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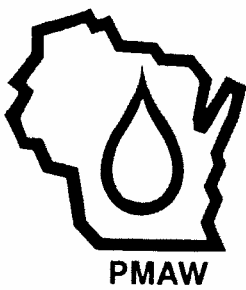
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A Report of Motor Fuel Fair Marketing Laws
Key Findings

Background

In recent years, mass retailers and vertically-integrated oil companies have attempted to repeal the Unfair Sales Act in Wisconsin and many other states under the premise that it drives up the cost of gas for consumers. Nothing could be further from the truth. A new study by Peltier and Skidmore, 2001, provides irrefutable evidence demonstrating that the Unfair Sales Act protects consumers and actually lowers gas prices. If this law is repealed there will be less competition, higher prices and fewer choices for consumers.

Key Findings

- 1) Part 1 confirms that minimum markup laws actually **lower** gas prices for consumers by reducing retail prices and markups in states that adopt them.
 - According to econometric analysis, fair marketing laws may result in initial price and markup increases, but average prices and markups ultimately fall to a lower level (reductions are on the order of approximately one cent after 10 years).
 - Research also shows that savings increase the longer the laws are in effect.
 - Motor fuel fair marketing laws provide long-term benefits to consumers in those states that adopt them.
 - Motor fuel fair marketing laws do what they are supposed to do—lower gas prices to consumers.

- 2) Part 2 demonstrates why the Brannon and Kelly, 1999 study is bad science and should not be considered when making fair marketing law policy decisions.
 - The assertion made by Brannon and Kelly in their 1999 report that Wisconsin's fair marketing law costs consumers \$50 million annually is not only wrong, it is misleading and unwarranted in terms of the actual benefits such laws provide consumers. **Wisconsin's fair marketing law actually save consumers at least \$25 million annually.**



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- The study has two critical flaws:
 - Short-time horizon: Part 1 of the new study shows that a long-term perspective is needed to assess the impact of fair marketing laws. Data used in the Brannon and Kelly, 1999 study only cover a span of six months prior to and six months following the implementation of increased enforcement of Wisconsin's fair marketing law. Their analysis based on this short-time horizon is used to make inferences about prices now and years into the future. Therefore, their conclusions about future gas prices are invalid.
 - Non-representative sample: Brannon and Kelly used a non-representative sample of data taken from two cities that make up less than 6 percent of the state's population. Then they use this limited sampling plan to draw inferences about gas prices across the state of Wisconsin as a whole. This would be analogous to selecting the winner of a statewide election based on the election results in just two cities. Similarly, Brannon and Kelly use only one control city (Duluth) and thus all conclusions about changing prices in Wisconsin are made relative to Duluth. Their conclusion that prices are higher in the entire state forevermore is unwarranted and misleading.
- A more comprehensive comparison shows that the repeal of Minnesota's law is associated with higher prices in Minnesota relative to Wisconsin. Specifically, after Minnesota repealed its general sales-below-cost law, Minnesota prices increased by 1.91 cents over the price that Wisconsin consumers paid. Equally important, the markup that Minnesota consumers paid relative to Wisconsin consumers increased by 1.33%

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**A REPORT OF MOTOR FUEL
FAIR MARKETING LAWS: PART 1**

**A NATIONAL STUDY OF THE EFFECTS OF
MOTOR FUEL FAIR MARKETING LAWS
ON GASOLINE MARKETS**

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Executive Summary

Background

The purposes of motor fuel fair marketing laws are to prevent the selling of motor fuel at retail below cost and, ultimately, to foster competition by preventing predatory pricing. Many questions have been raised about the effects of these laws on retail prices and markups. To date, no studies exist that look at the laws' effects over time.

This study looks at the long-term impact of fair marketing laws. Twelve states have (or had) motor fuel fair marketing laws during the 1984-1999 period. Of these twelve states, seven imposed new motor fuel fair marketing laws at different times between 1984 and 1999. The newly imposed regulations provide a unique opportunity to examine the long-run impact of the laws on motor fuel markets.

This is the first in a two-part series of analyses that examine the effects of fair marketing laws for gasoline. In Part 1, we take a national perspective in assessing the merits of fair marketing laws for gasoline. In Part 2, we critically evaluate a report by Brannon and Kelly (1999) titled, "*Pumping Up Gas Prices in Wisconsin: The Effects of the Unfair Sales Act on Retail Gasoline Prices in Wisconsin*," published by the Wisconsin Policy Research Institute.

Data/Methodology

Data on retail and wholesale prices for all 50 states were obtained for the years 1984-1999 from *The Petroleum Marketing Annual*, a yearly report published by the U.S. Energy Information Administration. Retail and wholesale prices represent inflation-adjusted, weighted averages net of all taxes.

Use of these data has two advantages over the use of price data from selected cities over a short period of time. First, the data are weighted averages of prices across entire states and more representative of consumer activity within the states. Second, analysis using average price data over a number of years is likely to yield a more accurate assessment of the overall impact of the fair marketing laws within each state.

Specifically, this study reviewed the long-term impact of motor fuel fair marketing laws utilizing multiple types of data analysis procedures, including:

- (1) Comparison of end-user prices across states with and without the fair marketing law,
- (2) Comparing end-user prices across states without the law, the first year the law is in effect, and after the first year the law is in effect,
- (3) Regression results using state and time dummy variables,
- (4) Regression results using state and time dummy variables, and other independent variables,
- (5) Regression results assuming a nonlinear relationship, and
- (6) Regression analysis using a subset of states.

Results/Conclusions

The statistical analysis shows that motor fuel fair marketing laws lower gas prices for consumers by reducing retail prices and markups in states that adopt them.

- According to econometric analysis, fair marketing laws may result in initial price and markup increases, but average prices and markups ultimately fall to a lower level (reductions are on the order of approximately one cent after 10 years).
- Research also shows that savings increase the longer the laws are in effect.
- Motor fuel fair marketing laws provide long-term benefits to consumers in those states that adopt them.
- Motor fuel fair marketing laws do what they are supposed to do—lower gas prices to consumers.

The analysis also shows that relying solely on first-year pricing and margin effects misrepresents the actual benefits of motor fuel fair marketing laws to consumers. This analysis will be presented in more detail in Part 2 of this study, which demonstrates the problems associated with the Brannon and Kelly Report (1999).

A NATIONAL STUDY OF THE EFFECTS OF MOTOR FUEL FAIR MARKETING LAWS ON GASOLINE MARKETS

Introduction

The purpose of Part 1 of this report is to examine the effects of motor fuel fair marketing laws on retail prices and markups over time. While some studies that examine the effects of such laws exist, we believe that the empirical methodologies used may present a biased empirical analysis. Specifically, previous studies have typically used a case study approach (e.g., merely comparing one state to another without controlling for other possible factors) or have compared gasoline prices/markups in states that have such laws to those without (Anderson and Johnson, 1999). Since states that adopt such laws may have a non-competitive market structure that leads to high prices, and as such might be motivated to introduce a fair marketing law to enhance competition, a cross-sectional comparison may yield biased results. In both instances, traditional tests of fair marketing laws for gasoline have ignored the long-term effect of these laws on the prices that consumers pay. This is surprising in that, theoretically, fair marketing laws are enacted with the goal of preserving and enhancing competition over time.

We suggest that a more appropriate approach is to examine how prices and markups change within states following the adoption of a fair marketing law. Importantly, the newly imposed laws are likely to take a period of time to affect market structure and thus prices. It is therefore appropriate to examine the impacts of fair marketing laws over an extended number of years using data from all states. As shown in Table 1, during the 1984-1999 period, seven states adopted fair marketing laws that apply specifically to motor fuel. These newly imposed laws provide an opportunity to evaluate the effects of fair marketing legislation on motor fuel markets. Importantly, no research that we have found has evaluated the effects over a significant period of time.

Table 1
States With Motor Fuel Fair Marketing Statutes, 1984-1999

State	Year of Enactment
Alabama	1984
Colorado	1993
Florida	1985, amended 1987, 1989, 1991
Massachusetts	1950
Missouri	1993
Montana	1991, measure repealed 1999
New Jersey	1983
North Carolina	1985
South Carolina	1998
Tennessee	1988
Utah	1981
Wisconsin	1973*, amended 1987, 1992, 1998
Source: Johnson (1999) and Kamerschen (2001)	
* The Unfair Sales Act became effective June 3, 1939. These dates reference recent amendments to the Act.	

