FISCAL RESEARCH CENTER

THE PRICE EFFECT OF GEORGIA'S TEMPORARY SUSPENSION OF STATE FUEL TAXES

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Executive Summary

Introduction

When Hurricane Katrina hit the Gulf Coast in August 2005, it had an immediate, significant and positive effect on the retail price of gasoline. In the wake of Katrina and the resulting increase in the gasoline price, Governor Perdue issued an Executive Order suspending the collection of all state fuel taxes in Georgia beginning on September 2, 2005, with the expressed intention of giving some price relief to Georgia consumers. The suspension was temporary, and lasted only until the end of September. While the possibility of taking such action was discussed by some of the other immediately surrounding states (e.g., Tennessee, Alabama, Florida, South Carolina, North Carolina), Georgia was the only state to act (Setze 2005).

In this report we explore the following question: Did the temporary suspension of the Georgia gasoline tax have the intended effect of lowering the gasoline price for Georgia consumers? The answer to this question is clearly of some interest, especially since suggestions have sometimes been made for Congress to temporarily suspend federal fuel taxes. We find that the suspension was almost immediately followed by a drop in the consumer price of gasoline, by roughly two-thirds of the amount of the tax suspension. When the temporary suspension was removed at the end of September, the price of gasoline increased back to its pre-Katrina levels.

Some Background on Georgia's Practice of Taxing Gasoline

Georgia's state taxes on gasoline are collected from wholesale distributors. For September 2005, the total effective fuel tax on gasoline was 15 cents per gallon, and it was this 15 cents tax that the Governor suspended. Since the tax is collected from the wholesale distributor, the wholesale price includes the fuel tax. Thus, the cost on September 2, 2005 of the gasoline in the retailers' tanks included the fuel tax. It would have taken a few days for retailers to obtain gasoline on which the distributor did not pay fuel taxes.

It is typically assumed that excise taxes (and other consumption taxes) are fully shifted to consumers in the form of higher retail prices. However, it is well-known that the effect of an excise tax on the price of the product depends upon the relative price elasticities of demand and supply. However, we suspect that it was expected that the per gallon retail price of gasoline would fall by the amount of the tax (i.e., by 15 cents), so that the consumer would reap the entire benefit from the tax cut. Whether this happened with the Georgia fuel tax suspension depends upon supply and demand.

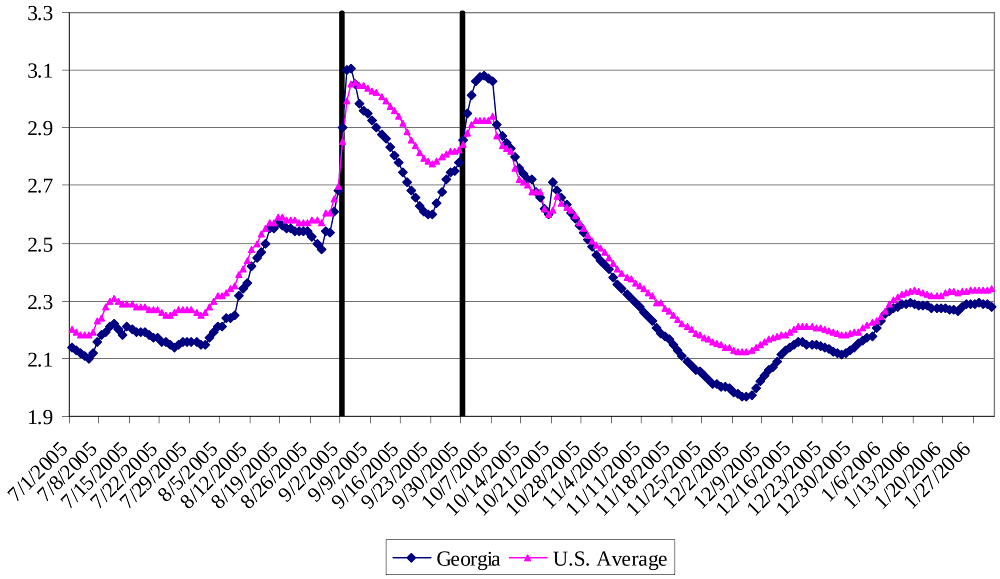
Data and Empirical Strategy

Because other factors were changing at the time of the gasoline tax suspension, we cannot simply compare the price in Georgia before, during, and after the suspension in order to determine the effect of the fuel tax suspension on gasoline prices in Georgia. To control for the changes in other factors that might have affected the price of gasoline, we compare daily gasoline prices in Georgia to the U.S. daily average price and to daily gasoline prices in states that border Georgia. By comparing the price of gasoline in Georgia to the price in other states, we can determine whether the suspension resulted in a reduction in the price of gasoline in Georgia.

Figure A presents daily gasoline prices in Georgia and the U.S. daily average price for the seven months, July 1, 2005 through January 31, 2006. The vertical lines indicate the 2nd and 30th of September, i.e., the tax suspension period. The figure indicates clearly the negative impact of the Georgia suspension of gasoline taxes on gasoline prices in Georgia and the positive price impact of the reimposition of the Georgia tax.

