

Does a Predatory Pricing Law Raise or Lower Price?
It Depends on the Plaintiff

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ABSTRACT

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Studies of the effects of "below-cost" pricing laws that exist in several states have lead to contradictory results regarding the significance and direction of price impacts at the retail level. The majority have found such laws produce higher prices as because it insulates inefficient firms from competition with more efficient. However, some research has concluded that these laws actually lower prices, at least temporarily. This study uses monthly data at the state level from 1987 through 2006 to reconsider the price impacts of these laws by including variables that measure the actual sources and incidence of suits being filed under the laws. The suits are dichotomized into public suits filed by state attorneys general and private suits filed by firms directly involved in retail gasoline sales. The existence of such a law in a state significant raises retail gasoline prices although this is offset slightly by the price effect of suits filed by public sector plaintiffs.

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1. Introduction

Seventeen US states have had fair marketing laws that prohibit a retailer from selling gasoline at a price below the wholesale price. The stated purpose typically is to protect consumers from monopoly pricing resulting from large national firms driving small independent retail gasoline sellers from the market by temporarily pricing below cost. Laws against charging a retail price so low as to damage a competitor have a long history in the US. The major federal law is the Robinson-Patman Act of 1936 which expanded the section of the 1914 Clayton Act prohibiting price discrimination. Economists have been skeptical of the possibility of predatory pricing as a rational business strategy to exploit market power and critical of the efficiency impacts of laws used to litigate such contentions. For example, antitrust task forces during the Johnson administration (the “Neal Report”) and the Nixon administration (the “Stigler Report”) both recommended repeal of the Robinson-Patman despite disagreeing on virtually every other recommendation. The recommendation for repeal was reiterated in the 2007 report of the Antitrust Modernization Commission. That report also noted, however, that many states have “sector-specific” laws regarding pricing and the state fair marketing laws prohibiting predatory pricing in retail gasoline sales are examples.

The Bureau of Competition of the Federal Trade Commission has warned against the adoption of such a law at the federal level or extension of these laws into other states because of the probable increase in market prices to consumers (FTC, 2002). Indeed, most policy and empirical studies of the price impacts of state gas-pricing laws have concluded that they raise retail prices (e.g., Hogarty, 1984; Barron et al, 1985; Fenili and Lane, 1985; Savvides-Gellerson, 1987; Johnson, 1999; Anderson and Johnson, 1999; Calvani, 2001). However, one study (Skidmore et al, 2004) finds that newly enacted fuel pricing laws at least temporarily *lower* retail prices by about one cent per gallon within five years of passage.

This note attempts to reconcile these contrary results by considering the degree to which such laws actually result in litigation and the motivation different parties have to sue. The next section summarizes the rationale for distinguishing the effects price effects of lawsuits filed by private firms from those filed by state governments. The third section presents the econometric specification and empirical results. A final section summarizes the results.

2. Legislation and the motivation to sue

Common law legal systems assign the judiciary an essential role in determining the meaning and scope of laws created by the legislature. But courts adjudicate only those cases which come before them and these are a subset of those legal actions by parties with motivations to file suit. Both the creation of new statutes and their eventual use in litigation take place within the context of interaction among many self-interested parties with each attempting to protect or enhance its own position. The context of litigation also includes some degree of uncertainty for both plaintiff and defendant (Priest and Klein, 1984; Cooter and Rubinfeld, 1989). Once a court renders a definitive opinion on the application of a statute this uncertainty is reduced and this in turn affects the number and types of legal disputes that subsequently arise. The decrease in

litigation uncertainty changes the incentives of potential plaintiffs to sue and the incentives of potential defendants to mitigate the risk of being sued.

The prevailing assumption in most studies of the price impact of gasoline pricing laws is that they were created at the behest of small sellers as protection against the greater efficiency of larger rivals: "... specific [sales-below-cost] laws are the product of a focused effort on the part of gasoline retailers to influence state legislatures."¹ It is notable that the most vigorous advocacy for these laws across the US has come from the Petroleum Marketing Association of America which promotes itself as representing small sellers.² That private parties use the powers of the legislative and judicial branches of government to promote their own economic interests is a common insight of the law and economics literature (see e.g., Landes and Posner, 1979) as well as that dealing with the economics of regulation (Viscusi et al, 2005). Suits filed under state gasoline fair marketing laws are usually initiated by either gasoline retailers, their trade associations, or the state attorney's office. Litigation initiated under a below-cost pricing law by a private seller seems likely to be a straightforward attempt to constrain more efficient competitors but the interests of state attorneys to file such suits is less clear. The attorneys general in those states with gasoline fair marketing laws are elected by popular vote, with two exceptions.³ This raises the possibility that a consumer protection rationale will be adopted by state attorneys, particularly among those who have ambitions at higher public office. Aggressive enforcement by the attorney general's office increases the potential risk of costly litigation and fines to retailers and can constrain prices and retail margins even in the absence of market power or predatory intentions against competitors. The distinction between the price effects of public and private parties use of the state gas pricing laws has been ignored in previous studies of these statutes.

3. Data and Empirical Results

The following fixed effects econometric model is estimated:

$$R_{it} = \alpha D_{it} + \beta L_{it} + \gamma X_{it} + \xi_i + \tau_t + \epsilon_{it},$$

where R_{it} is specified alternatively as the retail average price of unleaded gasoline, the retail percent markup, and the wholesale price of unleaded gasoline in state i at time t , α , β , and γ are the vectors of estimated coefficients, D_{it} denotes whether and when each state has a below-price gas pricing law, L_{it} represent measures of litigation activity distinguished by the type of plaintiff, X_{it} is a vector supply and demand factors determining prices, ξ_i and τ_t are state and time fixed effects, respectively, and ϵ_{it} is a vector of random errors.