Overview of Fair Marketing Laws

Positive View of Fair Marketing Laws

Proponents of fair marketing laws suggest that such laws foster competition by preventing large vertically integrated firms and high-volume firms from posing a predatory threat to smaller and/or independent retailers. Thus, in the absence of such laws, larger firms could drive out smaller firms by lowering prices below their costs. Once the smaller competitors have been purged from the market, the larger retailers have a greater ability to push prices above that which would exist in a more competitive environment.

Negative View of Fair Marketing Laws

Opponents of fair marketing laws argue that they protect inefficient firms from competitive forces and thus lead to prices and markups that are higher than they otherwise would be. This view is grounded in the belief that the elimination of weaker firms would enhance market efficiencies and lead to lower prices over time.

Short and Long-Term Effects

In either of the above two cases, the effects of the laws on prices and markups is indirect and is likely to take several years before any long-run impact is observed in the marketplace. This highlights the importance of evaluating the effects of fair marketing laws over a period of time to ascertain the outcomes of such legislation. As a consequence, testing the merits of either of these viewpoints would require an analysis of gas pricing data over multiple years. As such, studies that fail to take into consideration how gas markets evolve over time in the presence or omission of fair marketing laws cannot support or contradict either position.

Although long-term tests of fair marketing laws are necessary for evaluating their validity, short-term effects are interesting in their own right. For example, Kamerschen (2001) argues that in a market in which below-cost selling is permitted, mass retailers "subsidize" or finance retail gasoline prices at below-cost levels with profits generated from other levels of operations, profits in other geographical areas, or from profits from non-gasoline products. A state that adopts a fair marketing law forces mass retailers to play by consistent rules across the state. Thus in the short-run, mass retailers may be forced to increase prices in previously "subsidized" retail outlets to comply with the law. However, the fair marketing law does not necessarily prevent mass retailers from maintaining higher prices in other geographic areas, at least in the short run.

The preceding argument suggests that one might observe an initial increase in average prices across the state immediately following the imposition of a fair marketing law. A short-run analysis of the effects of a newly imposed or more actively enforced fair marketing law within a state might erroneously conclude that the law permanently increases gasoline prices. As our analysis shows, such a conclusion is groundless and misrepresents the ultimate impact of fair marketing laws on the prices consumers pay for gasoline. Specifically, we provide empirical evidence indicating that prices and markups fall the longer the law is in effect.

The purpose of this report is not to review all of the relevant empirical and theoretical considerations that apply to the fair marketing legislation and competition within gasoline markets. We refer interested readers to the study "*An Economic Analysis of Motor Fuel Fair Marketing Laws*" by Kamerschen (2001). Rather, we focus on an empirical assessment of fair marketing laws using data from all states over the 1984-1999 period.

An Initial Examination of the Effect of Fair Marketing Laws

As an initial evaluation of the possible effects of fair marketing laws, we present in Tables 2 and 3 a comparison of end-user prices (i.e., what consumers pay) for all states during the years 1984-1999. Table 2 shows that average annual inflation adjusted prices are *more than 3 cents lower* in states during which the law was in effect relative to those states/years in which there was no law in effect (a more detailed discussion of the pricing data is provided later). This difference is significant at the 99 percent level of confidence. However, Table 3 shows that the benefit to consumers of having a fair marketing law does not seem to take effect initially. In fact, for states that enacted a fair marketing law since 1984, prices increased by about one cent in the first year that the law was in place and are on average lower thereafter. Again, the difference is significant at the 99 percent level of confidence. While this simple analysis is suggestive of the benefits of fair marketing laws, we must examine the relationship between prices and the existence of fair marketing laws more rigorously.

Table 2
Comparison of End-user Price When
Fair marketing Law is in Effect Versus not in Effect

	Years When Law is Not In Effect	Years When Law is in Effect	Significance
End-user Price	78.61	75.26	.001**

Table 3
Comparison of End-user Price:
No Law, First Year in Effect, After First Year in Effect

	Law Not in Effect	First Year Law in Effect	Years Following First Year Law is In Effect	Significance
End-user Price	78.61	79.06	75.0	.002**

*** When $p < .001$, the difference is significant at a 99 percent confidence level. When $p < .002$, the difference is significant at a 98 percent confidence level.*

In the remainder of Part I of this report, we use econometric analysis to evaluate the effects of motor fuel fair marketing laws on gasoline prices. Our findings show that in states that have adopted fair marketing laws, average prices fall the longer the law is in effect. The econometric analysis shows that while prices increase by about 1.3 cents in the first year of the law, the positive effect is negated by the fourth year. Adjusted nationally, prices are more than a penny less than they would be in the absence of the law by year 10.

Methodology

The question that we want to answer is whether recently imposed fair marketing laws for motor fuel have altered motor fuel prices and markups in the states that have adopted them. Most previous studies of fair marketing laws have used a case study approach or have made comparisons across states that had laws versus those that did not. Importantly, these studies do not examine pricing and markup behavior over a significant period of time during which transitions occurred. In this study, we have taken a fundamentally different approach. As shown in Table 1, there are seven states that adopted motor fuel sales-below-cost laws during the 1984-1999 period, with adoptions occurring at different points in time. By collecting time-series data we can use variation across states in the timing of the adoption of these newly imposed laws to investigate how they affect prices and markups. We estimate a within-group model that exploits the panel nature of our data and controls for fixed state and year effects.

As a note, individuals who have had little exposure to econometric data analysis techniques might have some difficulty in following the methodology and findings sections. However, summary conclusions are clearly specified at the end of each section.

The econometric model is as follows. P_{it} is the weighted average price of unleaded gasoline for state i in period t . Then

$$P_{it} = D_{it}\alpha + X_{it}\beta + \mu_i + \eta_t + \varepsilon_{it} \dots \quad (1)$$

where D_{it} represents the status of the law in state i at time t , X_{it} is a vector of demand-side and supply-side characteristics that determines prices, μ_i and η_t are fixed state and year effects, respectively, and ε_{it} is a random error term. We also estimate a similar model for M_{it} , the average markup (retail price – wholesale price) for unleaded gasoline for state i in period t .

The fixed-effects model is appropriate for our analysis for three reasons. First, much of the variation in prices and markups is between states rather than within states. Although it would be difficult to specify all the institutional, economic and demographic characteristics that determine the differences across states in prices and markups, we can capture permanent differences between states with state-fixed effects. Similarly, there are a variety of factors that may affect prices and markups over time. We capture those differences with time effects. A second reason for using the fixed-effects model is that whether a state adopts a fair marketing law may be correlated with high motor fuel prices or markups prior to adoption of the law. That is, states

that have had concerns about non-competitive market structure and high prices may be more likely to adopt fair marketing laws. Suppose, for example, that states that adopt laws had, on average, higher prices. If this is true, omitting the state effects would yield biased estimates in that they would not clearly illustrate the effect that the fair marketing law had on prices in that state. Finally, the fixed-effects model is a within-group estimator that uses only the within-state variation to form the parameter estimates. Therefore, our estimate of the effects of fair marketing laws measures how prices and markups change within the states as legal climates change.¹

As much as possible, we attempt to control for demand- and cost-shifters that affect prices and markups. These data are described in greater detail below. Even so, it is difficult to include all factors that may determine prices and markups. However, the state fixed effects serve to capture any permanent differences across states (laws banning self-service, divorcement, transportation costs, etc.) not otherwise captured by other explanatory variables. Similarly, the time effects capture any variation in prices and markups over time that affect the whole country. For example, changes in federal laws regarding reformulated gasoline requirements or changes in environmental standards that affect the whole country are captured with the time effects.

Analysis

Data

The dependent variables are the inflation-adjusted average annual retail price in state i during period t for regular unleaded gasoline, measured in cents per gallon, and the markup which we calculate as the difference between retail and wholesale prices. Both measures are important in evaluating the effect of fair marketing laws, but ultimately we are most interested in the final price that consumers pay.

Information on retail and wholesale prices were obtained for the years 1984-1999 from *The Petroleum Marketing Annual*, an annual report published by the U.S. Energy Information Administration. Retail and wholesale prices represent inflation-adjusted weighted averages net of all taxes (i.e., net of all federal, state, and local sales and excise taxes) from a scientific sample of more than 3,500 companies and is valid at the 95% confidence level. For a more detailed discussion see www.eia.doe.gov.

Use of these data has two benefits over the use of price data from selected cities over a short period of time. First, since the data are a weighted average of the prices across the entire state, they are a better representation of consumer activity within the state as a whole. Second, analysis using average price data over a number of years is likely to yield a more accurate assessment of the overall impact of the fair marketing law within each state. It should be pointed out that disaggregated data (i.e., data collected and analyzed at the store level for all states) could also have been used. However, these data would be difficult to obtain for all 50 states over an extended number of years. In addition, the reliability of these data is questionable as you go farther back in time.