As can be seen in the figure, the gas price increased for both the U.S. and Georgia in the first few days of September, but then gas prices fell and fell more in Georgia. The difference in prices reached 18 cents on September 18th and stayed there until September 23rd. At that point, prices began to increase, with the gas price in Georgia increasing faster. At the end of September, the gas price in Georgia was 1 cent higher than the U.S. average. In order to account for the possible time lag in the

FIGURE A. GAS PRICES IN GEORGIA AND U.S. AVERAGE



wholesale delivery of gasoline that did include the fuel excise tax, we consider price differences over the period September 5th to September 30th. The average difference in daily price for this period was 12.0 cents, or 80 percent of the 15 cent Georgia fuel tax.

This would be the effect of the fuel suspension if the prices in Georgia and the U.S. were the same before and after the suspension. However, as can be seen, that is not the case. For the period October 1, 2005 to January 31, 2006, gas prices in Georgia averaged 2.8 cents less than the national average. Excluding the first week in October increases the difference to 4.7 cents. This suggests that the effect of the suspension was to reduce the retail price of gasoline in Georgia by 7.3 to 9.2 cents per gallon.

We also compared the price of gasoline in Georgia to the prices in neighboring states. Outside of September, gas prices in South Carolina and Tennessee were very similar to prices in Georgia. So it appears that a comparison of the September price differential with these two states would be a good measure of the effect of the fuel tax suspension. Again, ignoring the first four days of September, gas prices in Georgia averaged 11.9 cents less than in South Carolina. During the period October 1 through November 31, gas prices in Georgia average 0.6 cents higher than in Georgia, suggesting that the effect of the suspension was 12.5 cents.

Gas prices in Georgia averaged 8.0 cents less than in Tennessee during the suspension. During the period October 1 through November 31, gas prices in Georgia averaged 1.7 cents higher than in Georgia, suggesting that the effect of the suspension was 9.7 cents.

A more precise measure of the effect of the suspension on gasoline prices in Georgia can be obtained through regression analysis. Our empirical strategy is to measure how the difference in daily prices between Georgia and, say the United States, changed as a result of the gas suspension. For the most basic estimation of differences between the price in Georgia and the U.S. price, we find that the fuel tax suspension is associated with a 9.7 cent decrease in the retail price of gasoline in Georgia.

Overall, these estimation results indicate that the effect of the Georgia gasoline tax suspension was roughly two-thirds shifted to consumers in the form of lower gasoline prices.

The Price Effect of Georgia's Temporary Suspension of State Fuel Taxes

Introduction

When Hurricane Katrina hit the Gulf Coast in August 2005, it had an immediate, significant, and positive effect on the retail price of gasoline. In the wake of Katrina and the resulting increase in the gasoline price, Governor Perdue issued an Executive Order suspending the collection of all state fuel taxes in Georgia beginning on September 2, 2005, with the expressed intention of giving some price relief to Georgia consumers.[1] The suspension was temporary, and lasted only until the end of September. While the possibility of taking such action was discussed by some of the other immediately surrounding states (e.g., Tennessee, Alabama, Florida, South Carolina, North Carolina), Georgia was the only state to act (Setze 2005).

In this report we explore the following question: Did the temporary suspension of the Georgia gasoline tax have the intended effect of lowering the gasoline price for Georgia consumers? The answer to this question is clearly of some interest, especially since suggestions have sometimes been made for Congress to temporarily suspend federal fuel taxes. We find that the suspension was almost immediately followed by a drop in the consumer price of gasoline, by roughly two-thirds of the amount of the tax suspension. When the temporary suspension was removed at the end of September, the price of gasoline increased.

[1] State law allows the governor to suspend tax collections until the next meeting of the state's General Assembly. While it was not necessary, the state General Assembly was called into session to ratify the Executive Order, which it did.

Some Background on Georgia's Practice of Taxing Gasoline

Georgia's state taxes on gasoline consist of a 1 percent sales tax, a 3 percent fuel tax, and a 7.5 cent excise tax.[2] These taxes are collected from wholesale distributors.[3] Every six months the state specifies a retail price for gasoline on which the 1 percent sales and 3 percent fuel tax is levied. Thus, the state converts the tax into an excise tax. For September 2005, the total effective fuel tax on gasoline was 15 cents per gallon, and it was this 15 cents tax that the Governor suspended. Nationwide, state (and federal) taxes add roughly 40 cents to the average per gallon price of gasoline.

Since the tax is collected from the wholesale distributor, the wholesale price includes the fuel tax. Thus, the cost on September 2, 2005 of the gasoline in the retailers' tanks included the fuel tax. It would have taken a few days for retailers to obtain gasoline on which the distributor did not pay fuel taxes.

[2] The state sales tax rate is 4 percent. Fuel is exempt from 3 percentage points of the 4 percent sales tax, so the state sales tax on fuel is 1 percent. However, the 3 percent is formally designated a fuel tax, which allows the state to earmark the revenue for transportation purposes.

