

The Environmental Protection Agency's Regulatory Footprint: Quad-O's effect on International
Crude Oil, Distillate Prices, and Industry Returns

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Abstract: The Environmental Protection Agency's Quad-O regulation's objective is to reduce methane emissions; however, its effects on industry output and international crude oil and natural gas prices remain poorly understood. Quad-O increased international prices for crude oil, natural gas, conventional gas, diesel, and aviation fuel, but did not produce uniform effects on firm returns across upstream, midstream, and downstream sectors. While the regulation's implementation had limited effects on most firm returns, equipment & services and transportation & pipeline sectors experienced adverse returns following the Quad-O announcement. Although consumers faced higher energy prices, these sectoral return differential effects suggest that oil and gas consumers bore a larger share of the regulatory burden.

Keywords: Environmental Protection Agency; Regulation; Quad-O; Methane.

JEL Codes: L50, L51, L52, oil and gas JEL codes.

I. Introduction

The Environmental Protection Agency's (EPA) standards have a significant role in dynamic regulatory impacts on international crude oil and natural gas prices. The EPA was established in 1970 with oversight over the then-new criteria pollutants, which are carbon monoxide (CO), nitrogen dioxide (NO₂), sulfur dioxide (SO₂), ground-level ozone (O₃), particulate matter (PM), and lead (Pb). As the EPA's regulatory authority evolved, by August 2011, it proposed Quad-O emission standards targeting new, reconstructed, or modified oil and natural gas equipment to reduce methane emissions. These standard's objective is to prevent methane leaks and venting, addressing methane (CH₄)—a harmful pollutant is effectively a de facto criteria pollutant by regulating emissions from oil and gas operations, where compliance often requires firms to invest in new or upgraded infrastructure, where such changes raise operational costs through increased capital expenditures. These regulatory compliance costs affect corporate profits, which in turn affect shareholder wealth. If firms pass these costs on to consumers, it generates upward pressure on oil and gas prices. However, the relationship between individual firms' compliance costs, profitability, firm value, and their impact on international equity prices and returns remains unclear.

The EPA's Quad-O regulations are structured to respond to advancing scientific knowledge and to alleviate environmental and public health risks, especially by limiting harmful emissions. The 1990 Clean Air Act Amendments incorporated recent scientific discoveries and emerging technologies into law, empowering the EPA to stay adaptive in the face of evolving

research, technological innovation, and changing environmental conditions. Over time, these regulations have developed into three distinct phases. In addition, the proposed Quad-Oc rule would establish emission guidelines for State Implementation Plans (SIPs) to oversee volatile organic compound (VOC) and methane emissions from existing equipment.

Across subparts, regulated equipment spans the crude oil and natural gas production, processing, transmission, storage, and gathering operations. Covered emission sources encompass routine flaring, compressor stations, centrifugal and reciprocating compressors with dry or wet seals, pneumatic controllers and pumps, fugitive emissions from well sites and centralized facilities, storage vessels, gas well liquids unloading, sweetening units, and other leak-prone process equipment. A related program, Subpart W of the Greenhouse Gas Reporting Program (GHGRP), requires large petroleum and natural gas facilities that meet reporting thresholds to quantify and report greenhouse gas emissions, including methane, from these same systems.

It is against this backdrop that his study considers two questions regarding Quad-O's effect on international oil and gas distillate prices and US producer returns. First, how did Quad-O's August 23rd, 2011 proposal affect international crude, natural gas, and distillate prices? Quad-O increased the price of crude, natural gas, conventional gas, diesel, and aviation fuels but had no effect on producer returns. Second, which oil and gas sector was most affected by Quad-O's implementation? Quad-O effects were not uniform across upstream, midstream, and downstream sectors. Most producer returns were unaffected by Quad-O, yet equipment & service and transportation & pipeline returns were adversely affected. Consumers paid higher

prices, and implementation changed sector returns, indicating oil and gas consumers bear the larger incidence of the regulatory burden.