¹ Hsiao (1986) presents an excellent discussion of panel data estimation procedures.

We include a number of independent variables to explain the variation in prices and markups, and two key variables that mark the timing of the adoption of the fair marketing laws. Central to our analysis are two variables: *Markup* and *Years After Markup*. *Markup* (whether state has markup law in a particular year) is an indicator variable that is equal to one in all years following the adoption of a fair marketing law and zero otherwise.² However, because we suspect that newly adopted fair marketing laws will take some time to alter market structure and prices, we also use *Years After Markup* (1 = first year after, 2 = 2nd year after, etc.), which equals the number of years since the state implemented the fair marketing law.³ This variable is always equal to zero in those states without the law. We acknowledge that neither of these measures captures differences in the nature of the laws or the degree of enforcement across the states. While fair marketing laws are fairly uniform in their requirements (typically a 6 percent markup), differences across states and their enforcement over time can be substantial.⁴ Thus, our variables reflect the average effect of a fair marketing law and cannot capture the effects in a particular state.⁵ Finally, since our data represent state averages, our analysis does not measure the potential differential effects in sub-markets within a state.

We include a variety of demand- and supply-side characteristics as indicated by the literature which, in addition to *Markup* and *Years After Markup*, may also impact prices and markups (and thus need to be accounted for in the more complete regression models). These variables are: state population, state population density, percent of the population over the age of 65, per capita inflation-adjusted income, the total number of vehicles per population, total number of licensed drivers in the population, a dummy variable equal to one in those state-years in which a general sales-below-cost law exists and zero otherwise⁶, heating degree days in the Census region, average annual inflation-adjusted retail wage, inflation-adjusted wholesale prices, and a dummy variable that is equal to one in those state that have a city in which use of reformulated gasoline is required by federal law.⁷ More detailed definitions and sources of these variables are provided in the Appendix. Table 4 provides summary statistics for all variables.

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² Although several states have amendments to their laws, this variable does not capture that information. In separate regressions not reported, we estimate models in which we include some information regarding these amendments. Those results are similar to the results presented in this report.

³ *Years After Markup* is intended to capture the idea that prices and markups are unlikely to change immediately after the law is imposed, but require time for market structure to adjust. However, once the market reaches a new equilibrium, we expect diminishing returns in later years.

⁴ For example, Wisconsin has amended its fair marketing law a number of times. Most recently, the law was amended in 1998 to increase penalties for noncompliance.

⁵ The empirical approach is similar to Murray, Evans, and Schwab (1998) who evaluate the effects of court-ordered education finance reform on education funding across the states. They use a variable similar to *Years After Markup* to evaluate the effects of the court rulings on education spending and spending inequality.

⁶ According to a study by Johnson (1999), Arkansas, California, Colorado, Idaho, Kentucky, Louisiana, Maine, Maryland, Massachusetts, Minnesota, Montana, North Dakota, Oklahoma, Pennsylvania, Rhode Island, South Carolina, Tennessee, Utah, Virginia, Washington, West Virginia, Wisconsin, and Wyoming have or have had general sales-below-cost laws during the period of analysis. According to Johnson, only Minnesota and Virginia eliminated the laws during the period of analysis. However, our own search through *Commerce Clearing Trade Regulation Reports* and the Virginia State Statutes failed to confirm Virginia as ever having the law. Therefore, we do not count Virginia as ever having the law. To our knowledge no other states experienced a change in the status of this law during the period of analysis.

⁷ We attempt to control for as many variables as possible in our analysis. Kamerschen (2001) and Vita (1999) suggest that studies examining prices control for a variety of demand and cost shifters. Both studies provided guidance in our selection of control variables. The wholesale price is not included in the markup equation.

Table 4
Summary Statistics of Data From All States from 1984-1999

Variable	Mean	Standard Deviation
Real Retail Price of Unleaded Gasoline	77.950	11.322
Markup of Unleaded Gasoline	11.694	3.540
Markup Indicator Variable	0.188	0.390
Years After Markup	2.363	7.363
Population (thousands)	5,075.66	5,495.26
Population Density	167.41	231.26
Proportion of Population Over the Age of 65	0.124	0.021
Vehicles Per Capita	0.794	0.116
Drivers Per Capita	0.683	0.051
Average Annual Real Retail Wage	12,479.55	2,365.73
Average Heating Degree Days in the Census Region	4,687.17	1,664.45
Real State Gasoline Tax in Cents	17.039	5.051
Real Per Capita Income	19,764.05	5,164.85
Real Wholesales Price of Unleaded Gasoline	66.256	11.0356
General Sales-Below-Cost Indicator Variable	0.434	0.496
Reformulated Gasoline Indicator Variable	0.050	0.218
See Appendix for sources and details.		

RESULTS

We begin by presenting a simple model in which we include as covariates in equation (Model 1) only the state and year dummy variables plus a measure of fair marketing legislation. We then go on to show that our estimates of the impact of fair marketing laws are essentially unchanged if we add other covariates to the model. We also present a model that addresses the potential nonlinear relationship between fair marketing laws and gasoline prices and markups. Finally, we analyze a subset of states to further test the robustness of our findings.

Model 1: Simple Model (State and Time Dummy Variables)

The fixed-effects results for retail prices and markups are presented in Table 5. We present two models for retail prices and markups: in column 1 we use the *Markup* indicator variable (whether state has law in place for a given year) and in column 2 we include the cumulative index *Years After Markup*. All models include a complete set of state and year effects. The explained variation in the price and markup models is better than 90 percent and 70 percent, respectively. As can be seen in Table 5, *Markup* is not statistically significant, indicating that fair marketing laws do not seem to have an effect on prices or markups when only state and time dummy variables are considered. However, *Years After Markup* is negative and statistically significant—showing that the prices and markup consumers pay for gas decrease over time. These results indicate that 10 years after a fair marketing law is imposed, prices and markups within the state fall by 1.3 cents and 0.7 cents, respectively.⁸

Table 5
Regression Results for Basic Price and Markup Models
 (t-statistics are in parentheses)

Dependent Variable	Independent Variables			
	(1)		(2)	
	<i>Markup</i>		<i>Years After Markup</i>	
	Parameter	Adj. R ²	Parameter	Adj. R ²
Retail Price of Unleaded Gasoline	0.517 (0.726)	0.92	-0.135*** (2.483)	0.92
Markup of Unleaded Gasoline	0.349 (0.919)	0.71	-0.067**** (2.187)	0.71
<i>Note:</i> All models include state and year effects.				
*** Indicates significance at the 99 percent confidence level for a two-tailed test.				
**** Indicates significance at the 95 percent confidence level for a two-tailed test.				

⁸ Given that our time series extends to only sixteen years, we are hesitant to speculate what prices would be beyond ten years from adoption.

Summary Conclusion: Prices and markups that consumers pay decrease over time when a state has a fair marketing law.

Model 2: Simple Model Plus the Addition of Other Independent Variables

It is possible that our fixed-effects models would not fully account for the impact of omitted variables bias. We therefore estimate more complete specifications that include all of the variables presented in Table 4 (also see Notes in Table 6). These results are found in Table 6.

The findings from the more complete specifications shown in Table 6 corroborate those found in Model 1 and provide a consistent theme—that the price and markup consumers pay for gasoline decrease as years after adoption of a fair marketing law increase. The coefficients on *Markup* and *Years After Markup* are similar to those presented in Table 5. The coefficient on *Markup* indicates that there appears to be no effect on prices, but according to the coefficients on *Years After Markup*, 10 years after the fair marketing law is imposed, prices and markups decrease by about one cent each.

Table 6
Regression Results for Complete Price and Markup Models
 (t-statistics are in parentheses)

Dependent Variable	Independent Variables			
	(1)		(2)	
	<i>Markup</i> Parameter	Adj. R ²	<i>Years After Markup</i> Parameter	Adj. R ²
Retail Price of Unleaded Gasoline	0.333 (0.888)	0.97	-0.097*** (2.753)	0.97
Markup of Unleaded Gasoline	0.337 (0.893)	0.71	-0.098*** (2.765)	0.71

Notes: All models include state and year effects and the following control variables: population, population density, percent of the population over the age of 65, per capita inflation adjusted income, the total number of vehicles per population, total number of licensed drivers in the population, a dummy variable equal to 1 in those state-years in which a general sales-below-cost law exists and zero otherwise, heating degree days in the Census region, average annual inflation adjusted retail wage, inflation adjusted wholesale prices (in the case of the retail price model), and a dummy variable that is equal to one if a state has a city in which there is a reformulated gasoline requirement and zero otherwise.