[3] The exact procedure by which state gasoline excise taxes are administered varies across the states. In forty-two states (plus the District of Columbia), the tax is administered by a department of revenue or a department of taxation; in most remaining states there is a separate transportation or motor vehicles department that is responsible for the administration. Similarly, the agent that collects the gasoline tax (or the "point of taxation") also varies across the states. In many states it is the gasoline distributor that collects the excise tax; in a smaller number of states the tax is collected by the retail gasoline station; several other states collect the tax either on a "first sale" basis, in which the importer of the gasoline pays the tax upon receipt, or on a "first import" basis with the tax collected by the agent responsible when the gasoline first comes into the state.

Analytical Framework

It is typically assumed that excise taxes (and other consumption taxes) are fully shifted to consumers in the form of higher retail prices.[4] However, it is well-known that the effect of an excise tax on the price of the product depends upon the relative price elasticities of demand and supply. The retail price (inclusive of the excise tax) increases relatively more as a result of a tax increase the greater is the suppliers' responsiveness to price changes, and relatively less the greater is the responsiveness of consumers to price changes.[5] In this simple world, consumers will bear the full burden of an excise tax on gasoline (i.e., the increase in the retail price equals the excise tax) if supply is perfectly elastic, that is, if the supply curve is horizontal.

A simple example illustrates this conclusion. Suppose a gasoline excise tax is introduced in a perfectly competitive retail gasoline market. Figure 1 contains a very simple supply and demand model. The quantity demanded falls as the price increases, while the quantity supplied increases as the price increases. The market equilibrium price occurs where the two lines intersect; any other price will mean that there is excess demand (and there would be pressure to increase the price), or excess supply (and there would be pressure to reduce the price.) As a result of Katrina, the supply of gasoline had fallen, resulting in upward pressure on the price.

If an excise tax is imposed, the price paid by the consumer will differ from the price (net of the tax) received by the supplier by the amount of the excise tax; that

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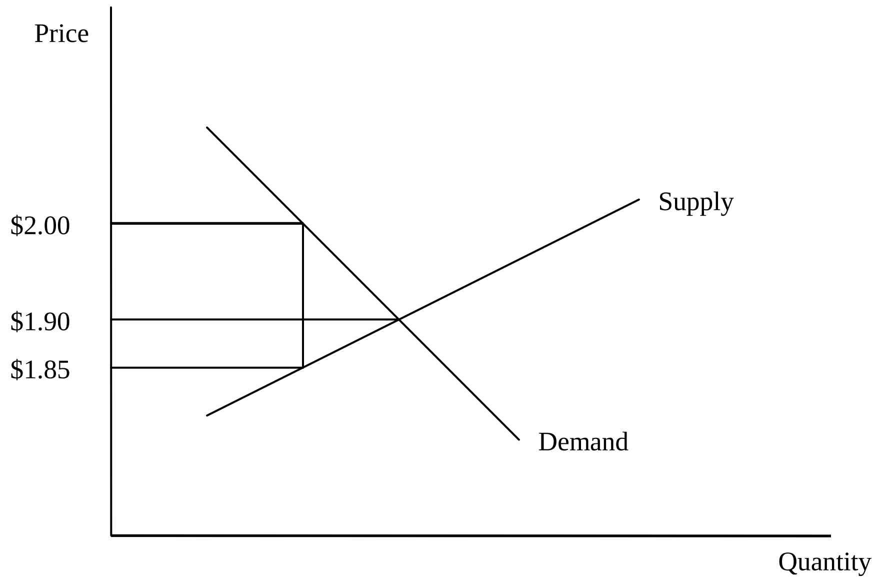
[4] For a recent survey of tax incidence, see Fullerton and Metcalf (2002).

[5] To be more precise, suppose that a perfectly competitive market has a demand curve defined by [$P=a-bQ$] and a supply curve defined by [$P=c+dQ$], where a, b, c, and d are positive parameters. The imposition of a specific excise tax t changes the supply curve to [$P=c+t+dQ$], where the price P is interpreted as the gross-of-tax price paid by consumers. Solving these equations gives:

$$P=(ad+bc+bt)/(b+d).$$

The tax therefore raises the price gross-of-tax paid by consumers and lowers the price net-of-tax received by producers; that is, the change in the price of gasoline in response to a change in the tax, or $\Delta P/\Delta t$ (where Δ denotes the change in the variable), equals [$b/(b+d)$], and the incidence is in general split between consumers and producers depending upon the slopes (and the elasticities) of the demand and supply curves. The incidence will fall completely on consumers (e.g., $\Delta P/\Delta t=1$) in the special cases that b equals infinity or d equals 0; the former case implies that demand is perfectly inelastic, and the latter case implies that supply is perfectly elastic.

FIGURE 1. THE INCIDENCE OF AN EXCISE TAX



is, the excise tax drives a wedge between demand and supply. This is illustrated in Figure 1, where the vertical line represents the excise tax. In the example, the retail price per gallon is $2.00, the excise tax is 15 cents, and the revenue received by the retailer is $1.85. When the 15 cents gasoline tax is eliminated, the retail price falls to $1.90. In this example, the removal of the excise tax means that the consumer pays 10 cents less per gallon while the retailer gets to keep 5 cents more per gallon.

