Presidents, Prices at the Pump, and the Difference in Perceptions between Energy Market Experts and Non-Experts*

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Abstract

We conduct a survey of US-based energy market experts and non-experts and find that non-experts are significantly more likely to believe the US President plays a major role in determining retail fuel prices. Next, we analyze weekly retail gasoline and diesel price data from the US, UK, France, and Canada under different heads of state. After controlling for fluctuations in the wholesale crude oil price, country-specific long-run averages in prices, common time shocks, and national fuel excise taxes, we find that fuel prices differ significantly across leaders. Although we do not claim to have established a causal link between executive regime change and retail fuel price variation, our fuel price analysis does help explain why many people believe political executives can influence retail gasoline prices. We also make a call to economists to fill the notable gap in the economic and policy research on the influence of executive action on retail fuel prices and to look for other potential gaps by paying closer attention to similarly prominent economic narratives.

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1 Introduction

Economic narratives, whether true, false, or somewhere in between, substantially influence individual and collective decision making (Shiller, 2019). In the United States, one of the most widely repeated, persistent, and influential economic narratives of the past several decades is that the US President can directly affect the domestic retail price of gasoline through deliberate policy choices. Presidents often claim credit when gasoline prices are low or falling, whereas their opponents or detractors are quick to blame them when gasoline prices are high or rising:

> *"The price of gas has... plummeted from an average of $1.25 a gallon when I took office to about 82 cents today. In fact, the price of gas is now cheaper in real terms... than it's been at any point since the 1950's. My mother used to tell me, 'It's not nice to crow,' but maybe this once I can't help it."* – Ronald Reagan (April 1986)

> *"Where is the president [George W. Bush]? We need a president who is fighting for the American worker, the American family, at the fuel pump."* – John Kerry (May 2004)

> *"Since... [Barack Obama] has been president, the cost of gasoline has doubled. ... He's said, 'It's not my fault.' ... Well, this is in fact his fault."* – Mitt Romney (March 2012)

> *"Do you think it's just luck that gas prices are so low, and falling? Low gas prices are like another Tax Cut!"* – Tweet by Donald Trump (January 2019)

> *"When Joe Biden took the oath of office, the average retail price of gasoline was $2.38 a gallon. Today, it is $4.23 a gallon. ... This was not an accident. It was not an unintended side effect. ... This was the result of the Green New Deal zealots in the Biden Administration."* – Ted Cruz (April 2022)

> *"The fastest decline in gas prices we've seen in a decade. Thanks, Biden."* – Tweet by Hillary Clinton (January 2023)

Numerous quotes like these, made by opportunistic politicians and pundits across the ideological spectrum, can be found in the public record. Nor is strong public sentiment about vehicle fuel prices—and the government's ability to affect them—solely a US phenomenon. Multiple public protests large enough to prompt a government response have erupted over

high fuel prices in the UK since 2000, most recently in 2022 as a result of record high prices in the wake of the war in Ukraine. In France, the highly publicized *Mouvement des Gilets jaunes*, or Yellow Vests Protests, began in 2018, primarily in response to rising crude oil and vehicle fuel prices and a proposed 2019 increase in fuel taxes. Yet despite its apparent effectiveness as a political device (Kim and Yang, 2022), this narrative is rarely accompanied by compelling evidence to support it. Moreover, when its validity is disputed, such rebuttals are often equally lacking in credible empirical support.

A striking feature of this economic narrative is the difference in perceptions between *experts*—e.g., energy industry professionals or research economists specializing in energy markets—and the general public. We present survey-based evidence that experts tend to be significantly more skeptical than non-experts regarding the President's influence over domestic retail fuel prices. Given this disagreement, the lack of empirical evidence, and the public interest in this narrative, it is worth investigating whether experts' skepticism or non-experts' credulity is more justified. We therefore follow our survey results by empirically testing the conjecture that domestic retail prices of gasoline and diesel fuel differ across national leaders. If they do, then regardless of whether the differences are *causally* linked to executive policy, it would explain why so many people believe the narrative that Presidents directly influence retail fuel prices.

To this end, we employ straightforward analyses to determine whether weekly gasoline and diesel prices vary on average for different leaders of the US, Canada, France, and the UK.[1] Our approach controls for variation in each country's relevant wholesale crude oil price and allows for country-specific fixed effects and common time shocks across countries in two separate analyses. First, we estimate an indicator for each leader in the pooled sample relative to the base case of leaders who were in power at the beginning of our data sample. Second, we examine leadership change as a natural experiment during the period when other world leaders in our sample are held constant, yielding quasi-experimental treatment effect estimates of the difference in fuel prices for each leader relative to his or her predecessor. We then repeat these analyses after controlling for national level fuel excise taxes, the most direct policy lever by which leaders can affect retail fuel prices.

[1]Our analysis does not distinguish between presidential versus parliamentary systems. The US is a presidential democracy—i.e., one in which the head of state is elected independently of the legislature. The UK and Canada are classified as parliamentary democracies, in which the Prime Minister (PM) is first elected as a member of parliament, and then elected PM by the other members of the parliamentary legislature. France is considered a 'semi-presidential' democracy, in that it has a parliament and PM, but its official head of state is a popularly elected President who can be removed by the assembly. Our analysis focuses on the nominal head of state in each country—Presidents in the US and France, and PM's in the UK and Canada. Although not part of our focus here, recent research has shown that parliamentary governments are generally better stewards of the macroeconomy across a variety of measures including output growth, inflation, and income inequality (McManus and Ozkan, 2018).

Our results indicate fuel prices are statistically and economically different across many (but not all) leaders, even when accounting for crude oil prices, country fixed effects, common time shocks, and excise taxes. In our pooled analysis, we find (relative to the base period) positive and negative differences in leader-specific average fuel prices of up to 21% of the contemporaneous fuel price. When comparing leaders to their predecessors, we find positive and negative differences of up to 15% of retail fuel prices under the previous leader. When controlling for excise taxes, we find that point estimates of leader-specific and regime change effects differ, but many remain statistically significant, suggesting excise taxes are one—but not the only—channel leading to different retail fuel prices by leader. To be clear, we do not claim that our analysis allows us to directly attribute these differences across leaders to executive policies; it does not. However, our findings are consistent with the *narrative* that leaders influence domestic fuel prices, contrary to the modal perception of energy economics experts. Such considerations have important welfare and macroeconomic implications and potentially consequential political ramifications.

These results, juxtaposed with our survey findings, are especially fascinating given that there appears to be a significant gap in energy market research regarding the effects of national executive leadership on retail vehicle fuel prices. Despite its persistence in political discourse, to our knowledge ours is only the second formal econometric investigation of this question in the literature. The only extant study to have explicitly examined the relationship between US President regime change and domestic vehicle fuel prices is that of Ahmadian (2011), who concludes, "US presidential elections have only had a minor impact on. . . [retail gasoline] price variation in the last ninety years." However, Ahmadian's limited sample of annual observations lacks sufficient variation to yield precise estimates. The study also lacks an untreated (i.e., no executive regime change) control group of similar foreign markets by which to compare domestic fuel price changes and thus the quasi-experimental variation needed to conduct credible inference. Our analysis constitutes a significant methodological improvement and uses a much larger, more granular dataset.

Our work contributes to literature on the economics of retail gasoline prices.[2] Many studies examine asymmetric responses of retail gasoline prices to oil price shocks, finding oil price increases pass through to retail gasoline prices more quickly than decreases (Noel, 2009, 2015; Bumpass et al., 2015; Bremmer and Kesselring, 2016; Chesnes, 2016; Chang and Serletis, 2018). Retail gasoline markets also provide a useful empirical setting for studies of market power, regulation, price competition, price discrimination, and price gouging (Deltas, 2008; Myers et al., 2011; Carranza et al., 2015; Byrne and De Roos, 2019; Luco, 2019;

[2]See Eckert (2013) for a full survey. We restrict our review to notable recent studies but do not claim to capture the full scope of the literature.

Neukirch and Wein, 2019; Roach, 2019; Beatty et al., 2021). Given the ubiquity of gasoline consumption in modern economic life, researchers have studied the effects of changes in retail gasoline prices and taxes on gasoline consumption and a variety of other behaviors ranging from speeding to purchasing groceries (Gicheva et al., 2010; Anderson et al., 2013; Li et al., 2014; Wolff, 2014; Byrne et al., 2015; Baumeister and Kilian, 2016). Other studies have focused on the relationship between gasoline prices and broader macroeconomic variables such as inflation expectations, consumer sentiment, and overall consumer spending (Binder, 2018; Binder and Makridis, 2022; Gelman et al., 2023). Work by Blinder and Watson (2016) suggests that favorable oil price shocks under Democratic presidents explain some of the gap in macroeconomic performance between Republican and Democratic presidents. Blinder and Watson acknowledge that presidential foreign policy may have caused some of these oil price shocks, but overall these oil price shocks are largely attributed to luck.

Other related analyses focus on the impact of US Strategic Petroleum Reserve (SPR) releases on the crude oil price and its financial derivatives, often finding modest effects.[3] None, however, examine how such effects are passed through to retail fuel prices. Considine (2006) estimated the Clinton Administration's 30 million barrel release from the SPR in 2000 to have reduced oil prices by around $1.30 as of late 2004, whereas the effect of the George W. Bush Administration's subsequent gradual build-up of the SPR is described as "almost imperceptible." More recently, Newell and Prest (2017) found that a strategic release of 10 million barrels would temporarily reduce petroleum spot prices by 2-3%, estimates later cited by a 2022 US Treasury Department press release claiming the Biden Administration's decision to release 180 million barrels from the SPR over six months, accompanied by additional releases by International Energy Administration (IEA) partners, "lowered the price of gasoline by 17 cents to 42 cents per gallon."[4] Similarly, Kilian and Zhou (2020) found the cumulative effect of SPR releases following the 1990 invasion of Kuwait led to a $2 per-barrel reduction in the real price of oil after 7 months. Stevens and Zhang (2021) report asymmetric effects of SPR additions and releases, concluding that unanticipated releases from the SPR have "no measurable impact" on oil prices, whereas unanticipated additions lead to temporary price increases of 1-2%.

SPR stock changes are not the only way an administration's policies might affect retail vehicle fuel prices. Many policies may play a role, including (but not limited to) military escalation in oil-producing regions, changes in restrictions on domestic oil drilling, changes in (or suspension of) fuel-specific excise taxes, or changes in regulations affecting market

[3] Of the countries in our sample, the UK and France also have strategic petroleum reserves, but Canada does not.

[4] https://home.treasury.gov/news/press-releases/jy0887

power and marginal refining costs. We take no stance on the desirability or wisdom of any leader's policy actions in these areas, nor do we make recommendations about them.[5]

Rather, our goals are twofold. The first is simply to establish that a difference in perceptions exists between experts and non-experts regarding national executive influence over retail fuel prices and to provide empirical evidence regarding whether this difference can be explained by *actual* fuel price differences across executive regimes. We view this as a means to engage the public discourse on a matter of apparent interest and to arm voters with information to better assess the validity of such claims made by public figures. Secondly, we seek to alert economists and other energy market analysts to the apparent gap in the literature on this matter, hoping to motivate further research. We make a call to economists and policy researchers more generally to check for other gaps by paying closer attention to prominent economic narratives without prejudgment as to such narratives' veracity.

The remainder of the paper proceeds as follows. Section 2 presents survey evidence demonstrating a significant difference in perceptions between experts and non-experts on the question of presidential influence on vehicle fuel prices. Section 3 describes our data and empirical design and discuss our results. Section 4 discusses the broader implications of our findings. Section 5 concludes. An appendix contains supplemental results tables, along with our survey instrument.