*** Indicates significance at the 99 percent confidence level for a two-tailed test.

Summary Conclusion: Even when other independent variables are accounted for in the model, the prices and markup consumers pay decrease over time when a state has a fair marketing law.

Model 3: Nonlinear Model

While the preceding models provide compelling evidence that fair marketing laws have a depressing effect on prices over time, it does not account for the possible increase in prices immediately following the imposition of the law as illustrated in Table 3 on page 4. Further, it does not account for the idea that once a new equilibrium market structure emerges (i.e., after most of the benefits of the law have accrued), the beneficial effects of the law are likely to diminish (i.e., prices decrease at a decreasing rate).

We therefore present another set of regressions designed to address the nonlinear relationship that may exist between prices and markup laws.

Table 7 presents estimates that include simultaneously in one regression both the *Markup* dummy variable and the natural logarithm of *Years After Markup*.⁹ In these regressions, *Markup* accounts for the immediate price increase in the year that the law is imposed and the natural logarithm of *Years After Markup* accounts for the reduction in prices in later years. We use the natural logarithm of *Years After Markup* to model and capture the idea that the price effects should diminish over time.¹⁰

Table 7
Regression Results for Nonlinear Relationship
Between Dependent Variables and Fair marketing Laws
 (t-statistics are in parentheses)

Dependent Variable	Independent Variables		
	<i>Markup</i>	<i>Ln(Years After Markup)</i>	Adj. R ²
Retail Price of Unleaded Gasoline	2.020** (3.740)	-1.184** (4.018)	0.97
Markup of Unleaded Gasoline	2.044** (3.738)	-1.198** (4.047)	0.71

Note: All models include state and year effects and the following control variables: population, population density, percent of the population over the age of 65, per capita inflation adjusted income, the total number of vehicles per population, total number of licensed drivers in the population, a dummy variable equal to 1 in those state-years in which a general sales-below-cost law exists and zero otherwise, heating degree days in the Census region, average annual inflation adjusted retail wage, inflation adjusted wholesale prices (in the case of the retail price model), and a dummy variable that is equal to one if a state has a city in which there is a reformulated gasoline requirement and zero otherwise.

** Indicates significance at the 99 percent confidence level for a two-tailed test.

Table 7 shows that *Markup* is positive and significant, whereas the natural logarithm of *Years After Markup* is negative and highly significant in both the price and the markup models. **The net effect of the newly imposed law depends on the length of time the law has been in place.**

⁹ To avoid arithmetic error when taking a natural logarithm of zero, we add 1 to each value of *Years After Markup*.

¹⁰ See Kennedy (1992) for a discussion of alternatives to the standard linear framework.

In the first year the law is imposed, prices and markups are about 1.2 cents higher, but prices and markups fall the longer the law is in place. Prices and markups approach their initial levels in the fourth year and by year 10 prices are about a penny less than they would be without the law.

These findings are similar to the more simple regressions presented in Table 7 except that they show how prices increase initially and fall at a diminishing rate thereafter. Further, they confirm our initial comparison of prices in Table 3 for states without the law, the first year of the law, and in year two and beyond. A random-effects estimation procedure yields similar results.¹¹

Summary Conclusion: (a) Prices and markup consumer pay decrease over time. (b) The inclusion of the natural log of Years After Markup shows that over time (as a new equilibrium emerges), the reduction in prices diminishes. (c) The model shows that prices and markups in the first year after the fair marketing law is in effect are higher and then fall steadily thereafter.

¹¹ Kennedy (1992) provides a clear description of fixed-effects versus random-effects.

Model 4: States With Significant Years of Having and Not Having Law

Although our findings are robust to a variety of estimation procedures and inclusion (or exclusion) of control variables, there still may be a concern that we have omitted some variable that may be correlated with the imposition of the fair marketing law. It may be that the omission of this information biases the estimated effects of the fair marketing laws. While it is difficult to include every possible factor into the analysis, we can further test the robustness of our findings by using a subset of states that are more similar to one another and in doing so reduce concerns about potential omitted variables. We begin by selecting four states that adopted the fair marketing law in the middle of the 1984-1999 period (Colorado-1993, Missouri-1993, Montana-1991, and Tennessee-1988). These four states have a substantial number of observations prior to and after adoption. For each of these states, we select two neighboring states that lie within the same PADD (Petroleum Administration for Defense Districts).¹² We then run another set of regressions similar to those presented in Table 7. Table 8 shown on page 15 is similar to Table 7 except that the estimates are generated from this subset of states. **Table 8 shows that if we select states that are similar to one another in order to flush out any additional variation in prices and markups not accounted for in our model, the sign and statistical significance of the coefficients on *Markup* and the natural log of *Years After Markup* are maintained.**

Table 8
Regression Results Using Subset of States
(t-statistics are in parentheses)

Independent Variables			
Dependent Variable	<i>Markup</i>	<i>Ln(Years After Markup)</i>	Adj. R ²
Retail Price of Unleaded Gasoline	2.805** (3.181)	-1.662*** (3.053)	0.98
Markup of Unleaded Gasoline	2.849** (3.373)	-1.706*** (3.209)	0.77

Note: All models include state and year effects and the following control variables: population, population density, percent of the population over the age of 65, per capita inflation adjusted income, the total number of vehicles per population, total number of licensed drivers in the population, a dummy variable equal to 1 in those state-years in which a general sales-below-cost law exists and zero otherwise, heating degree days in the Census region, average annual inflation adjusted retail wage, inflation adjusted wholesale prices (in the case of the retail price model), and a dummy variable that is equal to one if a state has a city in which there is a reformulated gasoline requirement and zero otherwise.

The states included in this analysis are Colorado, Missouri, Montana, Tennessee, Wyoming, Idaho, Illinois, Kansas, Kentucky and Ohio

*** Indicates significance at the 99 percent confidence level for a two-tailed test.

¹² Colorado's neighboring states are Wyoming and Idaho; Missouri's neighboring states are Illinois and Kansas; Montana's neighboring states are Wyoming and Idaho; Tennessee's neighboring states are Kentucky and Ohio.

Summary Conclusion: (a) Prices and markups that consumer pay decrease over time. (b) The inclusion of the natural log of Years After Markup shows that over time (as a new equilibrium emerges), the reduction in prices diminishes. (c) The model shows that prices and markups in the first year after the fair marketing law is in effect are higher and then fall thereafter. (d) The results are consistent when a subset of states with and without the law is compared to nearby states.

Conclusion

This study presents empirical support for the case that fair marketing laws do what they are supposed to do—lower gas prices to consumers.

The analysis presented in Part I of this report provides a national evaluation of the effects of fair marketing laws on gasoline and markups. According to the econometric analysis, fair marketing laws may result in initial price and markup increases, but average prices and markups ultimately fall to a lower level. The statistical analysis shows, within a 95 to 99 percent confidence level depending on the model, that consumer savings are on the order of about one cent after 10 years. It also shows that those savings increase over time.

Our analyses provide direct and indirect evidence that fair marketing laws effectively promote competition at the retail level and thus lower prices in the long-run. While prices may rise initially, we suggest that over the long-run, fair marketing laws protect small retailers and independents from predatory pricing of larger vertically integrated mass retailers. This may be the route through which fair marketing laws ultimately reduce retail prices over time. A recent study by Hastings (2001) provides compelling empirical evidence that the existence of independents leads to lower gasoline prices.

References

- Anderson, Rod W. and Ronald N. Johnson (1999), "Antitrust and Sales-Below-Cost Laws: The Case of Retail Gasoline, *Review of Industrial Organization*, 14: 189-204.
- Brannon, James I., and Frank Kelly (1999), "Pumping Up Gas Prices in Wisconsin: The Effects of the Unfair Sales Act on Retail Gasoline Prices in Wisconsin, *Wisconsin Policy Institute*, Vol. 12 No. 7.
- Hastings, Justine (2001), "Vertical Relationships and Competition in Retail Gasoline Markets: Empirical Evidence from Contract Changes in Southern California, working paper, University of California Energy Institute.
- Hsiao, Cheng (1986), *Analysis of Panel Data*, Cambridge University Press: New York, New York.
- Johnson, Ronald N., (1999), "The Impact of Sales-Below-Cost Laws on the U.S. Retail Gasoline Market," Report Prepared for Industry Canada, Competition Bureau.
- Kamerschen, David R. (2001), "An Economic Analysis of Motor Fuel Fair Marketing Laws," Prepared for the Petroleum Marketers Association of America.
- Kennedy, Peter (1992), *A Guide to Econometrics*, MIT Press: Cambridge, Massachusetts.
- Murray, Shiela E., William N. Evans, and Robert M. Schwab (1998), "Education-Finance Reform and the Distribution of Education Resources," *American Economic Review*, 88: 789-812
- Vita, Michael G. (1999), "Regulatory Restrictions on Vertical Integration and Control: The Competitive Impact of Gasoline Divorcement Policies, Unpublished Mimeo, Federal Trade Commission.