II. US Environmental Policy Effects on International Oil and Natural Gas Prices

The United States plays a central role in global crude oil and natural gas markets historically as one of the world's largest consumers and, since the early-2000s horizontal drilling and hydraulic fracturing revolution, increasingly as a dominant producer. For decades, US energy security depended heavily on Middle East and South America imports, and the shale revolution fundamentally altered this dynamic to reshape international energy markets. Subsequently, US oil and gas production now constitutes a significant share of global supply (EIA, *Petroleum and Other Liquids*, 2025). In addition, many of the world's major oil and natural gas companies originated in, and continue to maintain headquarters in, the United States, which positions US environmental and regulatory policies to influence international corporate actions. While global prices are shaped by factors beyond US control—including OPEC decisions, international economic conditions, extreme weather, and geopolitical disruptions in key producing regions—technological advances have transformed the United States from a predominantly import-dependent energy consumer into a major global producer. This shift reduces U.S. reliance on foreign imports and expands its influence across international energy markets, strengthening the role of U.S. environmental policy.

International oil and natural gas producers operate under their respective domestic legal and regulatory frameworks, many of which maintain less stringent environmental requirements and weaker enforcement mechanisms than in the United States. Despite these policy differences, the US EPA remains one of the most well-funded, legally developed, and scientifically informed world environmental regulatory bodies, and its standards frequently serve as industry practice

benchmarks. Backed by extensive scientific research and supported by widely available compliance tools and technologies, EPA regulations are generally viewed as rigorously tested and implementable. Since its establishment, specifically following the 1990 Clean Air Act Amendments, the EPA is structured to incorporate the most current and reliable environmental science, shaping not only domestic policy but also influencing the approaches of comparable international regulatory institutions. Within this broader framework, the EPA's Quad-O rules are globally a methane leak detection and emissions monitoring reference point. Proposed in August 2011, Quad-O established requirements for US oil and gas operators to detect methane leaks to maintain more efficient natural gas and petroleum infrastructure.

III. Aggregate Quad-O Effects on Crude Oil and Natural Gas Prices

Regression discontinuity (RD) is a widely used approach for estimating causal effects that exploits predetermined thresholds, where units are treated if an observed running variable exceeds a known cutoff (Kolesár and Rothe, 2018, p. 2277). In this study, the August 2011 Quad-O proposal is the cutoff. An RD models nonlinear trends and potential changes in slope coefficients at the cutoff, while emphasizing local estimation near the threshold (Angrist and Pischke, 2009, pp. 253-259; Angrist and Pischke, 2015, pp. 156–157). Graphical presentation of outcomes around the cutoff, strengthens the credibility of these causal interpretations, reflecting the immediate response to the regulatory change.

$$\begin{aligned}
 Price_t = & \alpha_Q + \beta_{Q1} \cdot 1 \cdot (Time_t - Quad) + \beta_{Q2} (Time_t - Quad)^2 + \beta_Q (Time_t - Quad)^3 \\
 & + \beta_{Q4} (Time_t - Quad)^4 + \beta_{Q5} (Time_t - Quad)^5 + \varepsilon_t \quad (\text{Model 1})
 \end{aligned}$$

If Quad-O causally increased crude oil and natural gas prices, North Sea Brent, Henry Hub natural gas, and distillate prices will encounter a sustained upward shift following the regulatory change. To identify the causal effect of the EPA's Quad-O implementation, a regression discontinuity design is applied across a range of energy markets, including crude oil, natural gas, conventional gas, diesel, and aviation fuel prices. In each market, prices exhibit a discrete and statistically significant discontinuity at the threshold, consistent with a structural break in international energy prices induced by the Quad-O regulatory change (Figures 1 and 2).

[Insert Figures 1 and 2 here]

The EPA's Quad-O introduction (Subpart OOOO) in August 23, 2011 introduced a significant shift in environmental compliance requirements for the oil and natural gas sector. By mandating reduced methane emissions during completions, equipment upgrades, and vapor recovery systems, Quad-O increased operational costs and regulatory burdens for US producers, particularly shale gas firms. Given the United States' growing role as an international crude oil and natural gas supplier, these regulatory changes altered market expectations regarding future supply. Anticipated drilling and production slowdowns contributed to upward pressure on international crude oil, natural gas, and refined petroleum product prices.