2 Survey Evidence: A Difference in Perceptions

It is common for non-economists' views about economic issues to differ significantly from those of professional economists. In *The Myth of the Rational Voter*, economist Bryan Caplan documents the extent of this divergence across a wide array of economic questions, using data from the Survey of Americans and Economists on the Economy (SAEE), conducted in 1996 (Caplan, 2007).[6] Of the 37 survey questions Caplan analyzed, two pertained to gasoline prices. The first asked, "Which do you think is more responsible for the recent increase in gasoline prices?" The two possible responses were, "oil companies trying to increase their profits," and "the normal law of supply and demand." Roughly 90% of economists chose the latter, whereas around 75% of the 'public' (i.e., non-economists) chose the former. The second question asked, "Do you think the current price of gasoline is too high, too low, or about right?" Non-economists mostly chose "too high," whereas economists' responses

[5]We also emphasize that our results and conclusions should not be interpreted as supporting or opposing any candidate, elected leader, or policy.

[6]The SAEE was conducted by the *Washington Post*, Kaiser Family Foundation, and Harvard University Survey Project.

averaged somewhere between "about right" and "too low."[7]

To establish evidence of a difference in perceptions between experts and non-experts regarding the US President's ability to influence domestic retail gasoline and diesel prices, we followed a similar approach. We conducted a short survey asking respondents two questions about retail vehicle fuel prices. The first asked, "How much influence do you think the United States President has over the domestic retail prices of unleaded gasoline and diesel fuel?" Response choices were: "None at all;" "Very little influence;" "Moderate influence;" "Strong influence;" or "The US President has complete control over gasoline and diesel prices." Second, we asked, "Do you think the current price of gasoline is too high, too low, or about right?" taken directly from the SAEE. Additionally, we asked respondents several questions about demographics, driving behavior, vehicle type, and monthly fuel expenditures.[8] The survey took place in March 2023, during a period of relatively high US gasoline prices ($3.30/gal, national average), following historically high peak prices in summer 2022 ($4.80/gal). A recent report finds that US television news coverage of gasoline prices ramps up significantly when nominal prices rise above $3.50/gal.[9]

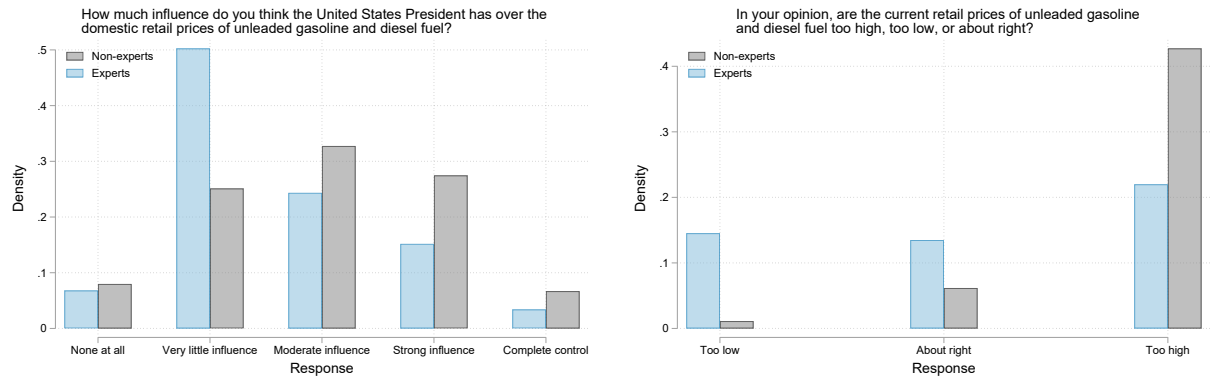
Our sample totals 1,234 respondents. 1,018 were commissioned directly from the online survey service, Qualtrics, which used quotas to ensure a nationally representative sample. We augmented this with another 216 respondents, identified through membership in major US associations of professional energy and environmental/resource economists, similar to the sampling approach used in prior survey-based studies of expert opinion on economic issues such as climate change, long-run economic growth, and social discounting (Nordhaus, 1994; Weitzman, 2001; Howard and Sylvan, 2020; Christensen et al., 2018; Drupp et al., 2023). Categorization of each respondent as an expert or non-expert on energy markets was based on stated occupation. We asked, "Which of the following best describes your occupation?" Possible answers were, "Academic, government, or non-profit research economist;" "Energy industry professional;" or "Other (neither of the above)." Respondents who selected one of the first two choices were categorized as experts, and all others as non-experts.[10] Interestingly, some respondents provided by Qualtrics self-identified as one of the two "expert" occupational categories. In total, 382 respondents (31%) were categorized as energy market

[7]Caplan attributes economists' greater likelihood of responding "too low" to a better understanding of unpriced negative externalities.

[8]The survey instrument was reviewed and approved by the Institutional Review Board of the Georgia Tech Office of Research Integrity Assurance (Protocol Number H23041). Survey data contain no personal identifying information, are jointly owned by the authors and Georgia Institute of Technology, and are included in the replication package.

[9]See: https://www.briefingbook.info/p/bad-news-bias-in-gasoline-price-coverage?s=09.

[10]We combine academic economists and energy industry professionals into a single "expert" category due to statistical equivalence in mean responses to the fuel price questions across the two groups.



(a) (b)

Figure 1: Histograms of expert and non-expert responses to vehicle fuel price survey questions.

experts and 852 (69%) as non-experts.[11]

Figure 1 presents histograms of the survey results, showing clear differences in perceptions across groups. Consider first the presidential influence question (Fig. 1a). For experts, the distribution is strongly skewed toward a perception of lower influence. The modal response was "Very little influence" (50.3%) and another 6.8% perceive the President to have no influence at all. By contrast, the modal response for non-experts was "Moderate influence" (32.75%), and responses were nearly evenly distributed around the mean. Only 33.1% of non-experts perceive the President to have little or no influence over retail fuel prices. For the question on price levels, the difference is even more striking (Fig. 1b). Although the modal response for each group was "Too high," expert perceptions were more evenly distributed across the three choices. Non-experts overwhelmingly chose "Too high" (85.5%), and almost none chose "Too low" (2.2%).

Formal statistical tests of mean responses, both with and without controls for demographic characteristics and driving behavior, are presented in Appendix A. For each question, the difference in mean responses across groups is strongly statistically significant. Compared to non-experts, experts on average perceive the US President as having significantly less influence over retail gasoline and diesel prices.[12] Similarly, the average expert response to

[11]For the occupation question, 103 respondents selected "Energy industry professional" and 279 selected "Academic, government, or non-profit research economist." Results are robust to removing respondents from the Qualtrics subsample who self-identified as one of the two "expert" occupational categories.

[12]Sample respondents identifying as more politically conservative perceive the President to have greater influence over fuel prices. As our survey was conducted during the Biden presidency, this is consistent with a 2013 Pew Research Center study that found perceptions depend strongly on which party controls the presidency. See https://www.pewresearch.org/short-reads/2013/07/25/can-a-president-control-gas-prices-depends-on-when-you-ask/

the question about price levels was slightly above "about right," whereas non-experts' average response was just below "too high." These differences persist for both questions after controlling for demographics, driving behavior, and political beliefs.

Which group's perceptions, experts or non-experts, are more justified? And, when Presidents claim credit for low fuel prices (or when others assign them blame for high prices), is there any empirical evidence to support these claims? We turn now to a formal econometric analysis of retail gasoline and diesel prices to examine the degree to which they vary across national executives.

3 Fuel price analysis

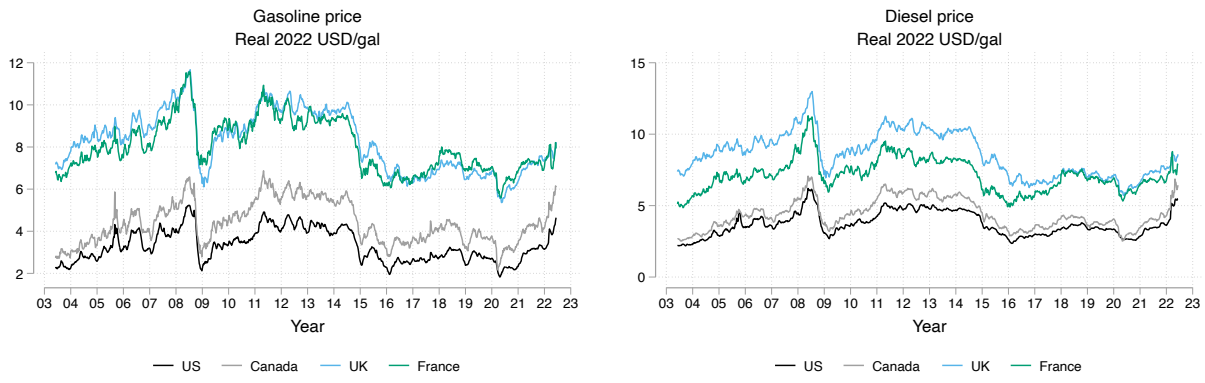
We seek to determine whether retail gasoline and diesel prices differ across national leaders. Most time-series variation in retail fuel prices comes from variation in the crude oil price (Kilian, 2010). Our null hypothesis is therefore that, on average, retail fuel prices do not differ across leaders after controlling for variation in the wholesale crude oil price, country-specific long-run averages in prices, and common time shocks—a null hypothesis consistent with the view that national leaders have no influence over domestic retail fuel prices. That is, we assume the retail price $p_{f,i,t}$ for fuel $f \in \{gasoline, diesel\}$ of country i in week t follows the model:

$$p_{f,i,t} = \mu_{f,i} + \lambda_{f,t} + \gamma_f p_{i,t}^{crude} + \sum_r \beta_{f,r} Leader_{i,t,r} + \varepsilon_{f,i,t}, \tag{1}$$

where $\mu_{f,i}$ are country-specific average fuel prices, $\lambda_{f,t}$ are common time shocks, $p_{i,t}^{crude}$ is the relevant wholesale crude oil price for country i, $Leader_{i,t,r}$ is an indicator variable equal to one for leader r, and $\varepsilon_{f,i,t}$ is conditional mean-zero heterogeneity in fuel prices. In the above model, the null hypothesis is that $\beta_{f,r} = 0$ for all leaders r. Under the null hypothesis, any differences in fuel prices across leaders can be explained by variation in the wholesale crude oil price, country-specific long-run averages in prices, and common time shocks.[13]

Hereafter, we suppress the subscript f and estimate separate regressions for gasoline and diesel. We view these as distinct fuel markets because they are not short-run substitutes (a given vehicle cannot switch between gasoline and diesel) and because price changes for each

[13] Although many empirical studies of retail gasoline prices use the "rack" price as the wholesale fuel price (Deltas, 2008; Hosken et al., 2008; Byrne et al., 2015; Beatty et al., 2021), variation in rack prices includes changes in refining costs, which may be partly driven by executive policies (e.g., environmental regulations). We prefer to use the crude oil price per gallon because the residual variation in retail fuel prices then includes the value added by refining crude oil into the final product. Crude oil is refined into fuel products in each country in our dataset.



(a) (b)

Figure 2: Retail gasoline and diesel prices by country.

fuel affect different sectors of the economy in distinct ways. Gasoline price changes are more likely to be directly experienced by households via the cost of personal driving. Diesel price changes are more likely to affect businesses via the cost of commercial driving.

We use weekly gasoline and diesel prices over the period 2003-2022 from the US, Canada, Great Britain, and France.[14] All prices are converted to real 2022 US dollars per gallon. Figure 2 displays time series of fuel prices for each country and Table 1 displays summary statistics. Fuel prices in the US and Canada are lower than in France and the UK, although the gap shrinks slightly over time.[15] The Cushing crude oil price per gallon serves as the relevant crude oil price for the US and Canada, whereas the Brent crude oil price per gallon is the relevant price for the UK and France.[16]

Our empirical strategy compares gasoline and diesel prices under different leaders. Figure 3 shows changes in executive leadership by country used to identify average price differences. First, we pool the data from each country over the whole sample period and compare fuel prices under each leader to a base period by estimating coefficients on indicator variables for each leader, controlling for the crude oil price and time and country indicators. Estimates are interpreted as the difference in average fuel price for each leader relative to the base period after netting out differences in the wholesale crude oil price, country-specific average prices, and common time shocks.