Appendix
Detailed Definitions and Sources For All Variables Employed in the Analysis

Variable	Details	Source
Average Annual Inflation Adjusted Wage Per Service Station Employee	SIC 5541: Gasoline Service Station, Average Annual Inflation Adjusted Wage Per Service Station Employee in the State	Http://stats.bls.gov/sahome.html
Driver Per Population	Total number of driver licenses Divided by State Population	Federal Highway Administration, <i>Highway Statistics</i> , 1980-1999
GDP Deflator	Gross Domestic Implicit Price Deflator	Http://www.bea.doc.gov/bea/dn/nipaweb/AllTables.asp
Heating Degree Days	Heating Degree Days By Census Division, Heating Degree-Days Are Deviations From the Mean Daily Temperature Below 65F	Http://www.eia.doe.gov/emeu/aer/overview.html
Markup	Indicator Variable Equal to 1 if a State Has a Markup Law and 0 Otherwise	Anderson and Johnson (1999), Kamerschen (2001)
Per Capita Income	Inflation Adjusted Per Capita Income	Http://www.bea.doc.gov/bea/regional/data.htm
Population	Total State Population	Http://www.census.gov/population/www/estimates/statepop.html
Population Density	Total State Population Divided by State Land Area in Square Miles	Http://www.census.gov/population/www/estimates/statepop.html
Proportion of Drivers Between the Ages of 20 and 44	Number of Drivers Between Ages of 20 and 44 Divided by Total Number of Drivers in the State	Federal Highway Administration, <i>Highway Statistics</i> , 1980-1999
Proportion of Population Over the Age of 65	Proportion of Population Over 65 Within the State	Http://www.census.gov/population/www/estimates/statepop.html
Reformulated Gas Requirement Indicator Variable	Indicator Variable Equal to 1 if a State has a city in which the Clean Air Act amendment required use of cleaner burning reformulated gasoline	Vita (1999)
Retail Price of Unleaded Gasoline	Average Annual Inflation Adjusted Price of Unleaded Gasoline Sales to End-users Net of All Taxes. Sales to end-users are those made directly to the ultimate consumer, including bulk customers, such as agriculture, industry, and utilities, as well as residential and commercial customers.	Energy Information Administration, <i>Petroleum Marketing Annual</i> , 1984-1999
Sales-Below-Cost	Indicator Variable Equal to 1 if a State Has a General Sales-Below-Cost Law and 0 Otherwise	Anderson and Johnson (1999)
State Gasoline Tax	State Gasoline Tax in Inflation Adjusted Cents Per Gallon	Federal Highway Administration, <i>Highway Statistics</i> , 1980-1999
Vehicles Per Population	Total Number of Vehicles Divided by State Population	Federal Highway Administration, <i>Highway Statistics</i> , 1980-1999
Wholesale Price of Unleaded Gasoline	Average Annual Inflation Adjusted Price of Unleaded Gasoline Sales for Resale Net of All Taxes. Sales for resale, that is, wholesale sales, are those made to purchasers who are other than ultimate consumers.	Energy Information Administration, <i>Petroleum Marketing Annual</i> , 1984-1999
Years After Markup	Cumulative Index of the Number of Years Since the Implementation of the Fair Marketing Law	

**A REPORT OF MOTOR FUEL
FAIR MARKETING LAWS: PART 2**

**A CRITICAL EVALUATION OF "PUMPING UP GAS
PRICES IN WISCONSIN: THE EFFECTS OF THE
UNFAIR SALES ACT ON RETAIL GASOLINE PRICES
IN WISCONSIN" PUBLISHED BY THE WISCONSIN
POLICY RESEARCH INSTITUTE**

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Executive Summary

Summary of Part 1: "A National Study of the Effects of Motor Fuel Fair Marketing Laws on Gasoline Markets"

In the Report on Motor Fuel Fair Marketing Laws: Part 1, "*A National Study of the Effects of Fair Marketing Laws on Gasoline Markets*," we took a "national" perspective in assessing the merits of motor fuel fair marketing laws. Our analysis provided empirical support for the hypothesis that fair marketing laws reduce retail prices and markups in states that adopt them. Two major conclusions can be drawn from the findings in Part 1.

1. *First*, estimates show that ten years after adoption, average retail prices and markups are about one cent lower than they would have been in the absence of the law.
1. *Second*, the findings show that although prices and margins might increase in the first year the law is in effect, lower prices in subsequent years more than make up for this initial price point.

Both of these points underscore the necessity of examining the effects of fair marketing laws beyond the first year in which the law is adopted or enforcement is strengthened.

Background: Part 2

In light of the methodology and results from Part 1 of this report, we evaluated the study "*Pumping Up Gas Prices in Wisconsin: The Effects of the Unfair Sales Act on Retail Gasoline Prices in Wisconsin*," published by the Wisconsin Policy Research Institute (Brannon and Kelly, 1999). The report suggests that increased enforcement of the law, which was strengthened in 1998, increased retail gasoline prices in Wisconsin relative to Minnesota. A critical evaluation of the report highlights at least two methodological problems that place the conclusions of that report in question—the use of too short of a time horizon to adequately measure the long-term effects of increased enforcement and use of a non-representative sample from which to base inferences about the entire state of Wisconsin.

Short-Time Horizon: Part 1 clearly shows that a long-term perspective is needed to assess the impact of fair marketing laws. Unfortunately, the data used in the Brannon and Kelly 1999 study only cover a span of six months prior to and six months following the implementation of increased enforcement of Wisconsin's fair marketing law. Their analysis based on this short time horizon is used to make inferences about prices now and years into the future. As a consequence, their conclusions about any future gas prices are invalid.

Non-Representative Sample: Second, Brannon and Kelly utilize a non-representative sample of data taken from two cities that make up less than 6 percent of the state's population. Of concern, they use this limited sampling plan to draw inferences about gas prices across the state

of Wisconsin as a whole. This would be analogous to selecting the winner of a statewide election based on the election results in just two cities. Similarly, Brannon and Kelly use only one control city (Duluth) and thus all conclusions about changing prices in Wisconsin are made relative to Duluth. Their conclusion that prices are higher in the entire state forevermore is unwarranted and misleading.

Data/Methodology: Part 2

To provide a more statistically valid perspective, we use statewide average annual prices over a number of years to evaluate changes in prices and markups in Minnesota and Wisconsin following Minnesota's decision to eliminate its general sale-below-cost law. We broadened the scope of the study to assess the impact fair marketing legislation has over a longer time horizon and examine the effects "across" each of the states.

Consistent with the approach/data used in Part 1, we compare average annual inflation-adjusted prices over the course of 16 years. We look at the impact of legislation over a longer time period rather than just the six-month period used by Brannon and Kelly. Moreover, in place of drawing conclusions concerning Minnesota versus Wisconsin using just two cities, we look at data at the state level. Also, instead of focusing on a change in the enforcement of Wisconsin's fair marketing law, our analysis is directed at Minnesota's 1995 decision to repeal its general sales-below-cost law that applies to gasoline sales. If Brannon and Kelly were correct, Minnesota's repeal of its sales-below-cost law would benefit Minnesota consumers relative to Wisconsin consumers. We will show that the reverse is true after Minnesota repealed its law and may account for why the state is re-enacting a sales-below-cost law.

Results/Conclusions: Part 2

The assertion made by Brannon and Kelly in their 1999 report that Wisconsin's fair marketing law costs consumers \$50 million annually is not only wrong, it is misleading and unwarranted in terms of the actual benefits such laws provide consumers.

A more comprehensive comparison shows that the repeal of Minnesota's law is associated with higher prices in Minnesota relative to Wisconsin. Specifically, **after Minnesota repealed its general sales-below-cost law, Minnesota prices increased by 1.91 cents over the price that Wisconsin consumers paid.** Equally important, the markup that Minnesota consumers paid relative to Wisconsin consumers increased by 1.26 cents.

Part 1 of this report concluded that motor fuel fair marketing laws lower gas prices for consumers by reducing retail prices and markups in states that adopt them. Part 2 shows that the Brannon and Kelly study is invalid and should not be used to draw conclusions about the impact of fair marketing laws in Wisconsin, Minnesota or any other states that may be reviewing related policies.

