Environmental Protection Agency. Web.
- EPA. 2016. "Table of Historical Sulfur Dioxide National Ambient Air Quality Standards (NAAQS)." *EPA*. Environmental Protection Agency. Web.
- Gallup Organization. 1999. "Cable News Network, USA Today. Gallup/CNN/USA Today Poll, Apr, 1999." *USGALLUP.99APR13.R32C*. *Gallup Organization*. Cornell University, Ithaca, NY: Roper Center for Public Opinion Research, IPOLL. Web.
- Gallup Organization. 1997. "Cable News Network, USA Today. Gallup/CNN/USA Today Poll, Oct, 1997." *USGALLUP.9727OC.RR26B*. *Gallup Organization*. Cornell University, Ithaca, NY: Roper Center for Public Opinion Research, IPOLL. Web.

- Gallup Organization. 1989. "Gallup Organization. Gallup Poll (AIPO), May, 1989." *USGALLUP.9134WI.RO23C. Gallup Organization*. Cornell University, Ithaca, NY: Roper Center for Public Opinion Research, IPOLL. Web.
- Gallup Organization. 2016. "Gallup Organization. Gallup Poll, Apr, 1990-2016." *USGALLUP.041190.RO3D. Gallup Organization*. Cornell University, Ithaca, NY: Roper Center for Public Opinion Research, IPOLL. Web.
- Gallup Organization. 1984. "Gallup Organization. Gallup Poll, Sep, 1984." *USGALLUP.121684.R12. Gallup Organization*. Cornell University, Ithaca, NY: Roper Center for Public Opinion Research, IPOLL. Web.
- Gallup Organization. 1988. "Gallup Organization. Gallup Poll, Sep, 1988." *USGALLUP.280GR.R16C. Gallup Organization*. Cornell University, Ithaca, NY: Roper Center for Public Opinion Research, IPOLL. Web.
- Harris, Richard A., and Sidney M. Milkis. 1989. *The Politics of Regulatory Change: A Tale of Two Agencies*. 2nd ed. New York: Oxford UP. Print.
- Kamieniecki, Sheldon. 1991. "Intergovernmental Relations and Clean-Air Policy in Southern California." *Publius* 21.3, *The State of American Federalism, 1990-1991* (1991): 143-54. *JSTOR*. Web.
- Lim, Elvin T. 2014. *The Lovers' Quarrel: The Two Foundings and American Political Development*. New York: Oxford UP. Print.
- Mckinney, Steven G. 2012. "A (Mostly) Civil War Over Clean Air Act SIPs." *Natural Resources & Environment* 27.1, *Federalism* (2012): 3-7. *JSTOR*. Web.
- Olson, Mancur. 1965. *The Logic of Collective Action: Public Goods and the Theory of Groups*. Cambridge, MA: Harvard UP. Print.

- Olson, Mancur. 1965. "Public Goods and Large Groups." Introduction. *The Logic of Collective Action: Public Goods and the Theory of Groups*. Cambridge, MA: Harvard UP. 1-30.
- Potoski, Matthew. 2001. "Clean Air Federalism: Do States Race to the Bottom?" *Public Administration Review* 61.3 (2001): 335-42. *JSTOR*. Web.
- Ringquist, Evan J. 1993. "Does Regulation Matter?: Evaluating the Effects of State Air Pollution Control Programs." *The Journal of Politics* 55.4 (1993): 1022-045. *JSTOR*. Web.
- U.S. Energy Information Administration. 2016. "Table CT1. Energy Consumption Estimates for Major Energy Sources in Physical Units, Selected Years, 1960-2014, United States." *State Energy Consumption Estimates 1960 Through 2014* (2016): 21+. *State Energy Data System (SEDS): 1960-2014 (complete)*. U.S. Energy Information Administration. Web.
- Williams, Hunton. 2015 "Implementation of National Ambient Air Quality Standards And The Nonattainment Program." *Clean Air Handbook*. Lanham: Bernan. 16-53. Print.

RES PUBLICA XXII

ILLINOIS WESLEYAN UNIVERSITY

2017



Knowledge and Wisdom