Next, we analyze each leadership transition as a separate natural experiment, comparing the fuel price in that country with the other countries during the period when no other

[14] See Appendix B for data sources.

[15] The series are stationary after within-time demeaning by the cross sectional average. We use Fischer-type unit root tests for panel data developed by Choi (2001), with the null hypothesis that all panels contain a unit root. We reject the null for both gasoline and diesel prices with p-values of 0.0035 and 0.0001, respectively.

[16] One barrel contains 42 gallons; price per gallon is thus price per barrel divided by 42.

Table 1: Fuel price summary statistics (2022 USD per gallon)

	(1) US Mean/SD	(2) UK Mean/SD	(3) Canada Mean/SD	(4) France Mean/SD	(5) All Mean/SD
Gasoline price	3.31	8.25	4.38	8.04	5.99
	(0.76)	(1.41)	(0.99)	(1.24)	(2.46)
Gasoline markup	1.30	6.15	2.38	5.94	3.94
	(0.23)	(0.82)	(0.42)	(0.59)	(2.21)
Gasoline tax	0.23	4.12	0.40	2.74	1.84
	(0.03)	(0.78)	(0.07)	(0.26)	(1.70)
Diesel price	3.71	8.59	4.37	7.13	5.95
	(0.85)	(1.52)	(1.04)	(1.16)	(2.31)
Diesel markup	1.71	6.49	2.37	5.03	3.90
	(0.32)	(0.90)	(0.46)	(0.50)	(2.03)
Diesel tax	0.30	4.20	0.16	3.62	2.02
	(0.03)	(0.88)	(0.03)	(0.48)	(1.93)
Crude price					2.10
					(0.78)
Observations	990	990	990	990	3960

Each observation is a weekly price in real 2022 USD per gallon from 2003-2022. The crude price is the Brent or Cushing wholesale crude oil price per gallon, and taxes are national tax rates.

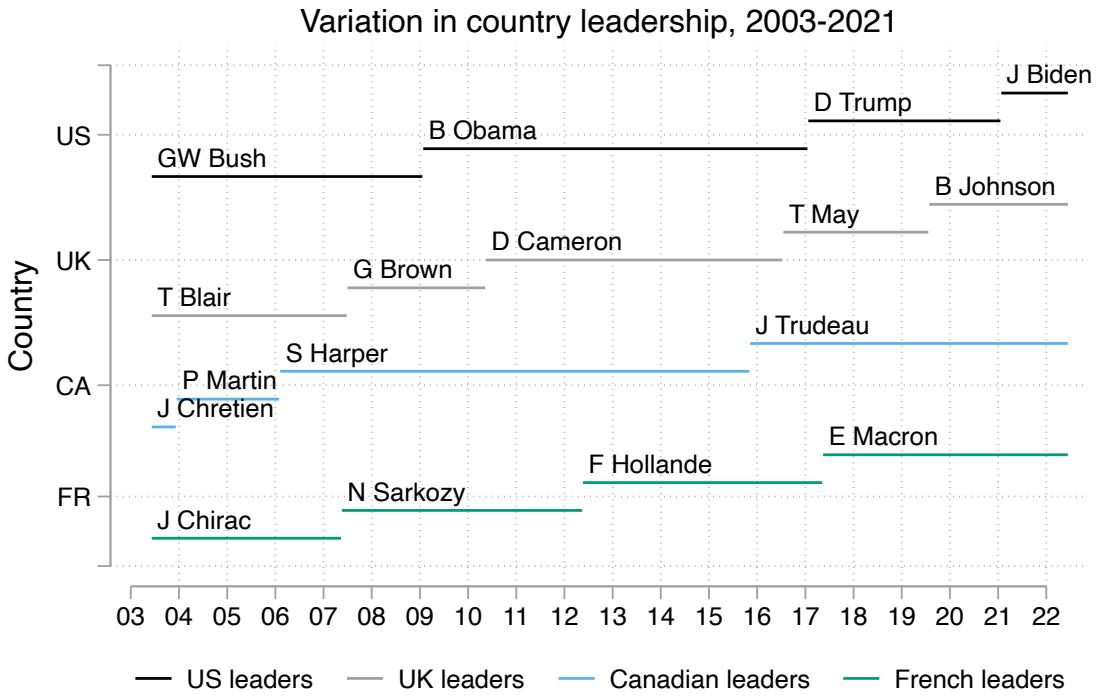


Figure 3: Variation in country leadership

leadership changes occurred. These estimates are interpreted as the difference in average fuel prices for each leader relative to the previous leader after controlling for the price of crude oil, country-specific average prices, and common time shocks. For inference, we use Driscoll and Kraay (1998) standard errors with p-values robust to heteroskedasticity and autocorrelation with a finite number of clusters, given a large time dimension (Vogelsang, 2012). We formally define these approaches below. We also repeat both analyses after controlling for national level fuel excise taxes to explore the extent to which any differences in fuel prices across leaders can be explained by differences in excise taxes.

Finally, note that in both approaches we control for the crude oil price, so intuitively our estimates are the differences in fuel prices across leaders after netting out variation in the wholesale crude oil price. However, it is also possible that leaders influence fuel prices indirectly through policies that affect the crude oil price (for example, via SPR releases or foreign policy decisions in oil-producing regions). If this were the case, the crude oil price could be viewed as endogenous to leadership changes and therefore problematic as a control variable. As a robustness check, we therefore also examine the impact of leadership changes on the *markup* of fuel prices over the crude oil price, which eliminates the concern of a potentially endogenous control variable.

3.1 Pooled approach

First, we estimate leader-specific mean fuel prices using the pooled samples for gasoline and diesel separately, using a specification identical to Equation (1). We omit the first leaders in our sample period (Bush, Blair, Chretien, Chirac), so the base period is the period in which these four leaders were in power. Each estimate $\hat{\beta}_r$ is the difference in conditional mean fuel price for leader r relative to the base period, controlling for wholesale crude oil prices, country-specific mean fuel prices, and common time shocks.

For each fuel, we first estimated a specification without leader indicators. Regression tables are presented in Appendix B. What is striking about the no-leader regressions is that the R-squared is 0.98 for gasoline and 0.97 for diesel, suggesting most of the variation in fuel prices is explained by crude oil prices, country fixed effects, and common time shocks. Adding leader indicators explains some residual variation and demonstrates that fuel prices were higher under certain leaders, contrary to our null hypothesis. Figure 4 plots leader coefficient estimates. Trump and Biden era retail gasoline prices were 34 cents and 36 cents higher than the base period, respectively, while Obama era prices were 2 cents lower (although not statistically different than zero). Ten out of 13 leader estimates are statistically different from zero for both gasoline and diesel, though there is not perfect overlap in which leader estimates are statistically significant across fuel types.

As a percentage of fuel prices, these estimates are economically meaningful. The decrease in UK gasoline prices under May translates to 20% of the average UK gasoline prices during May's tenure as Prime Minister. The increase in US gasoline prices under Trump was equivalent to 13% of the US gasoline price during Trump's presidency. Similarly, the increase in French gasoline prices under Sarkozy was 5% of the average French gasoline price, and in Canada the increase in gasoline prices under Trudeau was 13% of the average Canadian gasoline price.

Most of the leader effects on gasoline and diesel prices were of the same sign and comparable magnitude, with some exceptions. Macron saw lower gasoline prices but higher diesel prices. In the UK, the reduction in diesel prices under May and Johnson was significantly larger—both in absolute magnitude and as a percentage of base period prices (24% of UK diesel prices)—than the reduction in gasoline prices. Increases in diesel prices were 14% of US diesel prices under Trump, 4% of French diesel prices under Sarkozy, and 6% of Canadian diesel prices under Trudeau (although not statistically different from zero).

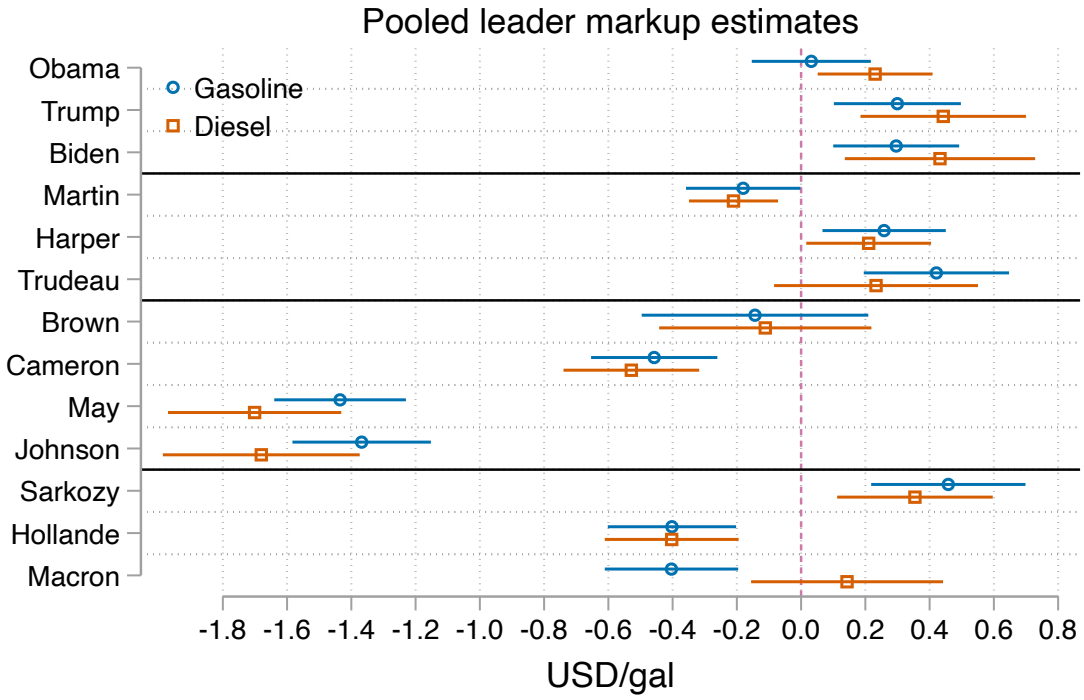


Figure 4: Estimates by fuel and by leader of Equation (1) on the pooled sample. 95% confidence intervals constructed from heteroskedasticity and autocorrelation robust standard errors for finite N and large T panel (Vogelsang, 2012).

3.2 Leadership transition approach

Next, we compare pairs of consecutive leaders in a given country when the leaders in the three other sample countries did not change. For example, we compare differences in prices under George W. Bush versus Barack Obama relative to prices in Canada, Great Britain, and France, restricting the sample to only the period when the executives in those countries did not change. This yields $R = 13$ within-sample regime changes, indexed $r \in \{1, ..., R\}$, that serve as natural experiments.