A Critical Evaluation of "Pumping Up Gas Prices in Wisconsin: The Effects of the Unfair Sales Act on Retail Gasoline Prices in Wisconsin"

Introduction

In light of the empirical methodology and findings presented in Part 1, we now offer an evaluation of the study "*Pumping Up Gas Prices in Wisconsin: The Effects of the Unfair Sales Act on Retail Gasoline Prices in Wisconsin*," published by the *Wisconsin Policy Research Institute* (Brannon and Kelly, 1999). Brannon and Kelly report that due to an increased enforcement of Wisconsin's Unfair Sales Act, which was imposed in August 1998, Wisconsin residents pay a higher price for gasoline as compared to Duluth, Minnesota. In their study, they compare average prices and markups in Eau Claire, Beloit and Duluth in the six months prior with the change in the law to average prices and markups during the six months following the change in the law.

Methodological Problems in Brannon and Kelly Study

Due to several methodological problems, we believe the conclusions drawn from their analysis are unwarranted and misrepresent the possible benefits of having a fair marketing law.

- *First*, the data used in their analysis covering a span of six months following the implementation of increased enforcement are used to make inferences about prices now and years into the future. The findings from Part 1 clearly show that conclusions based on only the short-term ramifications of fair marketing laws (and renewed enforcement) are invalid, misleading and inappropriate. Unfortunately, Brannon and Kelly fail to consider long-term ramifications of the law. Undoubtedly, there are legislative actions that are designed to benefit consumers over the long haul that might not have a positive impact after one year. The findings from Part 1 illustrate the short- and long-term effects of fair marketing laws.
- *Second*, a non-representative sample of data taken from just two cities that make up less than 6 percent of the state's population is used to make inferences about the entire state. Of concern, they make inferences about Wisconsin consumers as a whole based on this sampling plan. This would be analogous to predicting who will win a statewide election based on the election results in Eau Claire and Beloit. This approach would not be considered valid for predicting election results, nor should it be considered a valid approach for comparing gas prices and markups for Wisconsin versus Minnesota consumers.
- *Third*, and similar to the preceding argument, Brannon and Kelly use only one control city (Duluth) and thus all conclusions about changing prices in Wisconsin are made relative to Duluth. Even if one believed that the change in the law resulted in higher prices

in Beloit and Eau Claire relative to Duluth in the six months following the presumed increased enforcement of Wisconsin's fair marketing law, concluding that prices are higher in the entire state forevermore is unwarranted.

As shown in Part 1 of this report, taking a national perspective when studying the effect of fair marketing laws provides evidence that while price may increase during the first year of implementation, fair marketing laws ultimately lead to lower prices. This highlights the importance of evaluating fair marketing legislation over a longer period of time in order to ascertain its effects. Moreover, the analyses illustrate the importance of considering other factors that might influence gas prices. Unfortunately, Brannon and Kelly draw conclusions based on (1) only short-term effects, (2) do not control for other variables, and (3) an inappropriate sample to make conclusions about the entire state of Wisconsin.

An Alternative Analysis

We use a different approach to evaluate gas prices in Wisconsin and Minnesota. First, rather than comparing prices in selected cities over a relatively short period of time, and consistent with the approach/data used in Part 1, we compare average annual inflation-adjusted prices over the course of 16 years. As such, we look at the impact of legislation over a longer time period rather than just a six-month period. Moreover, in place of drawing conclusions concerning Minnesota versus Wisconsin using just two cities, we look at data at the state-level. This is a superior approach to making inferences from two small cities alone.

Also, instead of focusing on a change in the enforcement of Wisconsin's fair marketing law, our analysis is directed at Minnesota's 1995 decision to repeal its general sales-below-cost law that applies to gasoline sales. In total, we broadened the scope of the study to assess the impact fair marketing legislation has over a longer time horizon and examine the effects "across" each of the states.

Comparison of End-user Price in Wisconsin Versus Minnesota

As with Part 1 of this report, information on retail and wholesale prices was obtained for the years 1984-1999 from *The Petroleum Marketing Annual*, a yearly report published by the U.S. Energy Information Administration. Retail and wholesale prices represent inflation-adjusted weighted averages net of all taxes (i.e., federal, state, and local sales and excise taxes) from a scientific sample of more than 3,500 companies nationwide and is valid at the 95% confidence level. More detailed definitions of these variables are found in the appendix. See www.eia.doe.gov for a more detailed discussion of the sampling process.

As shown in Table 1, during the years of 1984-1994 in which both Minnesota and Wisconsin had a fair marketing law¹³, the average retail price of unleaded gasoline was 3.93 cents lower in Wisconsin than in Minnesota. As can also be seen in Table 1, for the years 1995-1999, the five-year period after Minnesota repealed its law, the average price of gas to end-users was 5.84 cents lower in Wisconsin. *This translates into an additional 1.91 cent end-user price advantage for Wisconsin residents as compared to Minnesota after Minnesota legislators repealed their law.* As such, and counter to Brannon and Kelly's argument, the difference in gasoline prices between Wisconsin and Minnesota increased in Wisconsin's favor after Minnesota repealed its law.

Table 1
Minnesota vs. Wisconsin: With Fair Marketing Law and Without
(End-user Price: Net of All Taxes)

	Minnesota End-user Price	Wisconsin End-user Price	Difference
1984-1994 Both States With Fair Marketing Law	80.03¢	76.10¢	-3.93¢
1995-1999 After Minnesota Repealed Law	80.58¢	74.74¢	-5.84¢
1.	Difference represents Wisconsin end-user gas prices as compared to Minnesota		
2.	The end-user data are in real dollars and net of all taxes		

Comparison of Markup Price in Wisconsin Versus Minnesota

Brannon and Kelly argue that because of the greater use of ethanol in Minnesota, a direct comparison of end-user gas prices may not be appropriate. We do not have data to support or contradict this claim, nor are they necessary. Specifically, to account for their claim that Wisconsin's fair marketing law disadvantages Wisconsin's consumers relative to Minnesota, we next examined the markup for the same time periods as outlined in Table 2. Using Brannon and Kelly's argument as a guide, one might expect that the markup that Minnesota consumers pay relative to Wisconsin would decrease after Minnesota repealed its fair marketing law. Table 2 strongly refutes this assumption. Specifically, Wisconsin on average had a 1.8 cent lower markup over the years that both states had a similar markup law. In contrast, Wisconsin had a 3.06 cents lower markup after Minnesota repealed its law. *This markup translates into an additional 1.26 cent savings for Wisconsin consumers. Apparently, the repeal of Minnesota's fair marketing law did not have the desired effect and likely accounts for the fact that Minnesota legislators have recently passed a revised version of the law.*

¹³ Minnesota actually had a sales-below-cost law that applied to all sales and not just gasoline. The law was repealed in 1995, but effective August 2001 Minnesota has reinstated a fair marketing law that applies to motor fuel.

Table 2
Minnesota vs. Wisconsin: With Fair Marketing Law and Without
(Markup Over Wholesale Price: Net Of All Taxes)

	Minnesota Markup	Wisconsin Markup	Difference
1984-1994 Both States With Fair Marketing Law	12.43	10.63	-1.8
1995-1999 After Minnesota Repealed Law	15.82	12.76	-3.06
1. Difference represents Wisconsin end-user gas prices as compared to Minnesota 2. Markup = (Price at pump – wholesale price).			

Conclusion

Our analysis shows that the Brannon and Kelly report's conclusions are simplistic, erroneous and misleading. A more comprehensive comparison shows that the repeal of Minnesota's law is associated with higher prices in Minnesota relative to Wisconsin. Specifically, after Minnesota repealed its general sales-below-cost law, Minnesota prices increased by 1.91 cents over the price that Wisconsin consumers paid. Equally important, the markup that Minnesota consumers paid relative to Wisconsin consumers also increased after the fair marketing law was repealed.

In combination, Tables 1 and 2 illustrate that the repeal of Minnesota's fair marketing law has hurt Minnesota consumers relative to Wisconsin consumers.

Part 1 of this report concluded that motor fuel fair marketing laws lower gas prices for consumers by reducing retail prices and markups in states that adopt them. In short, fair marketing laws do what they are supposed to do—lower gas prices to consumers. Part 2 shows that the Brannon and Kelly study is invalid and should not be used to draw conclusions about the impact of fair marketing laws in Wisconsin, Minnesota or any other states that may be reviewing related policies.