If commodity markets are efficient and forward-looking, prices and returns should fully reflect available information, yet the introduction of a new information set should not produce predictable changes in returns. To test if markets quickly assimilated Quad-O into returns, a regression discontinuity design is implemented across crude oil, natural gas, and distillate returns, using the August 23, 2011, Quad-O proposal as the cutoff.

$$Returns_t = \alpha_Q + \beta_{Q1} \cdot 1 \cdot (Time_t - Quad) + \beta_{Q2} (Time_t - Quad)^2 + \beta_Q (Time_t - Quad)^3$$

$$+\beta_{Q4}(Time_t - Quad)^4 + \beta_{Q5}(Time_t - Quad)^5 + \varepsilon_t \quad (\text{Model 2})$$

[Insert Figures 3 and 4 here]

While Quad-O had a persistent effect on prices, it did not produce a permanent discontinuity in returns for crude oil, natural gas, or distillate returns (Figure 3 and 4). The absence of a discrete jump in returns indicates that these markets returns were not causally affected by Quad-O, nor did the regulatory change generate a predictable return response at the implementation date.

IV. Industry Configuration and Market Organization

The oil and gas industry is vertically organized into Integrated and Independent upstream, midstream, and downstream producers. Vertically Integrated supermajors are present in each part of the industry, and internally organize their own upstream, midstream, and downstream units. Majors eliminate redundant production processes to achieve scale and scope associated with resource reserves, reduce risk, but draw greater attention from political and environmental interests. Vertically Integrated Majors included here are British Petroleum, Chevron, ConocoPhillips, ExxonMobil, Hess, Shell, and Total SA.

Smaller but comparatively large Independents specialize in specific industry sectors. For example, upstream Independents exploration & production specialize in exploration, drilling, and bringing reserves into production, and exploration & production firms reported here include Concho, Pioneer, and Diamond Back. Close to discovery, exploration & production firm valuations are directly tied to crude oil and natural gas, and their primary product's price varies directly with the price of crude and natural gas. While equipment & service firms historically

served each part of the industry, the recent fracking revolution, service firms are more integrated with exploration & production firms because equipment & service firms complete wells in final production stages after exploration & production bring crude and natural gas into production. Examples of equipment & service firms include Baker Hughes, Fluor, Haliburton, Heimerlich & Payne, Nabors, National Oilwell Varco, Schlumberger, TechipFMC, and Tidewater. Compared to other Independent oil and gas firms, equipment & service firms occupy among the most competitive parts of the industry.

Midstream transportation & pipeline firms physically move and store oil and gas production from upstream exploration & production to downstream refining & marketing. Transportation & pipeline firm examples include Aegion, Enbridge, Evolve Transition, Kinder Morgan, OneOK, Plains America, and TC Energy. Refining & marketing firms are end-line producers who receive crude and natural gas possession and distill it into usable petroleum, diesel, and polymers. Refining & marketing firms used here are Holly Frontier, Marathon Petroleum, Par Pacific Holdings, PBF Energy, Phillips 66, Targa Resources, and Valero. Because of their physical position in the oil and gas industry, transportation & pipeline and refining & marketing firm valuations do not vary as much with crude oil and natural gas as upstream producers. Rather, valuations are determined by the quantity of crude and natural gas transported, distilled, and sold in international oil and gas markets, where their values are determined by their value added to the quantity of oil and gas transported and refined.

Since early 2000s, crude oil, natural gas, and distillate prices have varied considerably, with a significant decrease in crude oil prices before the 2012 horizontal drilling revolution. Tight fracking technologies were developed earlier, where natural gas prices were lower after 2005 (Zuckerman, 2013; Gold, 2014). The firm data used here is for two different but related

research questions. The first is for international crude oil and distillate prices. Brent North Sea is the relevant commodity price, and international natural gas is measured at Henry Hub prices. Distillate diesel, conventional gas, and aviation fuel are measured in US Gulf Coast values. The second data series is firm-level returns measured relative to US equity and exchange returns. There are 34 exploration & production firms for the August 23rd, 2011 announcement. Nine equipment & service firms and 12 vertically integrated firms are used for the 2011 Quad-O announcement. There are 11 transportation & production firms, and five refining & marketing firms used for the 2011 announcement. Returns are averaged across sectors.