Our approach is similar to the stacked difference-in-differences (DiD) design of Cengiz et al. (2019). The advantage is that it ensures only valid (i.e., unchanging) control units are compared to the treated units, but comes at a cost of comparing only the end of the outgoing leader's term to the beginning of the new leader's term. The beginning or end of a leader's term may not be representative of his/her entire term because of leadership experience effects or strategic actions to reduce prices before an election, which would lead to greater estimated differences between consecutive leaders. This would, however, support the hypothesis that an executive can affect fuel prices purely through experience, at least in

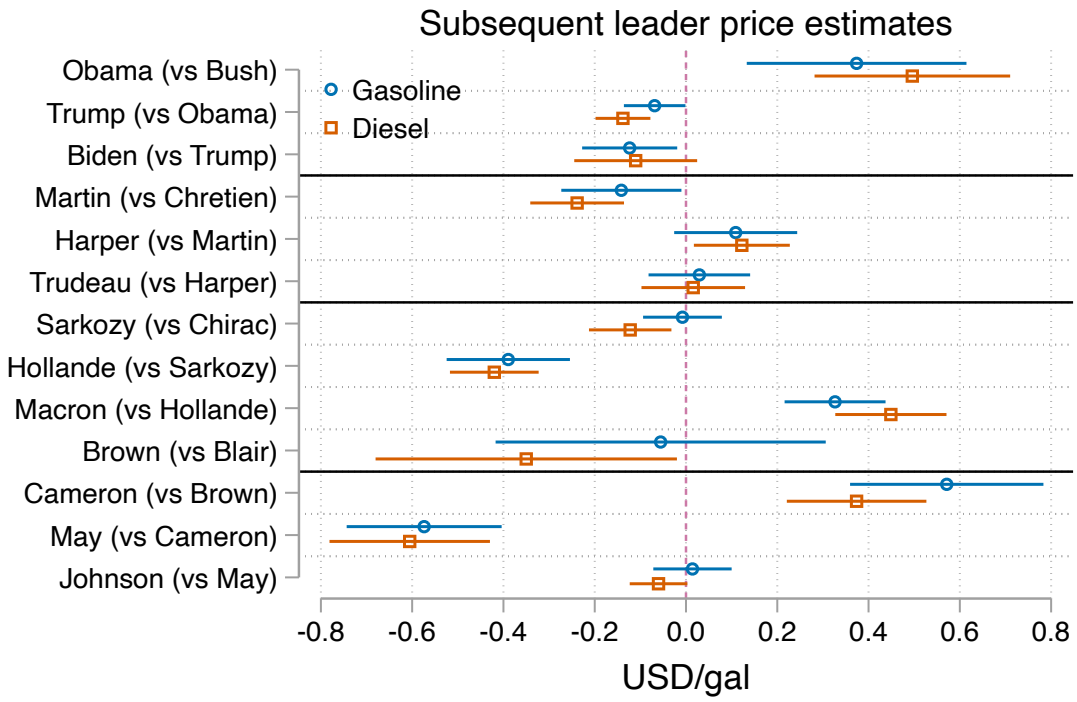


Figure 5: Estimates by fuel and by leader of equation 2 using a separate regression for each leadership transition. 95% confidence intervals constructed from heteroskedasticity and autocorrelation robust standard errors for finite N and large T panel (Vogelsang, 2012).

the short term.

Figure 3 highlights the variation used to test whether leader regime changes affect fuel prices. We analyze each natural experiment in a separate OLS regression to ensure clean treatment and control groups:

$$p_{i,t,r} = \alpha_r + \delta_r D_{i,t,r} + \gamma_r p_{i,t}^{crude} + \mu_{i,r} + \lambda_{t,r} + \varepsilon_{i,t,r}. \tag{2}$$

We regress the fuel prices in country i in week t during regime-change sub-period r, denoted $p_{i,t,r}$, on a constant term α_r, an indicator variable $D_{i,t,r}$ equal to one for all observations in the regime-changing country after executive power is transferred (zero otherwise), the crude oil price $p_{i,t}^{crude}$, country fixed effects $\mu_{i,r}$, and month-of-sample indicators $\lambda_{t,r}$. $\varepsilon_{i,t,r}$ is the error term. We subscript coefficients with r to emphasize that we obtain separate regression estimates for each regime change.

The DiD coefficient estimate $\hat{\delta}_r$ compares the difference in retail gasoline or diesel prices in the regime-changing country before and after the new leader takes power with differences in the control countries over the same period. The estimates from the leadership transition

approach should not be compared to those from the pooled approach for two reasons. First, the base period for each regression coefficient is drastically different. Second, the sample period is much shorter for each regression in the leadership transition approach, meaning the identifying variation occurs across a shorter period. For example, the coefficient for Biden in the leadership transition approach can be interpreted as the mean difference in fuel prices between Biden and Trump during the short period where no other leaders changed. The coefficient for Biden in the pooled approach compares the fuel price under Biden to fuel prices under Bush during the period at the beginning of the sample when Bush, Blair, Chretien, and Chirac were in office.

Figure 5 displays results.[17] Eight gasoline and ten diesel leader estimates are statistically different from zero. Estimates are comparable in magnitude to those in the pooled analysis, but each leader's estimate differs because of the change in the base period used. In the US, the largest estimated differences are the increases from Bush to Obama in gasoline prices of 37 cents per gallon and diesel prices of 50 cents per gallon, 12% and 15% differences respectively. The largest estimated difference in Canada is the change from Chretien to Martin, which reduced gasoline and diesel prices by 14 and 24 cents per gallon (4% and 7%) respectively. In France, gasoline and diesel prices under Macron were 39 and 42 cents per gallon (4% and 7%) higher than under Hollande. In the UK, prices under Theresa May for gasoline and diesel were 57 and 61 cents per gallon lower (9% and 9%) than under Cameron.

3.3 Controlling for excise taxes

Aside from direct price controls, a gasoline or diesel excise tax is perhaps the most straightforward national policy tool that could be used to affect fuel prices. All four countries in our sample levy an excise tax on both gasoline and diesel fuel.[18] The magnitude of a fuel tax's effect on fuel prices depends on unobserved demand and supply elasticities. While the executive does not typically have complete control over tax rates, leaders can influence tax policies, call for tax holidays,[19] and veto legislation proposing fuel tax changes.

Thus, we seek to explore the mechanism of national fuel excise taxes by controlling for excise taxes (in constant 2022 US dollars per gallon) in both our pooled and leadership transition analyses. If the national excise tax can explain some of the variation in fuel prices

[17] Regression tables reported in Appendix B.

[18] In the US, Canada, and France, state and provincial governments also levy taxes on fuels. The value added tax (VAT) in France and the UK is also applied on top of the national excise taxes.

[19] For example, President Biden called for a national fuel tax holiday in 2022, asking congress to pass legislation to lower the fuel excise tax as well as urging state governments to lower regional fuel taxes: https://www.whitehouse.gov/briefing-room/statements-releases/2022/06/22/fact-sheet-president-biden-calls-for-a-three-month-federal-gas-tax-holiday/.

by leader, our leader coefficient estimates should change. If fuel excise taxes are the only mechanism causing fuel prices to differ by leader, controlling for them would cause the leader coefficients to go to zero, although we do not expect this to be the case.

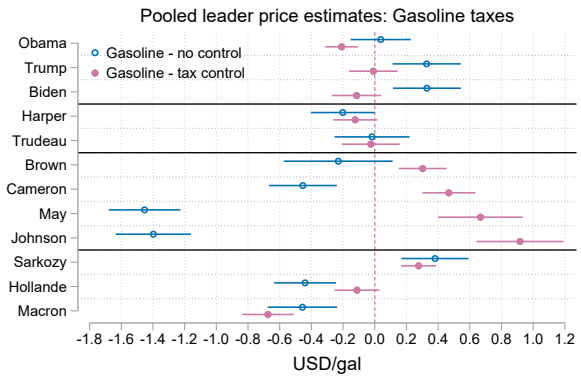
We collected data on national excise fuel taxes for each country during our sample period, although we were only able to locate data for France beginning in 2006.[20] In the United States, the nominal federal excise taxes on gasoline and diesel have been fixed at 18.4 and 28.4 cents per gallon, respectively, since 1993; thus, the real federal excise tax rates have been falling with inflation over our entire sample period. The mean real US federal gasoline and diesel excise tax rate during our sample period was 23 and 30 cents per gallon respectively (in 2022 USD). Similarly, the Canadian nominal federal excise tax rates have been fixed at 10 and 4 Canadian cents per liter since 1995 and 1997 respectively, translating to an average of 40 and 16 cents per gallon (in 2022 USD). French national nominal fuel tax rates saw large increases in 2016-2018 and in real terms have been much higher. In our sample period, the real national gasoline and diesel taxes in France were $2.74 and $3.62 per gallon, respectively. The UK has the highest fuel tax rates with sample period average real tax rates of $4.12 and $4.20 per gallon for gasoline and diesel fuel, respectively. The nominal UK fuel excise taxes were increased steadily from 2000-2011, at which point they were fixed and held constant until a reduction in April 2022.

We augment our pooled and leadership transition estimation strategies by adding a control for the national excise fuel tax level in each country as an explanatory variable. Because our data for France is limited to 2006 onward, we limit our pooled sample to 2006-onward and our leadership transition estimation samples do not include pre-2006 France; thus, our baseline coefficient estimates differ slightly from those in the main paper. We compare results with and without tax controls in our modified samples.

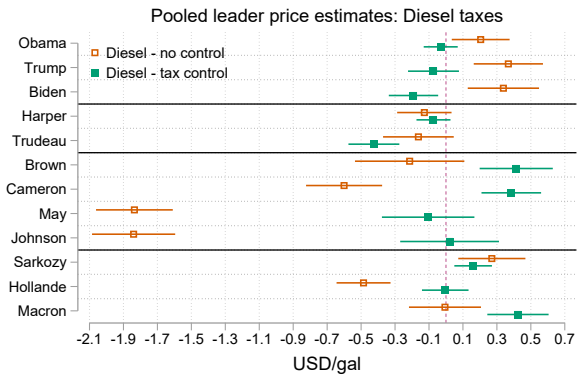
Figures 6a and 6b display our pooled estimates and Figures 7a and 7b display our leadership transition estimates.[21] Across both approaches, controlling for excise taxes does substantially change the coefficient estimates, but many of the leader effects are still statistically different from zero. The largest differences are those for the UK and French leader coefficients, which makes sense given that excise taxes in these countries are larger and have been changed significantly during the sample period, whereas the US and Canadian tax rates have been nominally fixed. Overall, we take this as evidence that the differences in real excise tax rates contribute to differences in fuel prices, but that this is not the only mechanism driving the differences in prices across leaders.

[20] Data sources are provided in Appendix B.1.

[21] Regression tables are presented in Appendix B.1, Tables B6-B14.



(a)



(b)

Figure 6: Pooled estimates including a control for national fuel-specific excise taxes. 95% confidence intervals constructed from heteroskedasticity and autocorrelation robust standard errors for finite N and large T panel (Vogelsang, 2012).

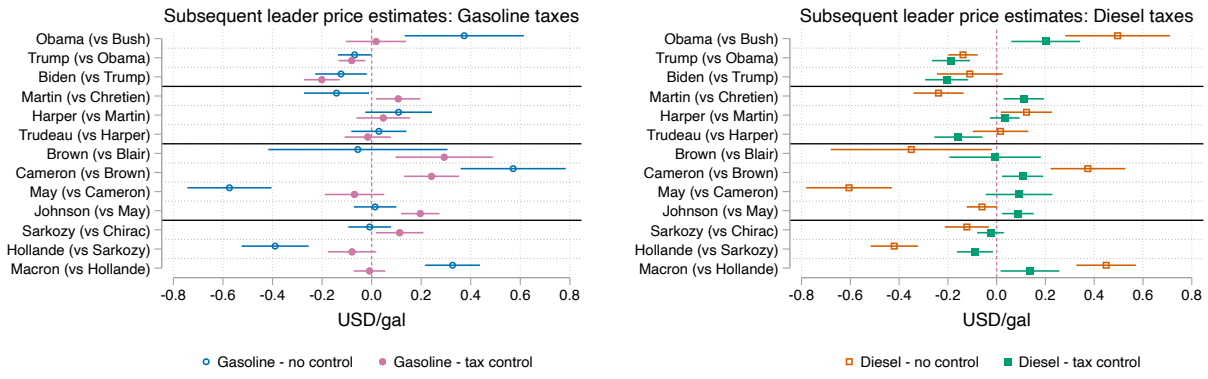
3.4 Robustness check: Fuel price markups

Given the concern about crude oil prices being potentially endogenous to leadership change, we also examine the country-specific retail price markup $p_{f,i,t}^{markup}$ of fuel product f in country i during week t, defined as the difference between country i's retail price $p_{f,i,t}^{retail}$ and the wholesale crude oil price per gallon $p_{i,t}^{crude}$:

$$p_{f,i,t}^{markup} = p_{f,i,t}^{retail} - p_{i,t}^{crude}. \tag{3}$$

Intuitively, this country-specific markup is the amount citizens pay above the world wholesale crude oil price, which includes refining costs, transportation costs, and economic rents.