Of interest, Minnesota's recent decision to reinstate a fair marketing law on motor fuel sales (effective August 2001) suggests that legislators and consumers were dissatisfied with the outcome of Minnesota's 1995 decision to eliminate its general sales-below-cost law.

References

Brannon, James I., and Frank Kelly (1999), "Pumping Up Gas Prices in Wisconsin: The Effects of the Unfair Sales Act on Retail Gasoline Prices in Wisconsin," *Wisconsin Policy Institute*, Vol. 12 No. 7.

Appendix
Detailed Definitions and Sources For Variables Employed in the Analysis

Variable	Details	Source
Retail Price of Unleaded Gasoline	Average Annual Inflation Adjusted Price of Unleaded Gasoline Sales to End-users Net of All Taxes. Sales to end-users are those made directly to the ultimate consumer, including bulk customers, such as agriculture, industry, and utilities, as well as residential and commercial customers.	Energy Information Administration, <i>Petroleum Marketing Annual</i> , 1984-1999
Wholesale Price of Unleaded Gasoline	Average Annual Inflation Adjusted Price of Unleaded Gasoline Sales for Resale Net of All Taxes. Sales for resale, that is, wholesale sales, are those made to purchasers who are other than ultimate consumers.	Energy Information Administration, <i>Petroleum Marketing Annual</i> , 1984-1999

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Dr. Peltier earned his Ph.D., MBA and B.B.A. degrees in marketing from the University of Wisconsin-Madison, with a minor in statistical analysis at the doctoral level. He has taught a variety of graduate and undergraduate courses at the University of Wisconsin-Madison, University of Nevada-Las Vegas, University of Colorado-Denver, and is currently a professor of marketing at the University of Wisconsin-Whitewater. Dr. Peltier's teaching specialties include marketing research, database marketing, advertising and statistical research methods/analysis.

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As a consultant, he acts as director of research at Knupp & Watson, Inc., in Madison. He is also president and owner of Applied Ph.D. Research and faculty research director for Creative Marketing Unlimited Research at UW-Whitewater. He is an internationally known expert in health care marketing research, advertising research, database applications and strategic marketing. In addition to having supervised hundreds of research projects, Dr. Peltier has authored over dozens of journal publications and presented numerous papers at international research conferences.

Internationally recognized, Dr. Peltier has won numerous awards for his research publications. In 1999, UW-Whitewater honored him as the "Outstanding Researcher" on campus.



Senate Bill 215... relating to: regulating the minimum price of motor vehicle fuel.

BILL SPONSORS

Authored by Senators **Zien** and **Reynolds**.
Coauthored by Representatives **Wood, Gundrum, Lehman, and Wasserman**.

BILL HISTORY

Senate Bill 215 was introduced May 24, 2005 and referred to the Senate Committee on Judiciary, Corrections and Privacy.

A public hearing was held on June 1, 2005, and an executive session was held on November 30, 2005 where the committee adopted Senate Substitute Amendment Two 5-0 and passed the bill as amended 3-2 (No: Risser, Taylor)

COMPANION BILL HISTORY

Assembly Bill 505 was introduced on June 21, 2005 and referred to the Joint Committee on Finance.

LRB ANALYSIS

Current Law:

Under current law, the Unfair Sales Act or "minimum markup" law prohibits "loss leaders," or wholesale and retail sales of merchandise at a price below the cost of the merchandise to the seller. With respect to motor vehicle fuel, current law prescribes certain formulas for calculating cost; a separate formula applies to each of several categories of wholesalers and retailers. Each calculation includes a minimum markup to cover a portion of the cost of doing business.

The minimum markup for a wholesaler of motor vehicle fuel is currently 3 percent, which means that the wholesaler must sell the fuel for at least 3 percent more than the cost of the fuel to the wholesaler. The minimum markup for the sale of motor vehicle fuel at a retail station owned by a refiner or a motor vehicle fuel wholesaler is 9.18 percent of the cost to the wholesaler or 9.18 percent of the average posted terminal price, whichever is greater. The "average posted terminal price" is an average price at which motor vehicle fuel is offered on a specific date, plus certain excise taxes and overhead costs. The minimum markup for the sale of fuel at a retail station not owned by a refiner or wholesaler is either 6 percent of the cost or 9.18 percent of the average posted terminal price, whichever is greater. The minimum markup for the retail sale of motor vehicle at a location other than a retail station is 3 percent. Current law does not define "retail station."

Proposed Change:

Senate Bill 215 eliminates the minimum markup component of each formula for calculating the cost of motor vehicle fuel. For sales of motor vehicle fuel, the bill changes the definition of loss leader from a sale below cost to a sale at or below cost. As a result, motor vehicle fuel must be sold at a price greater than the cost to the seller, but the cost no longer includes a minimum markup for the cost of doing business.

Senate Substitute Amendment Two:

Senate Amendment 2 accomplishes the following:

1. The general requirement that the wholesale price of motor vehicle fuel be increased

	<p>by a minimum of 3% over cost to the wholesaler is eliminated.</p> <p>2. The general requirement that the retail price of motor vehicle fuel be increased by a minimum of 6% over the cost of the fuel to the retailer is reduced to a minimum markup of 4%.</p> <p>3. In addition to the 4% retail minimum markup, the retailer must add at least three cents per gallon in a sale to a consumer.</p> <p>4. When a retailer sells motor vehicle fuel at a price below the defined cost to the retailer in order to meet a competitor's price, the "determination date" lookback period is reduced from 10 days to seven days.</p> <p>5. A retailer, wholesaler, or a refiner may not sell motor vehicle fuel at a price equal to or less than cost to one of those providers.</p> <p><u>Major Impact:</u></p> <p>SB 215 eliminates the minimum mark-up of motor vehicle fuel.</p>
<p>FISCAL EFFECT</p>	<p>None.</p>
<p>SUPPORT</p>	<p>The following persons appeared in favor of this bill:</p> <ol style="list-style-type: none"> 1. Dave Zien, Madison — Senator 2. Jeff Wood, Madison — Representative 3. Tom Reynolds, Madison — Senator 4. David Clark, Waukesha — Coalition for Lower Gas Prices 5. Ernie Stetenfeld, Madison — AAA Wisconsin 6. Craig Thompson, Madison — Wisconsin Counties Association 7. Robert Collison, Brookfield — Americans for Prosperity 8. Casey Coats, Blanchardville <p>The following persons registered in favor of this bill:</p> <ol style="list-style-type: none"> 1. Mike Furgal, Madison — Veterans of Foreign Wars 2. Marc Bentley, Madison — Schneider National 3. Michael Theo, Madison — Murphy Oil USA 4. Nate Elias, Madison — Wal-Mart <p>The following organizations registered their support for the bill with the State Ethics Board, but did not testify or register at the public hearing:</p> <ol style="list-style-type: none"> 1. none
<p>OPPOSITION</p>	<p>The following people testified in opposition to this bill:</p> <ol style="list-style-type: none"> 1. John Kruepkr, Jackson — Jim Ltd 2. Rick Lambrecht, Chippewa Falls — Consumers Cooperative Association 3. Dane Hegenbarth, Galesville — Hegenbarth Food Group Inc. 4. Todd Van Zeeland, Appleton — Van Zeeland Oil Company.

5. Jim Goetz, Madison — Goetz Companies
6. Ron Counsell, Watertown — Borderline BP
7. Chuck Van Zeeland, Appleton — Petroleum Marketers
8. Ed Francois, Belleville
9. Ed Huck, Madison
10. Richard McDonald, Manitowoc
11. Richard Blatter, Lake Mills
12. Keith Yelverton, Oconomowoc
13. Tony Huppert, Spring Valley
14. John Manske, Madison — Wisconsin Federation of Cooperatives
15. Randy Meffert, Waunakee — Wisconsin Petroleum Marketers & Convenience Store Association
16. Bob Bartlett, Madison — Wisconsin Petroleum Marketers & Convenience Store Association

The following people registered in opposition to this bill:

1. Scott Stenger, Madison — Tavern League of Wisconsin
2. Bill Smith, Madison — National Federation of Independent Businesses
3. Mary Ann Gerard, Madison — Wisconsin Auto & Truck Dealers Association
4. Jolene Plautz, Madison — Kwik Trip
5. Rick Genin, Madison — Genin's Mobil
6. Marian Kruepke, Jackson
7. Brandon Seltorz, Madison — Wisconsin Grocers Association
8. David Becker, Windsor — Windsor Travel Center Inc.
9. Gary Manke, Madison — Midwest Equipment Dealers Association
10. Michael Seversin, Madison — Seversin's Service Center
11. Peter Thacker, Middleton
12. James Lund, Middleton — Jim's Amoco LLE
13. Ferron Havens, Blue Mounds — Wisconsin Agribusiness Council
14. Fred Goetz, Madison
15. Gary Pivotto, Madison
16. W.B. Hollenbeck, Hartland
17. Eric Jensen, Madison — WBDA
18. Sabrina Gentile, Madison — Wisconsin Farm Bureau
19. Kathi Kilgore — Outdoor Advertising Association
20. Michelle Kussow, Madison — Wisconsin Grocers Association
21. Matt Hauser, Madison — Wisconsin Petroleum Marketers & Convenience Store Association