Because the August 2011 Quad-O proposal represented the initial change in EPA policy, it serves here as the event that oil and gas markets changed prices in response to the regulatory shift. Regulatory oversight increased producers' operational expenses if unforeseen environmental compliance costs exceeded budgeted allocations. However, compliance costs associated with Quad-O were not immediate; their full impact likely extended into 2012 before significantly affecting oil and gas producers' equity returns. Despite potential asymmetric market-policy responses, forward-looking participants in financial and commodity markets likely reacted to the announcement at or around this time. Like other regulatory costs, Quad-O compliance expenditures were not unprecedented, as compliance obligations are standard since the creation of the Environmental Protection Agency in 1970 under President Richard Nixon. By the early 2010s, EPA and Quad-O compliance costs were largely anticipated and integrated into firm cost structures. Any additional costs resulting from Quad-O would therefore have represented incremental expenses beyond those already incorporated into firms' budgets.

V. Quad-O Effects on Prices and Returns

The observed increase in crude oil, natural gas, and their distillates following Quad-O international prices indicates that Quad-O directly increased commodity prices, with a disproportionate portion of these higher costs passed on to consumers. However, it remains less clear which segments of the oil and gas industry bore the regulatory costs. A model is specified that accounts for firm-specific returns across oil and gas sectors, and individual firm returns are aggregated with corresponding commodity market returns to represent the combined effect of regulatory costs and market responses at the sector level.

$$r_i = \alpha + \beta_1 r_{S\&P} + \beta_2 r_{Brent} + \beta_3 r_{NatGas} + \beta_4 r_{ConGas} + \beta_5 r_{Diesel} + \beta_6 r_{JetFuel} + \beta_7 r_{SMB} + \beta_8 r_{HML} + \beta_9 r_{RMW} + \beta_{10} r_{CMA} + \beta_{11} r_{Quad} + \beta_{12} r_{SNP \times Quad} + \beta_{13} r_{Brent \times Quad} + \beta_{14} r_{NatGas \times Quad} + \beta_{15} r_{Congas \times Quad} + \beta_{16} r_{Diesel \times Quad} + \beta_{17} r_{JetFuel \times Quad} + \varepsilon_i$$

(Equation 3)

Let r_{it} is the i^{th} industry's average sector return in period t . $r_{S\&P,t}$, r_{SMB} , r_{HML} , r_{RMW} , and r_{CMA} are equity and macroeconomic factor returns, and $r_{Brent,t}$, r_{NatGas} , r_{ConGas} , r_{Diesel} , and $r_{JetFuel}$ are commodity market returns. r_{Quad} is each firm's rate of return after August 23rd, 2011. Interactive equity and Quad-O- commodity-distillate returns are $r_{SNP \times Quad}$, $r_{Brent,t \times Quad}$, $r_{NatGas,t \times Quad}$, $r_{Congas,t \times Quad}$, $r_{Diesel,t \times Quad}$ and $r_{JetFuel,t \times Quad}$. Various macroeconomic risk factors are associated with small-minus-big, high-minus-low, robust-minus-weak, conservative-minus-aggressive, and momentum. Small-minus-big is the traditional size effect, and as a macroeconomic risk factor, reflects broader market dynamics that are linked to variables, such as interest, inflation rates, and overall economic performance because interest and inflation rates reflect the overall state of the economy. High-minus-low is the value premium and is the ratio of high-to-low value is sensitive to business cycles. During contractions, value stocks tend to underperform when the earnings underperform. Robust-minus-weak represents macroeconomic activity when it captures return

differentials between economically robust and strong firms to weak and vulnerable firms. Momentum acts as a macroeconomic risk factor when it reflects market behavior and investor psychology in interaction with economic cycles, investor sentiment, and broader macroeconomic activity. Equation 3 models upstream, midstream, and downstream returns to measure Quad-O's affects across the industry.