We estimate the same regression models as in our pooled and leadership-change approaches, replacing the outcome variable with the markup and omitting the crude oil price on the righthand side. Results are presented in the appendix. Figure B1 plots the pooled and subsequent leader estimates of leader-specific average fuel price markups. The results are consistent with our main findings: there are significant differences in average fuel price markups across leaders, and these estimates are very similar to our main results reported above. This robustness check demonstrates that our main results are not driven by national leaders' ability to affect the crude oil price.



(a) (b)

Figure 7: Leadership transition estimates including a control for national fuel-specific excise taxes. 95% confidence intervals constructed from heteroskedasticity and autocorrelation robust standard errors for finite N and large T panel (Vogelsang, 2012).

4 Discussion

Our fuel price analyses find statistically significant differences in average gasoline and diesel prices across many (but not all) leaders, even after accounting for variation in the crude oil price, common time shocks, country fixed effects, and excise tax changes. A key question is whether the *actual* policy differences across leaders in our sample are generally consistent with our empirical findings. This is a complex question, and one that is ultimately beyond the scope of this paper to answer. However, to provide interested readers with a broad overview of the energy, environmental, and climate policies pursued by each of the national executives of the U.S., U.K., France, and Canada within our sample and how they might have impacted respective domestic retail vehicle fuel prices, we utilized artificial intelligence to create detailed policy reports for each leader, which are available in Appendix D.[22] In general, the variety of policy measures taken by national leaders that likely affected retail vehicle fuel prices—both directly and indirectly—is extensive, suggesting a wealth of opportunities for researchers. Despite this, our review of the literature has uncovered a surprising lack of peer-reviewed economic and policy research into such questions.

Given this complex tapestry of two decades' worth of national energy policies across these four countries, we emphasize that the statistically significant differences across national executives we observe in our fuel price analysis cannot be attributed directly to any *specific* policy or combination of policies. Nor can we rule out the possibility that at least some of the differences across leaders resulted from purely market forces outside of leaders' control.

[22]We used ChatGPT Version 4o's Deep Research feature which searches for sources relevant to a prompt. The full prompts used to generate the policy reports are provided in Appendix D.

However, they do generally explain why so many people believe that national executives have some influence over retail fuel prices.

As corroborating evidence to support the assertion that peoples' perceptions of presidential influence over fuel prices are at least partly driven by their observance of real price changes across presidents, Figure XX plots Google Trends searches[23] related to U.S. Presidents and gasoline prices from 20XX-20XX, along with the real U.S. national average gasoline price.[24] It is immediately clear that searches tend to increase during episodes of high retail fuel prices. Such searches appear also to have increased over time, perhaps due to increasing media repetition of the perceived link. [FINISH ONCE FIGURE IS ADDED.]

Perhaps counterintuitively, the results of our fuel price analyses appear more consistent with the modal perceptions of non-experts than of experts like energy economists and energy industry professionals. Given the significant gap in the literature noted above, this misalignment between expert perceptions and our econometric results is concerning. It suggests important questions about the effects of executive policy on vehicle fuel markets may have been unduly ignored in energy market research thus far. Expert groups like economists are just as prone to blind spots, systematic biases, and over-confidence as any other group (Chen et al., 2016).[25] It is plausible to infer that such effects may be driving the lack of research in this area of substantial public interest. Alternatively, it may simply be a question that *economists* find uninteresting despite the public interest, and therefore not worth the time; however, we find this explanation unlikely given existing research exploring the effect of the US President on the general economy (Blinder and Watson, 2016).

Our findings also point to the possibility that other important policy questions can be illuminated when economists pay closer attention to public sentiment. Consider again the other question from 1996's SAEE related to fuel prices: "Which do you think is more responsible for the recent increase in gasoline prices?" The possible responses were, "oil companies trying to increase their profits" versus "the normal law of supply and demand." Economists overwhelmingly chose the latter, whereas non-economists overwhelmingly chose the former. In the decade preceding the SAEE, roughly half of global oil production was still controlled by OPEC (Samii and Ameri, 1990), with the remaining share dominated by a handful of international "super-majors"—hardly a competitive market. Yet economists, who have a much

[23]Google Trends is increasingly used in social science and economic research as a useful tool for gauging consumer sentiment across a variety of sectors including energy (Park and Kim, 2018; Alexander and Oliver, 2024), and for forecasting broader macroeconomic conditions. A full review is not warranted here. See Jun et al. (2018) for a survey of the literature.

[24]We restrict Figure XX to the U.S. only, given that our survey respondents are strictly U.S.-based. Note also that our query is based on the fact that gasoline is colloquially referred to as "gas" in the U.S.

[25]Both authors admit to having priors on the question of presidential influence over fuel prices that were consistent with the modal beliefs of experts in our survey sample.

stronger grasp of the anti-competitive, profit-maximizing motives of cartelized oligopolistic producers with immense market power, appear to have brushed aside sudden oil price increases as "normal." Similarly, another SAEE question—unrelated to energy markets but emblematic of an equally prominent economic narrative in the public and political sphere—asked, "Do you think that trade agreements between the United States and other countries have helped create more jobs in the US, or have they cost the US jobs, or haven't they made much of a difference?" Caplan (2007) again reports significant disagreement between economists and non-economists. Economists typically answered that trade agreements have little to no effect on US jobs, whereas non-economists perceived, on average, that trade agreements cost US jobs. Although much empirical research has emerged on this question in the past two decades, there is reason to suspect that, when considering the abstract, *theoretical* effects of trade agreements on jobs in the 1990's when the SAEE was conducted (arguably prior to much rigorous empirical work on the issue), economists may not have fully appreciated the lived experience of domestic workers.[26] Our point here is not to suggest that economists were clearly wrong and the non-expert public right on either issue, but rather that, similar to the question of executive influence over fuel prices, there was likely more gray area to these questions than economists' near-unanimous responses would seem to admit.

4.1 Alternative Explanations

We now discuss plausible alternative explanations for the difference in perceptions between experts and non-experts regarding executive influence over retail fuel prices. First, the difference may relate to interpretation of the question itself. If the question is interpreted as asking about direct, immediate influence, then it is natural for experts to be more skeptical than non-experts. With the exception of excise taxes (and direct price controls, which have not been used in vehicle fuel markets since the 1970's), there are few levers by which an executive can directly alter retail fuel prices. If, however, one's interpretation is expanded to include indirect channels, allowing for general equilibrium effects that might reasonably be expected to impact fuel markets, then we might expect experts' views to coincide more with the views of non-experts. We intentionally left the question open to interpretation, and it cannot be overlooked that both groups were likely influenced by the prominent media narrative surrounding this issue.

Second, perhaps the problem is that a communication gap exists between experts and the general public. Large, persistent deviations in national-level gasoline prices from global

[26]See also Rodrik (2018), who explores the broader distributional effects of modern trade agreements and questions economists' "dogmatic" view that trade agreements necessarily leave US citizens better off on average.

trends across leaders must, by definition, be driven by local economic conditions, including policies like fuel taxes, environmental regulations, and other market interventions over which leaders exercise some control. In principle, the economist's toolkit allows us to estimate the impacts of such policy actions on fuel prices, which may or may not be significant. Citizens, by contrast, perceive the general correlation between leadership change and fuel price movements and conclude that policymakers can influence prices. Yet citizens may mistake *short-run* price changes as the immediate result of *current* policy decisions, when current price changes may in fact be related to policy actions taken by previous leaders[27] or to random and persistent shocks over which the current leader has no control. The difference in perceptions about executive influence over fuel prices may therefore be caused by a failure of experts to communicate effectively the timing and nature of policies and shocks affecting fuel prices. Executives can affect fuel prices through policy, but such effects are typically slow to materialize. Some shocks cannot be anticipated or prevented, and the policy responses to those shocks may also be delayed in their effects. Thus, in times of high fuel prices, the public's demand that their leaders take immediate action to lower them may be somewhat misguided. Yet, experts like economists would also be wrong to dismiss such demands as unrealistic or belittle non-experts for expecting action from their leaders on fuel prices, particularly given the lack of economic research on such questions.

5 Conclusion

Heads-of-state are highly visible in communicating economic policy objectives to their national electorates. These leaders command attention of the media and have the ability to influence economic narratives that affect aggregate behavior in meaningful ways. One such narrative that has prevailed in the US for decades is that the President can directly influence the retail prices of gasoline and diesel fuel. Presidents claim credit for low fuel prices but also draw criticism and blame when fuel prices are high.

In this paper, we first presented survey evidence that 'experts' like energy economists and energy industry professionals tend to be significantly more skeptical of such claims than non-experts. This is surprising; prior research has already shown that SPR releases have a small but statistically detectable effect petroleum prices, which are passed through to retail gasoline prices. We then analyzed weekly data on retail vehicle fuel prices from the US, UK, Canada, and France to provide evidence that, even after netting out changes in the price

[27] As a recent example, the Biden Administration's decision to halt the Keystone XL pipeline may have impacted domestic fuel prices over the long run, but it is not clear whether the decision affected US prices during Biden's presidency.

of crude oil and controlling for national fuel excise taxes, non-experts' beliefs appear more justified. Retail fuel prices vary significantly across national leaders in systematic ways. And while we do not claim to have established a causal link between executive action and the variation in retail fuel prices across leaders, our results suggest that energy economists and other energy market experts should be more open to studying the pathways through which domestic retail fuel prices are affected by executive policy choices, as such effects have important and wide-ranging economic and political consequences. Indeed, the burden of proof may be on economists to convince the public that fuel price differences are not due to a leader's policy actions.

Finally, taken in conjunction, our survey, literature review, and empirical results highlight the possibility that gaps exist in economic research that can be illuminated by studying conjectures propagated in prominent economic narratives, without prior appeal to economists' own biases and preexisting notions as to such narratives' veracity. In *Good Economics for Hard Times*, Nobel laureates Abhijit Banerjee and Esther Duflo point out that public trust in economists is distressingly low (Banerjee and Duflo, 2019). They go on to state, "This trust deficit is mirrored by the fact that the professional consensus of economists (when it exists) is often systematically different from the views of ordinary citizens." Our findings suggest the possibility that important gaps in economic research on questions of significant public interest may play a role.

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Appendices

A Survey Response Analyses

In the main text, we show that the perceptions of experts and non-experts differ regarding presidential influence on fuel prices and the acceptability fuel prices. In this section, we explore the degree to which this difference is due to differences between experts and non-experts on demographic characteristics, driving behavior, and political views. For example, compared to non-experts, the energy experts in our sample have higher income, are more likely to drive electric and hybrid vehicles, and are more likely to prefer the Democratic Party. To explore whether the differences in survey responses are because of expert status or whether they can be explained by other observable characteristics, we regress survey responses on an indicator variable for expert status while controlling for reported demographics, driving behavior, and political views. For the question "How much influence do you think the United States President has over the domestic retail price of unleaded gasoline and diesel fuel?" we coded a response of "none at all" as 0, "very little influence" as 1, "moderate influence" as 2, "strong influence" as 3, and "complete control" as 4. Thus, a higher value indicates a belief in a stronger influence of the president on fuel prices. Similarly, for the question "In your opinion, are the current retail prices of unleaded gasoline and diesel fuel too high, too low, or about right?" we coded a response of "too low" as 0, "about right" as 1, and "too high" as 2. Thus, a higher value indicates a belief that prices are too high. We estimate the following regression via ordinary least squares, adding different sets of controls to see the impact on the estimated difference between experts and non-experts:

$$Y_i = \alpha + \beta Expert_i + \gamma X_i + \varepsilon_i, \tag{A1}$$

where Y_i is a numeric representation of the survey response for individual i, α is a constant, $Expert_i$ is an indicator variable equal to one for experts, X_i are controls, and ε_i is an error term. The demographic controls include age, income, race, and gender; the driving controls include the number of driving trips taken per week, miles per trip, monthly fuel expenditures, and primary vehicle fuel type; and the political controls include preferred political party, stance on social issues, stance on economic issues, and an indicator for whether the respondent is a US citizen. For inference, we use heteroskedasticity robust (Eicker-Huber-White) standard errors.