¹Anderson and Johnson, 1999, p. 190.

²See e.g, Kamerschen, 2007.

³The New Jersey attorney is appointed by the governor and the attorney general of Tennessee is appointed by that state's supreme court.

The data are a panel of monthly gasoline prices and markups for the forty-eight contiguous states and the District of Columbia over the period January 1987 through December 2006. This produces 11,760 potential observations for which complete data for all variables were available for 8,535. The definitions and rationales for each of the variables in Table 1 are as follows:⁴

Gas Law is a dummy variable taking the value one in eleven months in which a below cost gasoline pricing law is in effect within a state.⁵ The other two legal variables distinguish instances of successful litigation of these laws by the type of plaintiff.⁶ *Public Action* is defined as subsequent cites in later court decisions to successful legal actions initiated by state or municipal attorneys and *Private Action* does likewise for litigation initiated by private firms. Among the cost variables is the average monthly *Crude Price* of oil within each states' petroleum district. Two variables are included to account for supply disruption effects during the period immediately preceding and during the Persian gulf war from June 1990 through June 1991, *Prewar* and *Gulf War*. The *Reformulated Gas* and *Oxygenated Gas* variables separately identify those states and periods in which those special products are in use, and *Gas Wage* is the mean wage of gasoline station attendants. Demand variables include real personal *Income*, the numbers of *Drivers Per Capita* and *Vehicles Per Capita*, and the *Population* and population *Density* for each state. Other variables measure the composite federal and state gasoline *Taxes* and the number of retail gasoline *Stations per Capita*. *Degree Days* is included to capture variations in seasonality factors among states not fully captured by the time variables.

The presence of a state law prohibiting a retail firm from selling gasoline at a price below costs raises average retail gas prices by about two cents per gallon. Successful cases initiated by private parties are associated with higher price but the impact of suits filed by the public sector have a negative cumulative impact over time. This effect is very modest, however, compared to the price effect of the existence of the law. These price impacts of the law and plaintiff types appear only at retail and have no measurable effects on the wholesale price of gasoline. By far the most important determinant of both retail and wholesale prices is the price of crude oil. The other variables have either expected or insignificant effects on prices.

⁴The time and state effects variables are omitted but the complete regression results are available at [http://core.ecu.edu/econ/bayesc/Research/Gas Prices/Results](http://core.ecu.edu/econ/bayesc/Research/Gas%20Prices/Results).

⁵During the data period two states, Georgia and Montana, eliminated their gas-pricing laws. Such laws became active in Arkansas (1993), Colorado (1993), Maryland (2000), Minnesota (2001), Missouri (1993), Montana (1991), New York (2004), South Carolina (1993), and Utah (1987). The below-cost gasoline pricing laws in the remaining six states with such statutes were in effect for the entire sample period.

⁶Successful in this context means a lawsuit in which the plaintiff prevails in that the court rendering an unambiguous decision that enforces the statute.

4. Conclusion

State laws prohibiting retailers from selling products at prices below costs are nominally intended to prevent firms with market power from destroying smaller competitive firms by temporarily incurring losses on sales that are offset by higher profits once competitive firms exit. Two necessary conditions for such a pricing strategy to be effective in increasing long run profit are that small rivals can be destroyed quickly and that subsequent price increases do not stimulate eventual new entry into the market. Both of these are severe restrictions that seem especially unlikely to occur in the retail sales of gasoline. Lawsuits filed by state or local governments have a modest depressing effect on retail prices but the existence of a below-cost gasoline pricing law within a state and lawsuits filed by private parties have the net effect of raising gasoline prices at retail. The preponderance of evidence is that the laws primarily serve the interests of smaller firms by discouraging price competition.

Table 1 Gasoline Prices and Markups, 1987-2006

	Retail Price (2006¢)		Retail Markup		Wholesale Price (2006¢)	
<u>Legal</u>	<u>Coefficient</u>	<u>t-value</u>	<u>Coefficient</u>	<u>t-value</u>	<u>Coefficient</u>	<u>t-value</u>
Gas Law	2.13	3.09	0.0176	4.34	1.05	0.67
Public Action	-0.53	-5.03	0.0020	3.20	-0.69	0.10
Private Action	0.27	4.04	0.0012	2.96	0.16	0.07
<u>Cost</u>						
Crude Price	122.12	195.09	-0.17	-46.17	124.20	0.61
Gulf War	4.89	6.50	-0.022	-4.90	6.075	0.73
Prewar	3.59	4.91	-0.0039	-0.91	3.95	0.71
Reformulated Gas	0.18	0.37	-0.018	-6.36	2.46	0.48
Oxygenated Gas	3.35	4.74	0.030	7.33	0.76	0.69
Gas Wage	0.001	0.09	0.000074	1.82	-0.0051	0.0068
<u>Demand</u>						
Income	0.001	3.64	-0.00000039	-0.42	0.0007	0.00015
Vehicles Per capita	-0.02	-2.93	-0.0002	-5.26	-0.0051	
Drivers Per Capita	-1.65	-1.45	-0.0058	-0.87	-1.25	1.11
Density	-0.003	-1.22	0.000091	5.3	-0.0036	0.0028
Population	0.001320	4.67	-0.0000004340	-0.26	0.0009510	0.00000028
<u>Other</u>						
Tax	5.40	2.69	0.0727	6.16	1.81	1.95
Stations per Capita	12.82	5.05	21.01	1.41	10.80	2468.61
Degree Days	-0.005	-6.87	0.000017	4.28	-0.0058	0.0006458
Constant	18.11	2.32	0.029	0.64	8.78	7.58
R ² =	0.90		R ² =	0.36	R ² =	0.80

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