[Insert Table 1 here]

Traditional valuation patterns across upstream, midstream, and downstream segments respond with established patterns. Upstream exploration & production and equipment & service returns typically have the greatest equity and commodity market returns (Carson, 2020; Carson, 2022). When treated as a single effect, Quad-O's August 23, 2011 announcement had little effect on aggregate oil and gas industry returns because capital is not fungible across sectors, and regulatory effects did not fall evenly across the oil and gas industry (Carson, 2023). Although Quad-O contributed to higher international crude oil, natural gas, and distillate prices, it did not generate uniform changes in firm valuations. The most adverse effects were concentrated among equipment & services firms and transportation & pipeline firms. Equipment & services firms are highly sensitive to exploration & production capital expenditures, which decrease when upstream firms adopt a wait-and-see posture in response to regulatory uncertainty. Their limited financial buffers and high exposure to upstream drilling activity amplify the impact of regulatory announcements. Midstream transportation & pipeline firms, despite generally stable cash flows, face risks tied to throughput volumes and infrastructure compliance. Decreases in upstream production reduce pipeline volumes, raise per-unit regulatory costs, and increase exposure to aging infrastructure requirements, making midstream firms vulnerable to additional regulation.

Exploration & production, vertically Integrated, and refining & marketing firms were not independently affected by the Quad-O announcement. Exploration & production firms and vertically Integrated firms can offset regulatory pressures by benefiting from commodity price increases or by reallocating resources across operational divisions. Vertically Integrated firms' internal coordination across upstream, midstream, and downstream units enables them to manage regulatory shocks, reallocate capital, and optimize infrastructure investments more effectively than smaller Independent producers. Refining & marketing firms, whose margins depend on crack spreads rather than upstream volumes, can pass increased costs downstream to consumers, insulating them from most regulatory shocks affecting upstream and midstream producers.

Although firm returns were generally unaffected by Quad-O, its interactive effects varied. Equity market conditions were broadly positive following the announcement, but vertically Integrated majors, whose equity returns are strongly correlated with market movements, were adversely affected once Quad-O was implemented. Interactive effects between Quad-O and natural gas returns were generally small across sectors, while the Quad-O crude oil interaction negatively affected exploration & production firms and vertically Integrated majors. Conventional gasoline, one of the distillates most directly associated with regulatory compliance requirements, exhibited negative interactions for all sectors except transportation & pipeline firms. Jet fuel returns were the exception, displaying positive correlations, although these effects were modest relative to other distillates.

V. Conclusion

The EPA was established in 1970 and revised in 1990 with oversight over the criteria pollutants, and methane is now a de facto criteria pollutant. Quad-O is the EPA's primary

regulation over regulation and increased the price of crude, natural gas, conventional gas, diesel, and aviation fuels but had no effect on producer returns. While Quad-O had a persistent effect on prices, it did not produce a permanent discontinuity in returns for crude oil, natural gas, or distillates. Subsequently, Quad-O causally increased international energy prices and were efficiently assimilated it into returns by August 23, 2011. Most producer individual returns were unaffected by Quad-O, yet equipment & service and transportation & pipeline returns were independently and adversely affected by Quad-O, with large vertically Integrated firms best positioned to absorb the increased compliance costs. When treated as a single event, Quad-O's August 23, 2011 announcement had little effect on aggregate oil and gas industry returns, and regulatory effects did not fall evenly across the oil and gas industry.