We display our results in Tables A1 and A2. Focusing on the presidential influence results first, we can see that across all specifications experts see less of a role for presidential influence

Table A1: Expert vs non-expert perceptions of presidential influence on fuel prices

	(1) Model 1	(2) Model 2	(3) Model 3	(4) Model 4
Expert	-0.42*	-0.21*	-0.22*	-0.15*
	(0.060)	(0.076)	(0.076)	(0.076)
Demographic controls		Yes	Yes	Yes
Driving controls			Yes	Yes
Political controls				Yes
Observations	1234	1234	1234	1234

Heteroskedasticity robust standard errors (Eicker-Huber-White) reported in parentheses. * $p < 0.05$.

Table A2: Expert vs non-expert perceptions of fuel price level

	(1) Model 1	(2) Model 2	(3) Model 3	(4) Model 4
Expert	-0.68*	-0.32*	-0.28*	-0.26*
	(0.046)	(0.050)	(0.049)	(0.047)
Demographic controls		Yes	Yes	Yes
Driving controls			Yes	Yes
Political controls				Yes
Observations	1234	1234	1234	1234

Heteroskedasticity robust standard errors (Eicker-Huber-White) reported in parentheses. * $p < 0.05$.

over fuel prices on average. Compared to the unconditional mean in column 1, adding demographic controls (column 2) reduces the mean difference substantially but does not change the sign of the relationship. Adding controls for driving behavior (column 3) slightly increases the difference between experts and non-experts. Controlling for political views (column 4) further reduces the difference between experts and non-experts, but even with all controls in the model there is still a statistically significant difference between expert and non-expert perceptions. Ultimately, while controls reduce the differences between groups, experts see the president as having less influence on fuel prices than non-experts holding demographics, driving behavior, and political views fixed.

The results are similar for perceptions of the fuel price level. Compared to the unconditional mean in column 1, adding demographic controls (column 2) reduces the mean difference substantially, but the difference remains the same sign. Adding driving controls (column 3) and political controls (column 4) narrows the difference by a smaller amount. Similarly, while controls reduce the differences between groups, experts see the fuel price as

too low rather than too high relative non-experts holding demographics, driving behavior, and political views fixed.

B Supplemental Tables

In this section, we present supplemental tables of regression results for our fuel price analyses in Section 3. Estimates in Table B1 are based on Equation **??** and summarized in Figure 4. Estimates in Tables B2-B5 are based on Equation 2 and summarized in Figure 5.

US fuel price data are publicly available through the US Energy Information Administration (EIA) at http://www.eia.gov/oil_gas/petroleum/data_publications/wrgp/mogas_history.html and http://www.eia.gov/oog/info/wohdp/diesel.asp. Canadian data cover Ontario only and are publicly available at https://data.ontario.ca/dataset/fuels-price-survey-information. British data are publicly available through the UK Department for Business, Energy & Industrial Strategy at https://www.gov.uk/government/statistics/weekly-road-fuel-prices. French data were purchased from https://www.globalpetrolprices.com/. Brent and Cushing wholesale prices per barrel were obtained from the EIA at http://www.eia.gov/dnav/pet/pet_pri_spt_s1_w.htm.

Table B1: Pooled estimates of leader-specific average fuel prices.

	(1) Gasoline	(2) Gasoline	(3) Diesel	(4) Diesel
B Obama		0.02		0.23*
		(0.096)		(0.092)
D Trump		0.34*		0.45*
		(0.11)		(0.13)
J Biden		0.36*		0.44*
		(0.12)		(0.15)
P Martin		-0.16		-0.21*
		(0.094)		(0.069)
S Harper		0.26*		0.21*
		(0.11)		(0.10)
J Trudeau		0.49*		0.24
		(0.14)		(0.15)
G Brown		-0.13		-0.11
		(0.18)		(0.17)
D Cameron		-0.36*		-0.51*
		(0.11)		(0.12)
T May		-1.33*		-1.69*
		(0.13)		(0.13)
B Johnson		-1.26*		-1.66*
		(0.13)		(0.15)
N Sarkozy		0.51*		0.36*
		(0.12)		(0.12)
F Hollande		-0.31*		-0.39*
		(0.11)		(0.11)
E Macron		-0.29*		0.16
		(0.13)		(0.15)
FR	4.70*	4.80*	3.38*	3.51*
	(0.058)	(0.049)	(0.053)	(0.056)
CA	1.08*	0.90*	0.66*	0.72*
	(0.025)	(0.071)	(0.021)	(0.054)
UK	4.92*	5.53*	4.84*	5.71*
	(0.073)	(0.059)	(0.087)	(0.058)
Crude price	0.28	0.67*	0.39	0.95*
	(0.18)	(0.13)	(0.23)	(0.17)
Time indicators	Yes	Yes	Yes	Yes
R^2	0.975	0.991	0.967	0.990
Observations	3960	3960	3960	3960

Each model contains time indicators and uses fixed-b heteroskedasticity and autocorrelation robust standard errors for finite N and large T panels (Vogelsang, 2012). * $p < 0.05$.

Table B2: DiD estimates for US Presidents relative to their predecessors.

	(1) Gasoline	(2) Diesel	(3) Gasoline	(4) Diesel	(5) Gasoline	(6) Diesel
B Obama	0.37*	0.50*				
	(0.12)	(0.11)				
D Trump			-0.07*	-0.14*		
			(0.034)	(0.031)		
J Biden					-0.12*	-0.11
					(0.053)	(0.069)
Country FE	Yes	Yes	Yes	Yes	Yes	Yes
Time indicators	Yes	Yes	Yes	Yes	Yes	Yes
Observations	596	596	172	172	604	604

Each model contains country fixed effects and time indicators and uses fixed-b heteroskedasticity and autocorrelation robust standard errors for finite N and large T panels (Vogelsang, 2012). * $p < 0.05$.

Table B3: DiD estimates for UK Prime Ministers relative to their predecessors.

	(1) Gasoline	(2) Diesel	(3) Gasoline	(4) Diesel	(5) Gasoline	(6) Diesel	(7) Gasoline	(8) Diesel
G Brown	-0.06	-0.35*						
	(0.18)	(0.17)						
D Cameron			0.57*	0.37*				
			(0.11)	(0.078)				
T May					-0.57*	-0.61*		
					(0.087)	(0.090)		
B Johnson							0.01	-0.06
							(0.044)	(0.032)
Country FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Time indicators	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	348	348	692	692	252	252	768	768

Each model contains country fixed effects and time indicators and uses fixed-b heteroskedasticity and autocorrelation robust standard errors for finite N and large T panels (Vogelsang, 2012). * $p < 0.05$.

Table B4: DiD estimates for Canadian Prime Ministers relative to their predecessors.

	(1) Gasoline	(2) Diesel	(3) Gasoline	(4) Diesel	(5) Gasoline	(6) Diesel
P Martin	-0.14*	-0.24*				
	(0.067)	(0.052)				
S Harper			0.11	0.12*		
			(0.069)	(0.054)		
J Trudeau					0.03	0.02
					(0.057)	(0.058)
Country FE	Yes	Yes	Yes	Yes	Yes	Yes
Time indicators	Yes	Yes	Yes	Yes	Yes	Yes
Observations	556	556	716	716	864	864

Each model contains country fixed effects and time indicators and uses fixed-b heteroskedasticity and autocorrelation robust standard errors for finite N and large T panels (Vogelsang, 2012). * $p < 0.05$.

Table B5: DiD estimates for French Presidents relative to their predecessors.

	(1) Gasoline	(2) Diesel	(3) Gasoline	(4) Diesel	(5) Gasoline	(6) Diesel
N Sarkozy	-0.01	-0.12*				
	(0.044)	(0.046)				
F Hollande			-0.39*	-0.42*		
			(0.069)	(0.050)		
E Macron					0.33*	0.45*
					(0.056)	(0.062)
Country FE	Yes	Yes	Yes	Yes	Yes	Yes
Time indicators	Yes	Yes	Yes	Yes	Yes	Yes
Observations	292	292	1140	1140	520	520

Each model contains country fixed effects and time indicators and uses fixed-b heteroskedasticity and autocorrelation robust standard errors for finite N and large T panels (Vogelsang, 2012). * $p < 0.05$.

B.1 Supplemental tables: Excise tax analysis

Here we present regression results tables coinciding with Figures 6a, 6b, 7a, and 7b. Nominal excise tax data were gathered from the following sources:

- United States: https://www.fhwa.dot.gov/policyinformation/statistics/2020/pdf/mf205.pdf and https://www.fhwa.dot.gov/policyinformation/statistics/2022/pdf/mf205.pdf
- Canada: https://natural-resources.canada.ca/our-natural-resources/domestic-and-international-markets/transportation-fuel-prices/fuel-consumption-taxes-canada/18885
- United Kingdom: https://www.gov.uk/government/statistics/hydrocarbon-oils-bulletin/historical-hydrocarbon-oils-duty-rates–2
- France: https://ec.europa.eu/taxation_customs/tedb/splSearchForm.html

Table B6: Pooled estimates of leader-specific average fuel price differences when controlling for excise tax.

	(1) Gasoline	(2) Gasoline	(3) Diesel	(4) Diesel
B Obama	0.04	-0.21*	0.20*	-0.03
	(0.097)	(0.052)	(0.087)	(0.051)
D Trump	0.33*	-0.01	0.37*	-0.07
	(0.11)	(0.078)	(0.10)	(0.077)
J Biden	0.33*	-0.11	0.34*	-0.19*
	(0.11)	(0.079)	(0.11)	(0.074)
S Harper	-0.20	-0.12	-0.13	-0.07
	(0.10)	(0.072)	(0.082)	(0.051)
J Trudeau	-0.02	-0.03	-0.16	-0.42*
	(0.12)	(0.093)	(0.11)	(0.076)
G Brown	-0.23	0.30*	-0.21	0.41*
	(0.18)	(0.077)	(0.16)	(0.11)
D Cameron	-0.45*	0.47*	-0.60*	0.38*
	(0.11)	(0.085)	(0.11)	(0.090)
T May	-1.45*	0.67*	-1.84*	-0.10
	(0.12)	(0.14)	(0.12)	(0.14)
B Johnson	-1.40*	0.92*	-1.84*	0.02
	(0.12)	(0.14)	(0.12)	(0.15)
N Sarkozy	0.38*	0.28*	0.27*	0.16*
	(0.11)	(0.056)	(0.10)	(0.057)
F Hollande	-0.44*	-0.11	-0.49*	-0.00
	(0.100)	(0.072)	(0.081)	(0.070)
E Macron	-0.46*	-0.67*	-0.01	0.42*
	(0.11)	(0.083)	(0.11)	(0.092)
FR	4.95*	1.28*	3.60*	-0.31
	(0.062)	(0.15)	(0.042)	(0.23)
CA	1.39*	0.87*	1.05*	0.99*
	(0.093)	(0.066)	(0.070)	(0.044)
UK	5.65*	-0.94*	5.81*	0.61*
	(0.082)	(0.26)	(0.081)	(0.31)
Crude price	0.60*	0.66*	0.82*	0.83*
	(0.13)	(0.15)	(0.17)	(0.19)
Diesel tax				1.02*
				(0.061)
Gasoline tax		1.36*		
		(0.055)		
Time indicators	Yes	Yes	Yes	Yes
R^2	0.990	0.996	0.990	0.995
Observations	3424	3424	3424	3424

Each model contains time indicators and uses fixed-b heteroskedasticity and autocorrelation robust standard errors for finite N and large T panels (Vogelsang, 2012). * $p < 0.05$.