With a flatter supply curve the retailer's share of the tax reduction is smaller. For example, when the supply curve is horizontal the revenue per gallon that the retailer gets is the same regardless of the excise tax. (A supply curve that is horizontal (or "perfectly elastic") means that the suppliers are able to increase the quantity supplied to match any increase in the amount demanded without any increase in the cost per unit.) In this case consumers bear the entire tax burden of the tax and thus gain the entire benefit of the elimination of the tax. This situation is what we suspect was the view of the market when the suspension of fuel taxes was imposed. In particular, we suspect that it was expected that the per gallon retail price of gasoline would fall by the amount of the tax (i.e., by 15 cents), so that the consumer would reap the entire benefit from the tax cut.

Whether this happened with the Georgia fuel tax suspension depends upon whether the supply of gasoline was horizontal, so that the wholesalers reduced their price to the retailer and the retailer in turn passed on the reduction in wholesale price to the consumer. However, if supply is not horizontal, for example because costs increase with increasing output or because the supplier exercises monopoly power in the sale of gasoline, then the conclusion that the retail price will fall by the full amount of the tax will not hold.[6]

In the long run the supply of gasoline may be horizontal, but in the aftermath of Katrina, supplies were interrupted. Thus, the ability to increase supply to match the increase in demand due to the suspension of the excise tax may have been limited. The demand for gasoline, particularly in the short-run, is thought to be rather non-responsive to price changes, i.e., to be inelastic.

[6] For example, continuing with the scenario in Note 5, under monopoly provision of gasoline the equilibrium price with the tax becomes [$P=(ab+ad+bc+bt)/(2b+d)$], so that [$\Delta P/\Delta t=b/(2b+d)$], so that there is not full forward shifting of the tax to consumers.

A Brief Review of Previous Excise Tax Incidence Studies

Most applied incidence studies assume that sales and excise taxes are fully reflected in consumer prices, so that prices respond one-for-one to changes in excise taxes (Pechman 1985; Bradford 1995; Cronin 1999). Surprisingly, however, there is little empirical analysis on the extent to which excise taxes actually affect commodity prices.[7]

Poterba (1996) uses city-specific clothing and personal care price data covering the 1947-1977 and the 1925-1939 periods to examine the degree to which state and local retail sales taxes are shifted to consumers. His results are somewhat variable, but he often finds that taxes are fully shifted to consumers; in some cases he finds limited evidence of over-shifting, although it is never possible to reject the null hypothesis that prices rise "point-for-point" with the changes in the tax, and he also finds that full shifting typically (though not always) occurs in the first quarter of the tax change.

Besley and Rosen (1999) also examine the incidence of sales taxes using price data for 12 narrowly defined commodities in 155 different U.S. cities, using quarterly price data for the period 1982-1990. They find full shifting for a number of the commodities, but they also find over-shifting for more than half the products, a result that they attribute to imperfect competition in the retail sector.

Kenkel (2005) considers the effect of tax increases on alcoholic beverage prices in Alaska. Using a phone survey of over 400 establishments, he collected prices one month prior to the tax increase and one year after the tax change. He finds that the tax increase was more than fully passed through to consumers. His results are consistent with those of Cook (1981) and Young and Bielinska-Kwapisz (2002), who also find that alcoholic beverage taxes are more than fully passed through.

There are also several papers that consider the effect of taxes on the price of fuel. Chouinard and Perloff (2002, 2004) attempt to explain inter-state differences in retail and wholesale gasoline prices using monthly data for the 48 mainland states plus the District of Columbia for the period March 1989 through June 1997. They

[7] For some examples of early empirical research on the incidence of sales and excise taxes, see Due (1954), Brownlee and Perry (1967), Woodard and Spiegelman (1967), and Sidhu (1971).

list the many reasons why price could differ over time and space, including demand, costs, market power, pollution laws, seasonality, and taxes. They estimate a simple reduced form equation, so the coefficients on tax rates cannot be interpreted as incidence measures. They find that less than 50 percent of federal taxes are reflected in the retail price, while 97 percent of state fuel taxes are reflected in the retail price. It is unclear why the two taxes should result in different price effects.

Doyle and Samphantharak (2005) study the temporary suspension of the sales taxes on gasoline prices in Illinois and Indiana, using daily gasoline prices at the station level. They regress the log of price against a state dummy variable, a post-suspension dummy variable, the state dummy variable interacted with the post-suspension dummy variable, the log of the wholesale price, brand dummy variables, and the station's zip code characteristics; price is measured just before and just after the tax change. They find that prices fell by less than the full amount of the tax reduction and that the price increased by more when the tax was re-inserted than the decrease in price when the tax was suspended. These changes are similar to the effect they find for differences in the wholesale cost.

Alm, Sennoga, and Skidmore (2007) test the assumption of full forward shifting of gas taxes using monthly gasoline prices for all 50 states over the period 1984 to 1999. Their results consistently indicate full shifting of gasoline taxes, with an almost immediate reflection of gasoline taxes in the tax-inclusive gasoline price.