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Table 1, Average Sector Returns across the Oil and Gas Industry

| | (1) ENP | (2) ENS | (3) INT | (4) TNP | (5) RNM |
|------------------|---------------------------|----------------------------|----------------------------|----------------------------|----------------------------|
| Constant | 0.000351* (0.000200) | 0.000331 (0.000234) | 0.000124 (0.000137) | 0.000797 (0.000498) | 0.000568 (0.000519) |
| S&P | 0.937350*** (0.049292) | 0.980628*** (0.031572) | 1.080159*** (0.018822) | 0.499328*** (0.057283) | 0.959745*** (0.081395) |
| Brent | 0.126710*** (0.011085) | 0.095065*** (0.015366) | 0.076456*** (0.009217) | -0.232063*** (0.081968) | -0.011783 (0.039282) |
| Natural Gas | 0.019993*** (0.004215) | 0.016556*** (0.004650) | -0.001383 (0.002886) | 0.004771 (0.008174) | 0.000209 (0.013859) |
| Conventional Gas | 0.099636*** (0.009913) | 0.093898*** (0.016305) | 0.060978*** (0.009765) | -0.189383** (0.074112) | 0.209541*** (0.035890) |
| Diesel | 0.225885*** (0.025349) | 0.247037*** (0.022439) | 0.141091*** (0.015352) | 1.804792*** (0.429357) | 0.143102*** (0.045003) |
| Jet Fuel | -0.018529 (0.017359) | -0.007390 (0.020108) | -0.025751 (0.016409) | -0.840219*** (0.226099) | -0.037317 (0.037638) |
| SMB | 0.006216*** (0.001013) | 0.006007*** (0.000419) | 0.000384 (0.000274) | 0.004661*** (0.000548) | 0.005975*** (0.000647) |
| HML | 0.003403 (0.002741) | 0.002063*** (0.000530) | 0.000680** (0.000325) | 0.000065 (0.000655) | 0.004791*** (0.000779) |
| RMW | 0.010415 (0.008062) | 0.003268*** (0.000621) | 0.002246*** (0.000445) | -0.001855** (0.000772) | 0.000607 (0.000731) |
| CMA | -0.009798 (0.009075) | -0.000544 (0.000847) | -0.000746 (0.000528) | 0.002306** (0.001102) | -0.004256*** (0.001147) |
| MOM | -0.002499 (0.001580) | -0.003217*** (0.000301) | 0.000178 (0.000208) | -0.002216*** (0.000391) | -0.002571*** (0.000409) |
| Quad-O | 0.001479 (0.002344) | -0.001112*** (0.000311) | -0.000133 (0.000198) | -0.001195** (0.000539) | -0.000156 (0.000557) |
| S&P×Quad | 0.139500*** (0.047178) | 0.154520*** (0.047499) | -0.615322*** (0.041913) | 0.328249*** (0.074178) | 0.069848 (0.093589) |
| Brent×Quad | -0.079102** | 0.003235 | -0.101250** | 0.278309*** | 0.006746 |

| | | | | | |
|-----------------------|---------------------------|----------------------------|----------------------------|----------------------------|----------------------------|
| | (0.038269) | (0.026578) | (0.041494) | (0.086458) | (0.043010) |
| Natural Gas×Quad | -0.052822 (0.050875) | -0.009347 (0.006614) | 0.005827 (0.009675) | 0.003353 (0.009336) | -0.005701 (0.014886) |
| Conventional Gas×Quad | -0.127082** (0.064522) | -0.091597*** (0.023873) | -0.091575*** (0.024448) | 0.249708*** (0.075769) | -0.173562*** (0.041385) |
| Diesel×Quad | 0.179741 (0.149895) | -0.026865 (0.040133) | 0.333983*** (0.048307) | -1.666864*** (0.431619) | -0.050229 (0.061620) |
| Jet Fuel×Quad | 0.071007*** (0.024425) | 0.070667* (0.036145) | 0.341282*** (0.050159) | 0.860183*** (0.227332) | 0.021818 (0.059342) |
| Observations | 110,530 | 24,619 | 41,960 | 38,995 | 22,523 |

Source: Natural gas, <https://fred.stlouisfed.org/series/DHHNGSP>. Conventional Gas,

<https://fred.stlouisfed.org/series/DGASUSGULF>. Diesel, <https://fred.stlouisfed.org/series/DDFUELUSGULF>.