Table B7: DiD estimates for US Presidents relative to their predecessors for gasoline, controlling for excise tax.

	(1) Gasoline No tax	(2) Gasoline Tax	(3) Gasoline No tax	(4) Gasoline Tax	(5) Gasoline No tax	(6) Gasoline Tax
B Obama	0.37*	0.02				
	(0.12)	(0.062)				
D Trump			-0.07*	-0.08*		
			(0.034)	(0.027)		
J Biden					-0.12*	-0.20*
					(0.053)	(0.037)
Gasoline tax		1.30*		0.87*		1.35*
		(0.067)		(0.13)		(0.12)
Country FE	Yes	Yes	Yes	Yes	Yes	Yes
Time indicators	Yes	Yes	Yes	Yes	Yes	Yes
Observations	596	596	172	172	604	604

Each model contains country fixed effects and time indicators and uses fixed-b heteroskedasticity and autocorrelation robust standard errors for finite N and large T panels (Vogelsang, 2012). * $p < 0.05$.

Table B8: DiD estimates for UK Prime Ministers relative to their predecessors for gasoline, controlling for excise tax.

	(1) Gasoline No tax	(2) Gasoline Tax	(3) Gasoline No tax	(4) Gasoline Tax	(5) Gasoline No tax	(6) Gasoline Tax	(7) Gasoline No tax	(8) Gasoline Tax
G Brown	-0.06	0.29*						
	(0.18)	(0.10)						
D Cameron			0.57*	0.24*				
			(0.11)	(0.057)				
T May					-0.57*	-0.07		
					(0.087)	(0.061)		
B Johnson							0.01	0.20*
							(0.044)	(0.040)
Gasoline tax		1.20*		1.67*		1.00*		1.10*
		(0.069)		(0.078)		(0.094)		(0.12)
Country FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Time indicators	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	348	348	692	692	252	252	768	768

Each model contains country fixed effects and time indicators and uses fixed-b heteroskedasticity and autocorrelation robust standard errors for finite N and large T panels (Vogelsang, 2012). * $p < 0.05$.

Table B9: DiD estimates for Canadian Prime Ministers relative to their predecessors for gasoline, controlling for excise tax.

	(1) Gasoline No tax	(2) Gasoline Tax	(3) Gasoline No tax	(4) Gasoline Tax	(5) Gasoline No tax	(6) Gasoline Tax
P Martin	-0.14*	0.11*				
	(0.067)	(0.046)				
S Harper			0.11	0.05		
			(0.069)	(0.055)		
J Trudeau					0.03	-0.02
					(0.057)	(0.048)
Gasoline tax		1.42*		1.27*		1.59*
		(0.096)		(0.11)		(0.11)
Country FE	Yes	Yes	Yes	Yes	Yes	Yes
Time indicators	Yes	Yes	Yes	Yes	Yes	Yes
Observations	556	422	716	609	864	864

Each model contains country fixed effects and time indicators and uses fixed-b heteroskedasticity and autocorrelation robust standard errors for finite N and large T panels (Vogelsang, 2012). * $p < 0.05$.

Table B10: DiD estimates for French Presidents relative to their predecessors for gasoline, controlling for excise tax.

	(1) Gasoline No tax	(2) Gasoline Tax	(3) Gasoline No tax	(4) Gasoline Tax	(5) Gasoline No tax	(6) Gasoline Tax
N Sarkozy	-0.01	0.11*				
	(0.044)	(0.049)				
F Hollande			-0.39*	-0.08		
			(0.069)	(0.050)		
E Macron					0.33*	-0.01
					(0.056)	(0.032)
Gasoline tax		1.11*		1.63*		0.95*
		(0.17)		(0.094)		(0.11)
Country FE	Yes	Yes	Yes	Yes	Yes	Yes
Time indicators	Yes	Yes	Yes	Yes	Yes	Yes
Observations	292	292	1140	1140	520	520

Each model contains country fixed effects and time indicators and uses fixed-b heteroskedasticity and autocorrelation robust standard errors for finite N and large T panels (Vogelsang, 2012). * $p < 0.05$.

Table B11: DiD estimates for US Presidents relative to their predecessors for diesel, controlling for excise tax.

	(1) Diesel No tax	(2) Diesel Tax	(3) Diesel No tax	(4) Diesel Tax	(5) Diesel No tax	(6) Diesel Tax
B Obama	0.50*	0.20*				
	(0.11)	(0.072)				
D Trump			-0.14*	-0.19*		
			(0.031)	(0.040)		
J Biden					-0.11	-0.21*
					(0.069)	(0.045)
Diesel tax		0.86*		1.21*		1.58*
		(0.071)		(0.077)		(0.22)
Country FE	Yes	Yes	Yes	Yes	Yes	Yes
Time indicators	Yes	Yes	Yes	Yes	Yes	Yes
Observations	596	596	172	172	604	604

Each model contains country fixed effects and time indicators and uses fixed-b heteroskedasticity and autocorrelation robust standard errors for finite N and large T panels (Vogelsang, 2012). * $p < 0.05$.

Table B12: DiD estimates for UK Prime Ministers relative to their predecessors for diesel, controlling for excise tax.

	(1) Diesel No tax	(2) Diesel Tax	(3) Diesel No tax	(4) Diesel Tax	(5) Diesel No tax	(6) Diesel Tax	(7) Diesel No tax	(8) Diesel Tax
G Brown	-0.35*	-0.01						
	(0.17)	(0.096)						
D Cameron			0.37*	0.11*				
			(0.078)	(0.043)				
T May					-0.61*	0.09		
					(0.090)	(0.070)		
B Johnson							-0.06	0.09*
							(0.032)	(0.033)
Diesel tax		0.78*		1.11*		1.45*		1.01*
		(0.10)		(0.054)		(0.13)		(0.086)
Country FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Time indicators	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	348	348	692	692	252	252	768	768

Each model contains country fixed effects and time indicators and uses fixed-b heteroskedasticity and autocorrelation robust standard errors for finite N and large T panels (Vogelsang, 2012). * $p < 0.05$.

Table B13: DiD estimates for Canadian Prime Ministers relative to their predecessors for diesel, controlling for excise tax.

	(1) Diesel No tax	(2) Diesel Tax	(3) Diesel No tax	(4) Diesel Tax	(5) Diesel No tax	(6) Diesel Tax
P Martin	-0.24*	0.11*				
	(0.052)	(0.042)				
S Harper			0.12*	0.03		
			(0.054)	(0.031)		
J Trudeau					0.02	-0.16*
					(0.058)	(0.050)
Diesel tax		1.35*		1.25*		1.25*
		(0.068)		(0.075)		(0.091)
Country FE	Yes	Yes	Yes	Yes	Yes	Yes
Time indicators	Yes	Yes	Yes	Yes	Yes	Yes
Observations	556	422	716	609	864	864

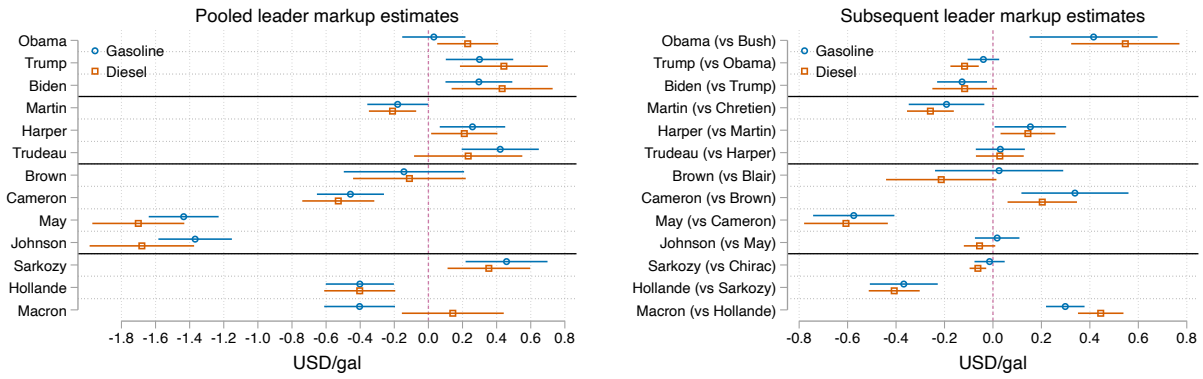
Each model contains country fixed effects and time indicators and uses fixed-b heteroskedasticity and autocorrelation robust standard errors for finite N and large T panels (Vogelsang, 2012). * $p < 0.05$.

Table B14: DiD estimates for French Presidents relative to their predecessors for diesel, controlling for excise tax.

	(1) Diesel No tax	(2) Diesel Tax	(3) Diesel No tax	(4) Diesel Tax	(5) Diesel No tax	(6) Diesel Tax
N Sarkozy	-0.12*	-0.03				
	(0.046)	(0.028)				
F Hollande			-0.42*	-0.09*		
			(0.050)	(0.038)		
E Macron					0.45*	0.14*
					(0.062)	(0.061)
Diesel tax		1.09*		1.04*		1.06*
		(0.066)		(0.072)		(0.13)
Country FE	Yes	Yes	Yes	Yes	Yes	Yes
Time indicators	Yes	Yes	Yes	Yes	Yes	Yes
Observations	292	292	1140	1140	520	520

Each model contains country fixed effects and time indicators and uses fixed-b heteroskedasticity and autocorrelation robust standard errors for finite N and large T panels (Vogelsang, 2012). * $p < 0.05$.

B.2 Supplemental figures: Markup analysis robustness check



(a) (b)

Figure B1: Robustness check using fuel price markups relative to the crude oil price as the outcome variable. Figure plots pooled and subsequent leader estimates of leader-specific average fuel price markups. 95% confidence intervals constructed from heteroskedasticity and autocorrelation robust standard errors for finite N and large T panel (Vogelsang, 2012).

C Survey Instrument

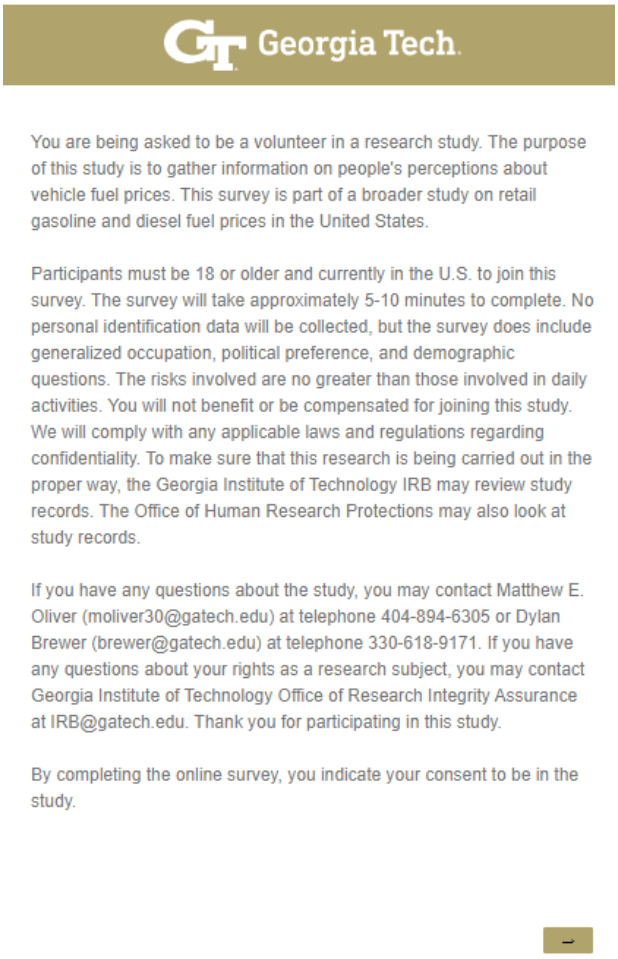


Figure C1: Survey front matter.