With the exception of Doyle and Sampantharak (2005), the studies of the price effect of taxes on fuel consider quasi-permanent changes in fuel taxes. A temporary change in fuel tax provides a stronger test of the full and immediate shifting of the fuel tax, as found by Alm, Sennoga, and Skidmore (2007). With a temporary suspension of the fuel tax, retailers could be inclined to refrain from reducing the price of gasoline by the full amount of the tax cut. The temporary nature of the tax suspension does not allow for changes by retailers other than price changes. For example, we should not expect a change in the number of retailers due to the change in the tax. Finally, unlike other products, gasoline is a very homogenous product, one whose price is clearly announced by each retailer, and there are websites that list retailers with the lowest prices.

Data and Empirical Strategy

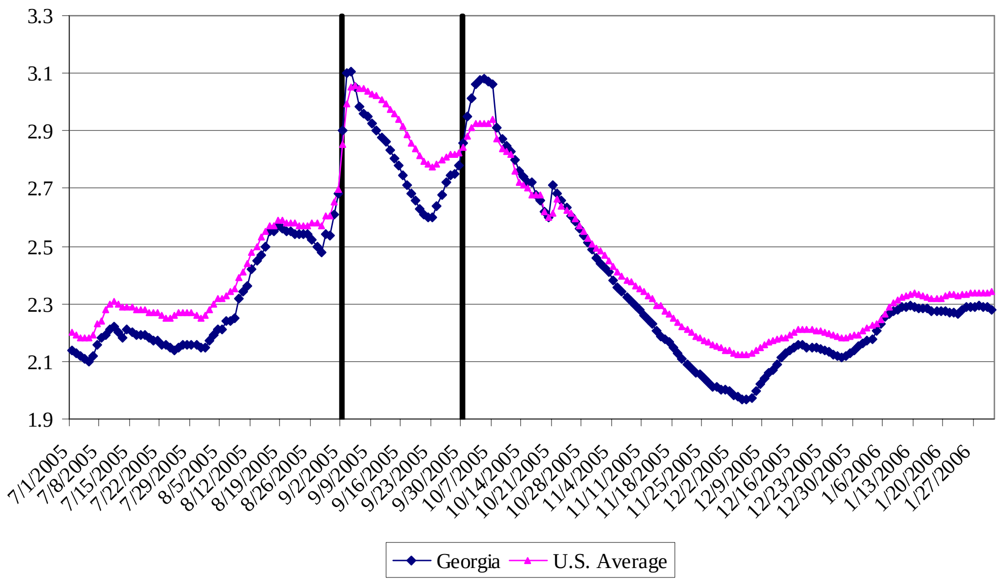
Because other factors were changing at the time of the gasoline tax suspension, we cannot simple compare the price in Georgia before, during, and after the suspension in order to determine the effect of the fuel tax suspension on gasoline prices in Georgia. To control for the changes in other factors that might have affected the price of gasoline, we compare daily gasoline prices in Georgia to the U.S. daily average price and to daily gasoline prices in states that border Georgia. So, by comparing the price of gasoline in Georgia to the price in other states we can determine whether the suspension resulted in a reduction in the price of gasoline in Georgia.

We collected average daily retail gasoline prices from Georgia and its neighboring states, Tennessee, Alabama, Florida, South Carolina, and North Carolina, and for the entire United States. These data are from the AAA website, *fuelgaugereport.com*, and are based on consumer reports of prices paid. Our Georgia and U.S. data cover the period July 1, 2005 through January 31, 2006, although in our estimations we also examine different sub-periods of the entire period.

Simple Cross-State Comparisons

Figure 2 presents daily gasoline prices in Georgia and the U.S. daily average price for the seven months, July 1, 2005 through January 31, 2006. The vertical lines indicate the 2nd and 30th of September, i.e., the tax suspension period. The figure indicates clearly the negative impact of the Georgia suspension of gasoline taxes on gasoline prices in Georgia and the positive price impact of the reimposition of the Georgia tax.

FIGURE 2. GAS PRICES IN GEORGIA AND U.S. AVERAGE



As can be seen in Figure 2, the gas price increased for both the U.S. and Georgia in the first few days of September, but then gas prices fell and fell more in Georgia. The difference in prices reached 18 cents on September 18th and stayed there until September 23. At that point, prices began to increase, with the gas price in Georgia increasing faster. At the end of September, the gas price in Georgia was 1 cent higher than the U.S. average. In order to account for the possible time lag in the wholesale delivery of gasoline that did include the fuel excise tax, we consider price differences over the period September 5th to September 30th. The average difference in daily price for this period was 12.0 cents, or 80 percent of the 15 cent Georgia fuel tax.

This would be the effect of the fuel suspension if the prices in Georgia and the U.S. were the same before and after the suspension. However, as can be seen, that is not the case. For the period July 1, 2005 to August 31, 2005, the price of gas in Georgia averaged 7.7 cents lower than the average price for the U.S. During August the price in Georgia was 6.3 cents less than the U.S. average price. In the first five days after the fuel tax suspension ended gas prices in Georgia rose substantial faster than for the U.S. But by the end of the first week of October the price in Georgia had fallen to the U.S. average price and then continued to fall so that by the end of October gas prices in Georgia were less than the U.S. average. For the period October 1, 2005 to January 31, 2006, gas prices in Georgia averaged 2.8 cents less than the national average. Excluding the first week in October increases the difference to 4.7 cents.