Aviation Fuel, <https://fred.stlouisfed.org/series/DJFUELUSGULF>

Note: ENP is Exploration & Production. ENS is Equipment & Service. INT is Vertically Integrated. TNP is

Transportation & Pipeline. RNMS is Refining & Marketing. Standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

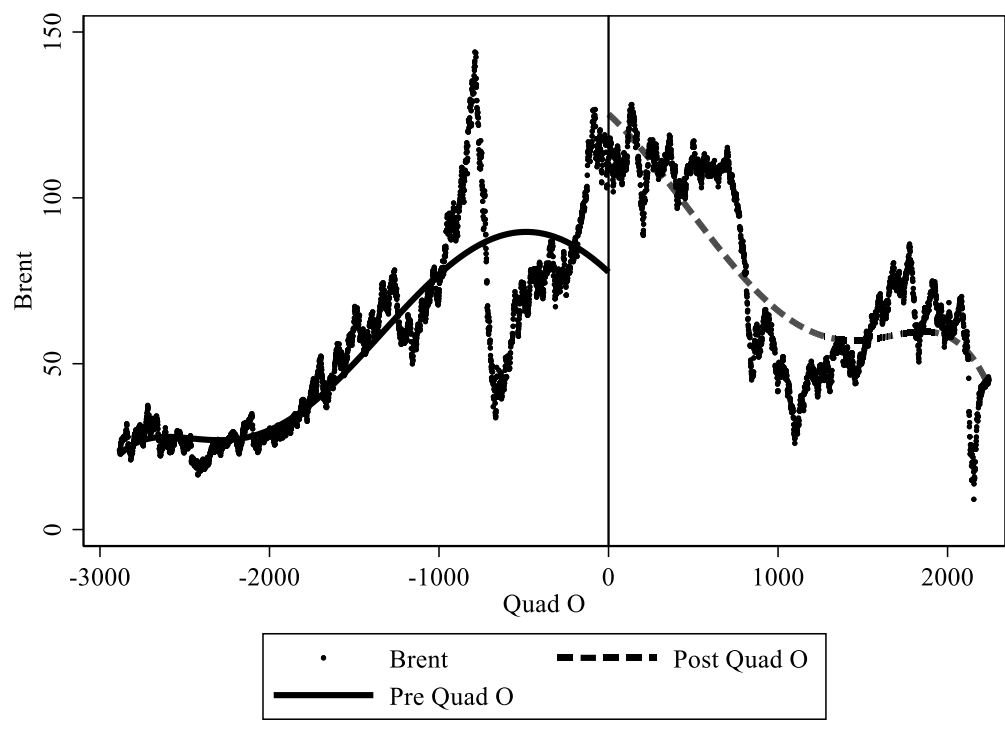


Figure 1, Pre and Post Quad-O Crude Oil Price Regression Discontinuity

Source: <https://fred.stlouisfed.org/series/DCOILBRENTU>

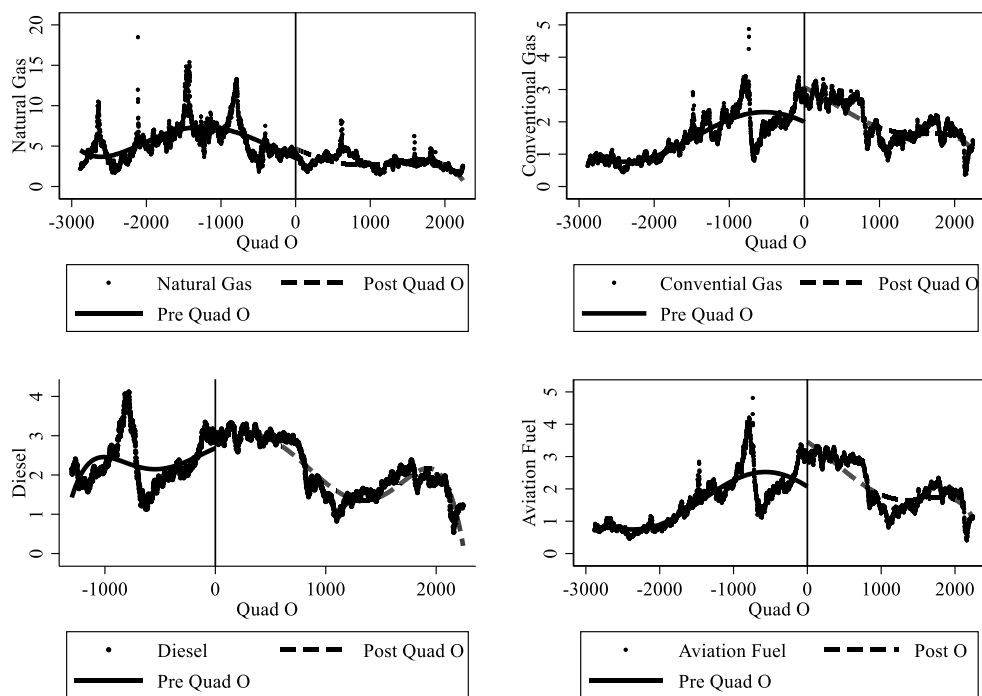