Figure C2: Affirmation of data quality.

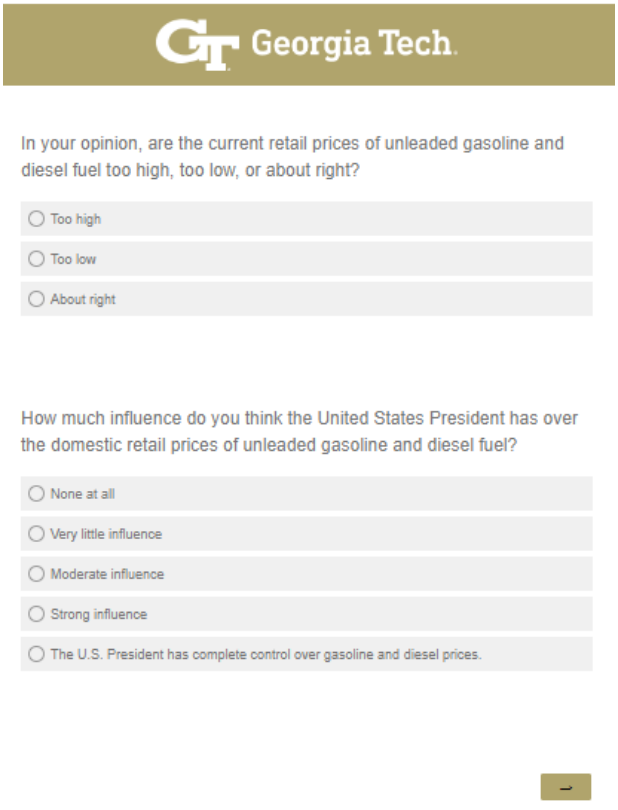


Figure C3: Main questions of interest. Order is randomized.

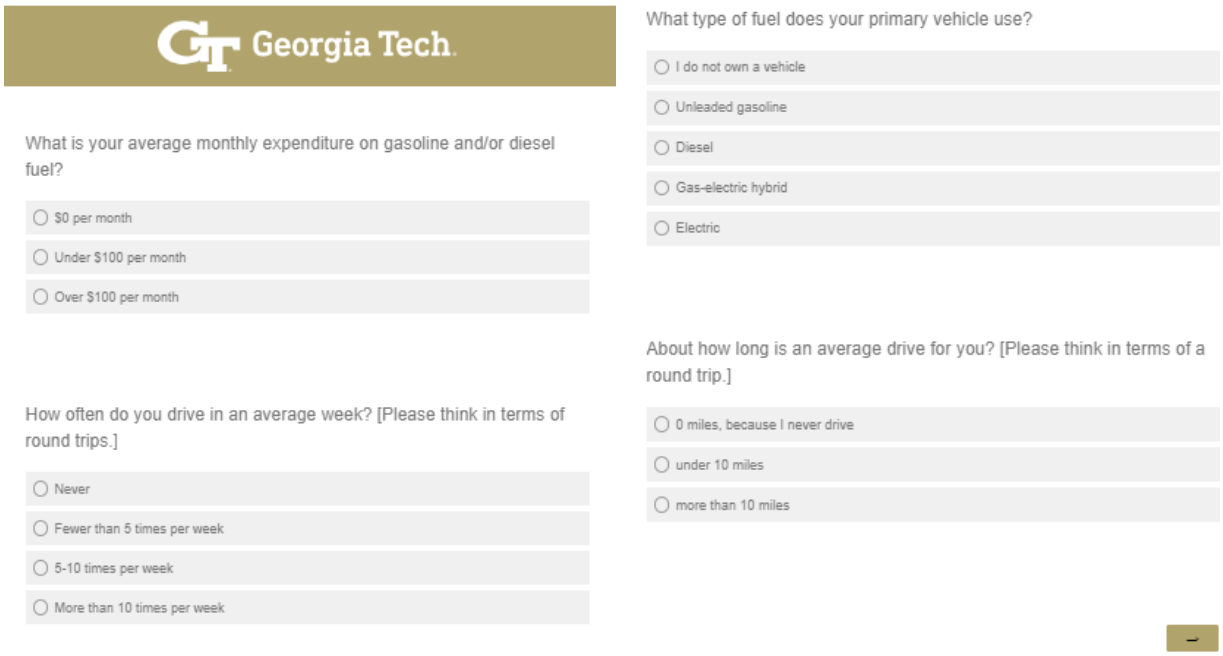


Figure C4: Questions about driving behavior and fuel usage. Order is randomized.



Figure C5: Attention check.

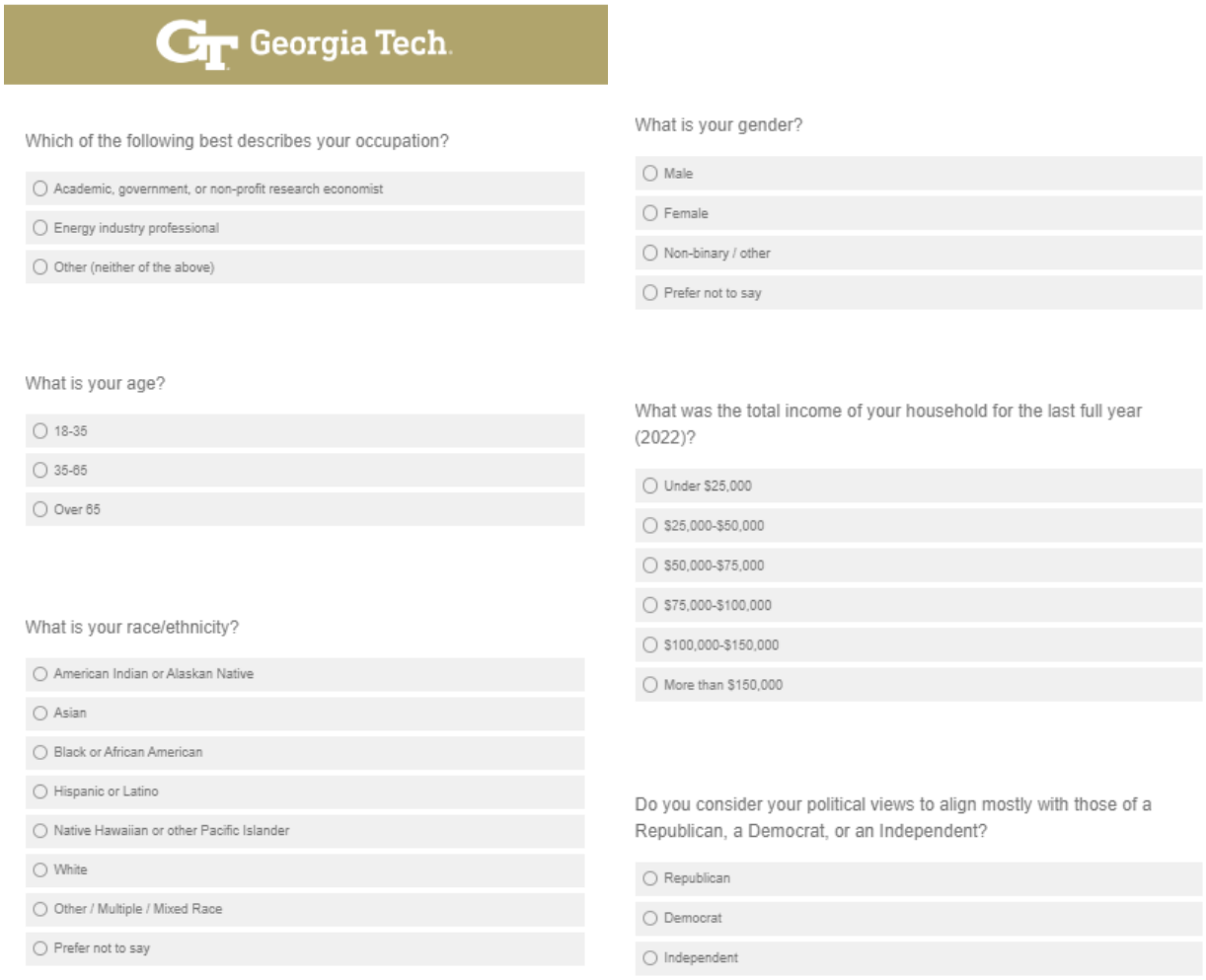


Figure C6: Socio-demographic questions.

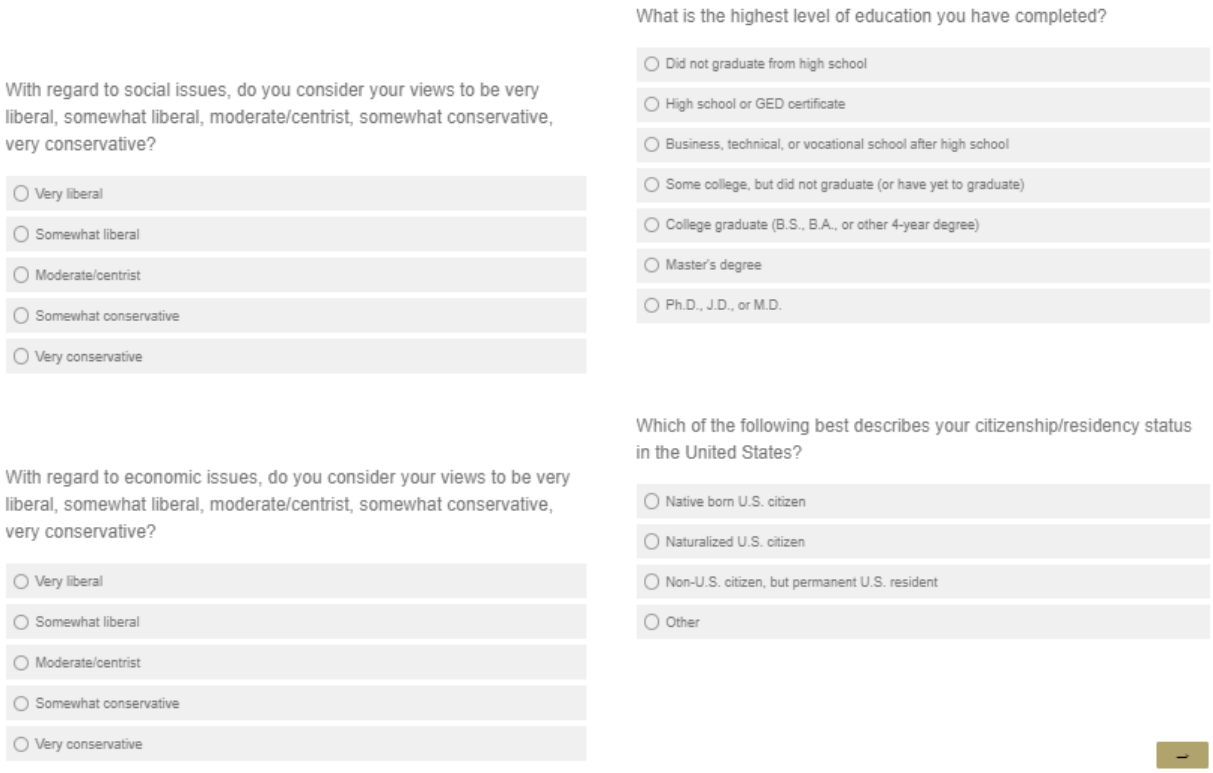


Figure C7: Additional socio-demographic questions.