We also compared the price of gasoline in Georgia to the prices in neighboring states, although we only have prices for these states for period August 29, 2005 to January 31, 2006. Figures 3 – 7 contain these comparisons. In all of the figures the price of gas in Georgia was lower during the fuel tax suspension. However, gas prices were higher in Alabama, Florida, and North Carolina than in Georgia on most other days.

On the other hand, outside of September, gas prices in South Carolina and Tennessee were very similar to prices in Georgia. So it appears that a comparison of the September price differential with these two states would be a good measure of the effect of the fuel tax suspension. Again, ignoring the first four days of September, gas prices in Georgia averaged 11.9 cents less than in South Carolina and prices were generally 9 to 14 cents lower during the period of the fuel suspension. During the period October 1 through November 31, gas prices in Georgia average 0.6 cents higher than in South Carolina, suggesting that the effect of the suspension was 12.5 cents.

Gas prices in Georgia averaged 8.0 cents less than in Tennessee during the suspension, and generally were 5 to 11 cents lower, again ignoring the first four days in September. During the period October 1 through November 31, gas prices in

FIGURE 3. GAS PRICES IN GEORGIA AND ALABAMA

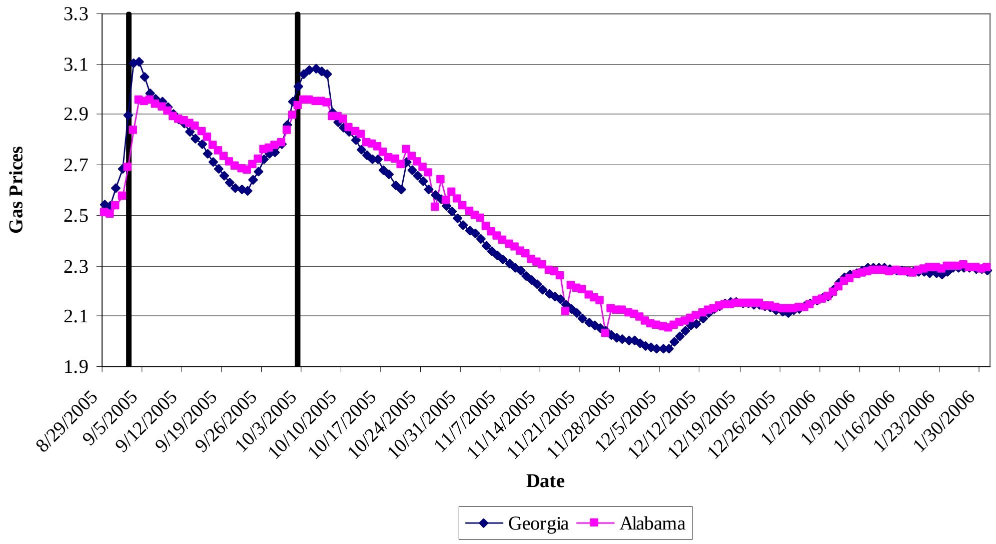


FIGURE 4. GAS PRICES IN GEORGIA AND FLORIDA

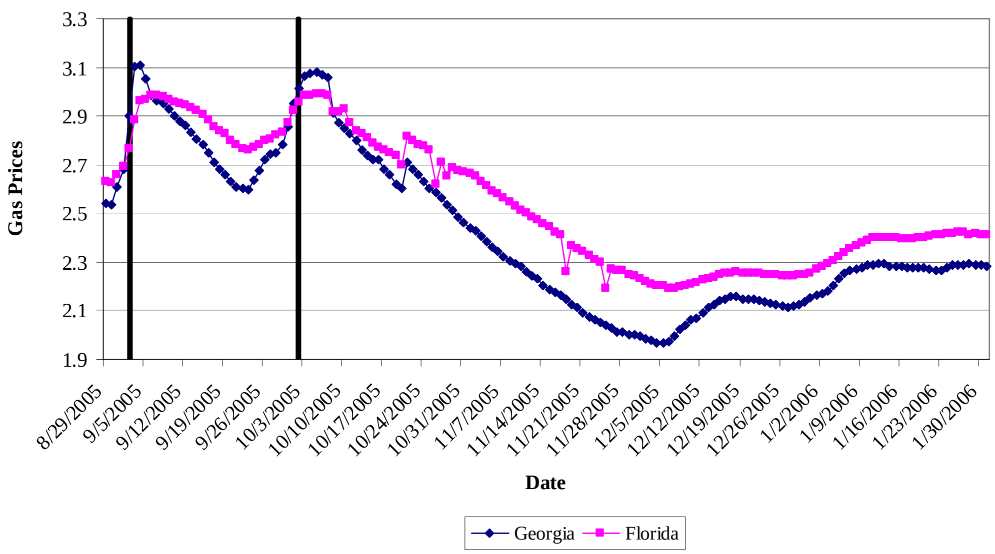


FIGURE 5. GAS PRICES IN GEORGIA AND NORTH CAROLINA

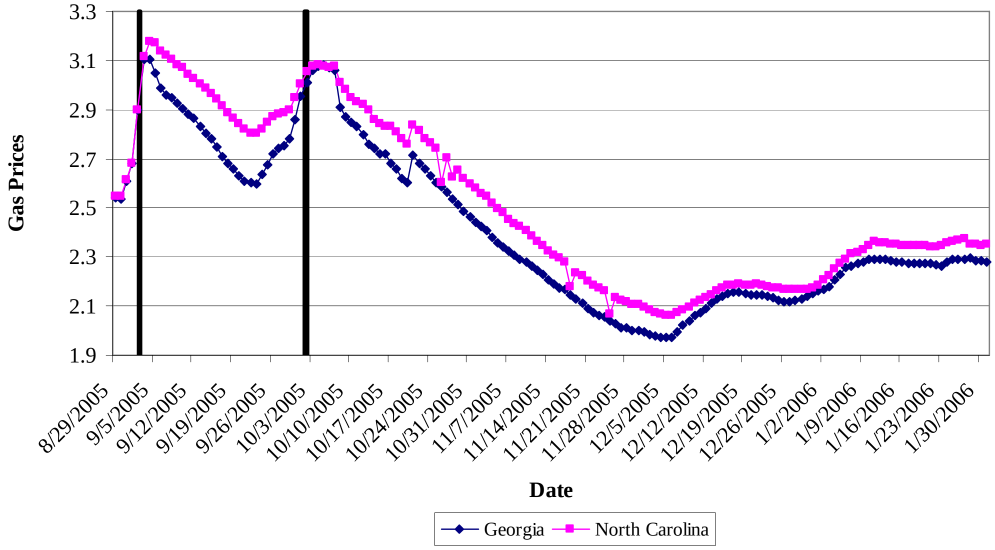


FIGURE 6. GAS PRICES IN GEORGIA AND SOUTH CAROLINA

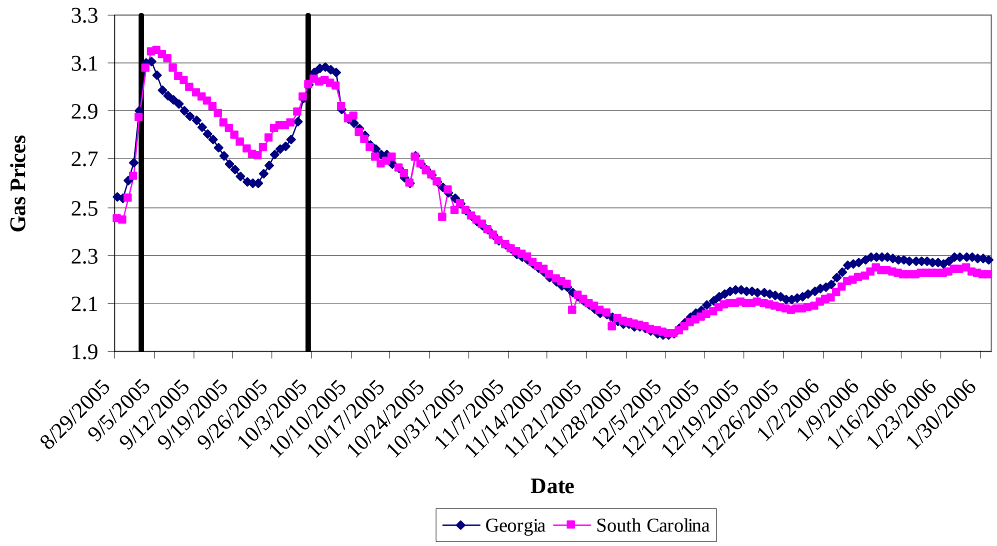
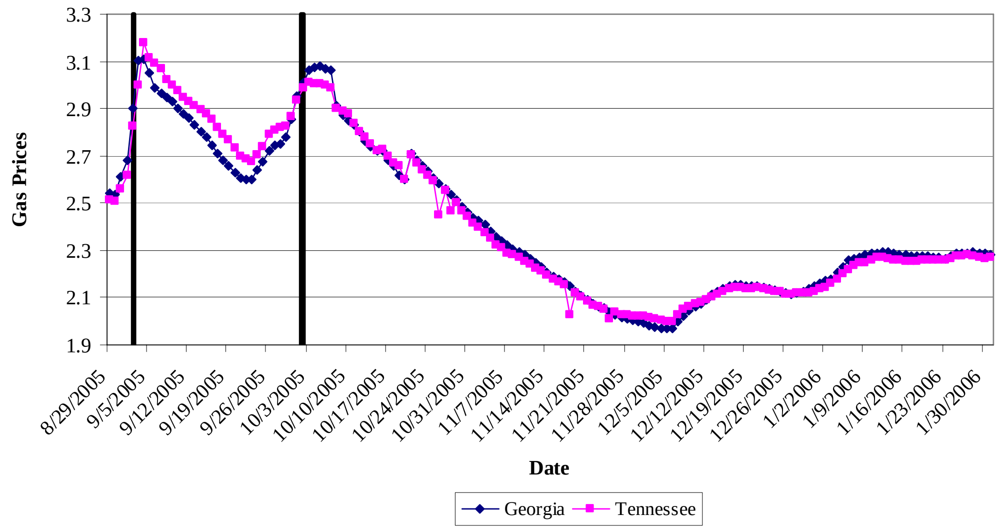


FIGURE 7. GAS PRICES IN GEORGIA AND TENNESSEE



Georgia averaged 1.7 cents higher than in Tennessee, suggesting that the effect of the suspension was 9.7 cents.