The following organizations registered their opposition to the bill with the State Ethics Board, but did not testify or register at the public hearing:

1. none

NEUTRAL

The following organization(s) appeared or registered for information only:

1. none

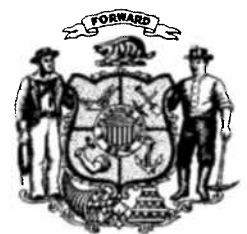
The following organization registered their intention to lobby with the State Ethics Board but did not take a position on the bill:

1. American Petroleum Institute

	<ol style="list-style-type: none">2. Cottonwood Financial Ltd.3. Murphy Oil USA4. Wisconsin Merchants Federation5. Wisconsin Transportation Builders Association6. Woodman's Food Market
CONTACT	Kimber Liedl, Committee Clerk, Senate Committee on Judiciary, Corrections & Privacy
DATE	May 4, 2006



WISCONSIN STATE LEGISLATURE



Q: What are the assumptions that we would need to accept in order to accept the conclusions of the Skidmore et. al. study?

A: We would need to be conclude that large retailers effectively lower prices below costs in states without SBC laws to drive out their competitors, and then raise the price to generate monopoly profits once their competitors are gone. However, we must also assume that once the prices are increased, that something keeps the competitors out of the market. However, the barriers to re-entry into the market are actually quite low. First, the vacant stations could easily be re-opened once prices were raised to abnormally high levels, and the renewed competition would result in competitive prices once again. Second, even if a new station needed to be built, the expense of a new station is not so prohibitive to keep competitors out of the market. In the anti-trust literature, this gets at the issue of recoupment as it relates to predatory pricing. That is, predatory pricing is only seen as a profitable strategy if there is an opportunity to recoup the losses generated when prices were cut below costs, by earning monopoly profits for a sustained period of time. No such opportunity exists in this case.

Q: Does the Skidmore et. al., study claim that SBC laws “help the little guy?”

A: No. In fact, Skidmore et. al. show that these laws do not significantly increase the number of small producers (1-4 employee establishments). Rather, they significantly increase the number of medium and large producers (5 employees and more). Thus, their study shows that it is the large producers, not the little guy who is helped by this law. Furthermore, their findings also show that these laws reduce the retail price of gasoline in the long run (which they define as 2-3 years). Once again, this would hurt, not help the little-guy.

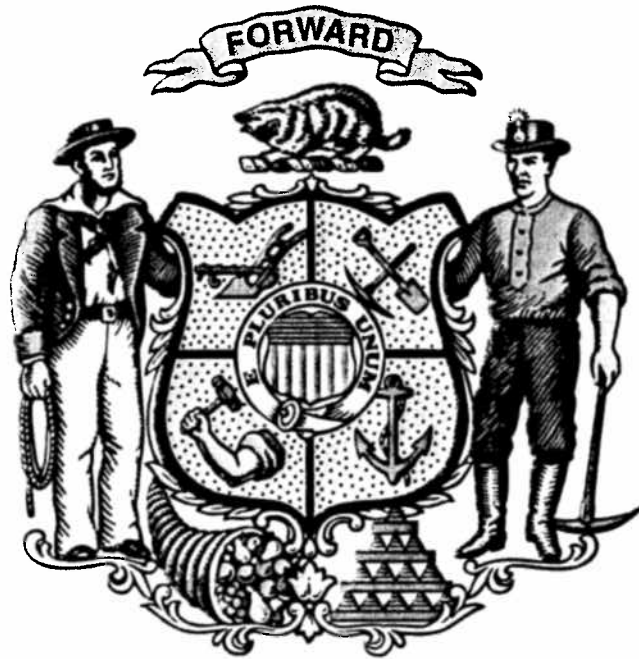
Q: Is the Skidmore et. al., study in the mainstream of economic studies on this topic?

A: No. In fact, their study is unique in finding beneficial impacts to consumers from these laws. They acknowledge that their unique finding is a result of the time period that they use, which includes much of the 1980's. When they use a shorter time period (1994 – 2001), that they find the opposite result; specifically that these laws increase the retail price of gasoline.

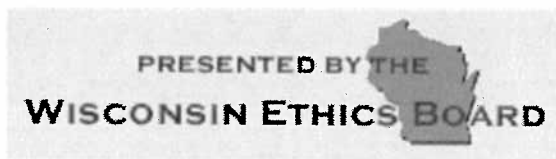
Q: Why is it inappropriate to draw inferences about the impact of these laws today, from data from the 1980's like Skidmore et. al. do?

A: Normally, empirical economists prefer more data to less. However, one of the underlying assumptions that must always be made is that the structure of the market being statistically evaluated is not changing dramatically over the period of analysis. There were a number of reasons to think that this assumption is violated in this case, and hence that there were important structural changes taking place in the retail gasoline market during the 1980's. First, oil prices began falling somewhat rapidly in the middle

1980's as a result of the collapse of OPEC's price discipline in the mid 1980's. Second, the nature of gasoline retailers was changing dramatically during the 1980's. Although the convenience store revolution began in the 1980's, there were still a substantial number of gasoline retailers that pumped modest amounts of gasoline, and had extensive auto repair services. By the end of the 1990's, there were very few retail gasoline stations that specialized in automobile repair, and also very few that did not have convenience stores associated. Third, the pay at the pump technology was not widely adopted until the 1990s. This helped to change the cost structure of gasoline retailing. Fourth, the volume of gasoline sales per station grew dramatically for the major retailers during the 1980's, while it grew at a much slower pace during the 1990's. Finally, the 1980's was a time period in which the majors dominated the retail landscape. The 1990's is a period where non-integrated refiners and independents increased their prominence in the market place. In short, the 1980's were a very different period than the 1990's, and using data from the 1980's to explain the impact of these laws in the 1990's and beyond is probably not appropriate.



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2005-2006 legislative session
Legislative bills and resolutions

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- Text, Sponsors and Analysis
- Status and Fiscal Estimate
- Lobbying Effort on this item

Senate Bill 215

regulating the minimum price of motor vehicle fuel.

Organization		These organizations have reported lobbying on this proposal:	Place pointer on icon to display comment click icon to display prior comments		
Profile	Interests		Date Notified	Position	Comr
●	●	AAA Wisconsin	5/24/2005	↑	
●	●	American Petroleum Institute	5/31/2005	↔	—★
●	●	Cottonwood Financial Ltd.	2/14/2006	?	—★
●	●	Kwik Trip Inc	5/25/2005	↓	—★
●	●	Marten Transport	8/23/2005	?	—★
●	●	Murphy Oil USA Inc	7/27/2005	↔	—★
●	●	National Federation of Independent Business	5/27/2005	?	—
●	●	Outdoor Advertising Association of Wisconsin	6/2/2005	↓	—
●	●	Tavern League of Wisconsin	2/10/2006	↓	—
●	●	Wal-Mart Stores Inc	6/10/2005	↑	—
●	●	Wisconsin Agribusiness Council	8/1/2005	↓	—
●	●	Wisconsin Alliance of Cities Inc	9/14/2005	↓	—
●	●	Wisconsin Automobile & Truck Dealers Association Inc	6/9/2005	↓	—
●	●	Wisconsin Automotive Aftermarket Association Inc	5/31/2005	↓	—
●	●	Wisconsin Counties Association	5/27/2005	↑	—
●	●	Wisconsin Farm Bureau Federation	6/2/2005	↓	—
●	●	Wisconsin Farmers Union	6/20/2005	↓	—
●	●	Wisconsin Federation of Cooperatives	7/25/2005	↓	—
●	●	Wisconsin Independent Businesses Inc	9/13/2005	↓	—
●	●	Wisconsin Merchants Federation	11/30/2005	↔	—
●	●	Wisconsin Petroleum Marketers & Convenience Store Association, Inc.	5/31/2005	↓	—
●	●	Wisconsin Transportation Builders Association	12/29/2005	↔	—
●	●	Woodman's Food Market, Inc.	9/14/2005	?	—