Gas prices in the September 5th to September 30th period were 17.0 cents lower on average in Georgia than in North Carolina. However gas prices were 10.6 cents lower on average during the period October 1 to November 31. This suggests that during the fuel tax suspension, the price of gas in Georgia was 5.4 cents lower than normal. An equivalent comparison of gas prices in Georgia with Alabama and Florida suggests that the gas price actually increased during the fuel tax suspension.

The comparisons of Georgia gas prices with the national average, North Carolina, South Carolina, and Tennessee suggest that the fuel suspension resulted in a reduction of gas prices in Georgia of between 5.4 cents and 12.5 cents.

Regression Analysis

The figures provide some indication that the suspension of the fuel tax reduced the retail price of gasoline in Georgia. However, a more precise measure of the effect of the suspension on gasoline prices in Georgia can be obtained through regression analysis. Our empirical strategy is to measure how the difference in daily prices between Georgia and, say the United States, changed as a result of the gas suspension. For example, if the typical difference in prices was 5 cents before and after the suspension and 12 cents during the suspension, we can conclude that the suspension caused a 7 cent drop in gas price in Georgia. This approach is referred to as the difference-in-differences approach.

To implement this approach we estimate the following regression:

$$[P_{Gt} - P_{Ot}] = \beta_0 + \beta_1 * Suspension + \varepsilon,$$

where P_{Gt} is the retail price of gasoline in Georgia on day t, P_{Ot} is the price in another market on day t, *Suspension* is a dummy that equals one for the period of gasoline tax suspension in September 2005, (β_0, β_1) are coefficients, and ε is an error term. The value of β_1 measures the effect of the suspension.

We estimate this equation separately for Georgia versus the U.S, and for Georgia versus each of the surrounding states. We also estimate this equation for data covering the sub-period of July, August, September, and October of 2005 (123 daily observations), as well as for the entire July 2005-January 2006 period (215 daily observations). In some specifications, we include a time trend, and in other specifications the dependent variable is measured as the natural log of the price difference.

Our basic estimation employs simple Ordinary Least Squares (OLS) estimation methods. However, given the time series properties of the data, we also employ error correction methods, and we examine the consistency of our OLS estimates with cointegration methods.

If the tax suspension was fully shifted to the retail customer, then the coefficient on *Suspension* (or β_1 in our basic specification) would equal 15 cents. In fact, we find that the temporary suspension of the gasoline tax lowered prices in Georgia relative to other states and the U.S. average, a result consistent with what is observed in the figures. However, we find that the gas price in Georgia did not fall by the full amount of the tax suspension, a result also suggested by the figures.

Table 1 contains the results of some of the regression analysis. The most basic OLS estimation for Georgia versus the average U.S. price, for the sub-period July to October 2005, gives a coefficient on *Suspension* of -0.097 (column 2). This implies that the fuel tax suspension is associated with a 9.7 cent decrease in the retail price of gasoline in Georgia. Overall, these estimation results indicate that the effect of the Georgia gasoline tax suspension was roughly two-thirds shifted to consumers in the form of lower gasoline prices.

TABLE 1. ESTIMATION RESULTS

Independent Variable	Model 1: Sub-period	Model 2: Entire Period
Constant	4.004	-0.0585
	(12.66)	(12.802)
Suspension	-0.097	-0.027
	(2.462)	(2.272)
R^2	0.189	0.124
Number of Observations	123	215

Note: t-statistics are in parentheses.

When the entire period is used for the estimation (column 3 in Table 1), we still find that the impact of the gasoline tax suspension is to lower the price of gasoline in Georgia relative to the U.S. average or relative to neighboring states. However, the impact of the suspension is significantly reduced. For example, the basic OLS estimation result for Georgia versus the U.S. average yields a coefficient on *Suspension* of -0.027. In other words, we find that the suspension of fuel taxes reduced gasoline prices in Georgia by 2.7 cents.

The inclusion of a time trend does not affect these results. The pooled estimation for Georgia versus neighboring states gives similar results. The results are also unaffected by error correction estimation methods. Cointegration estimates indicate the OLS estimates are consistent.

Overall, then, these results are consistent with partial, but not full, short-run shifting of the temporary elimination of gasoline tax to consumers in the form of a lower retail price of gasoline.

Conclusions

The effect of exogenous and unexpected events on consumer prices inevitably gives rise to the call of political actions to mitigate the impacts of these events on consumers, and a temporary suspension of sales and excise taxes is a common response. The results in this report suggest that a suspension in excise taxes will clearly and significantly affect consumer prices. Indeed, our results indicate that in the short run the suspension of an excise tax on gasoline will be reflected in a reduction in the retail price of gasoline by roughly two-thirds of the excise tax that is removed. Even so, it must be remembered that the reinstitution of the tax will largely restore the pre-suspension price of gasoline. Consequently, the tradeoffs between the gain to consumers from a temporary reduction in prices and the loss to state government from the short-run loss in tax revenues should be factored into any decision.

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