Figure 2, Pre and Post Quad-O Natural Gas and Distillate Price Regression Discontinuity

Source: Natural gas, <https://fred.stlouisfed.org/series/DHHNGSP>

Conventional Gas, <https://fred.stlouisfed.org/series/DGASUSGULF>

Diesel, <https://fred.stlouisfed.org/series/DDFUELUSGULF>

Aviation Fuel, <https://fred.stlouisfed.org/series/DJFUELUSGULF>

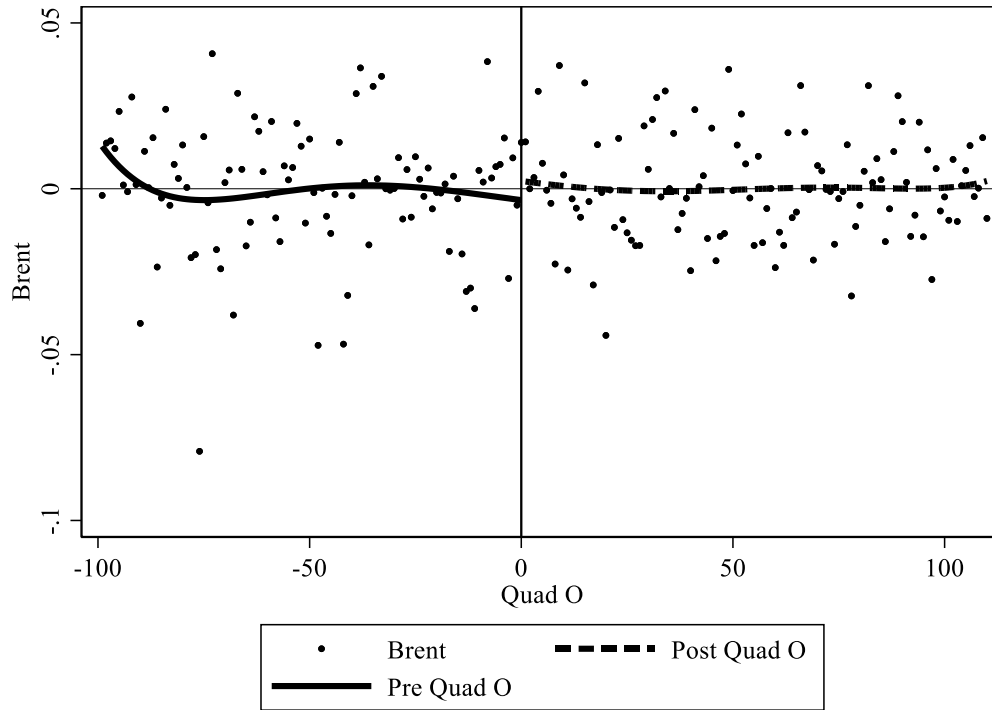


Figure 3, Pre and Post Quad-O Crude Oil Returns Regression Discontinuity.

Source: <https://fred.stlouisfed.org/series/DCOILBRETEU>

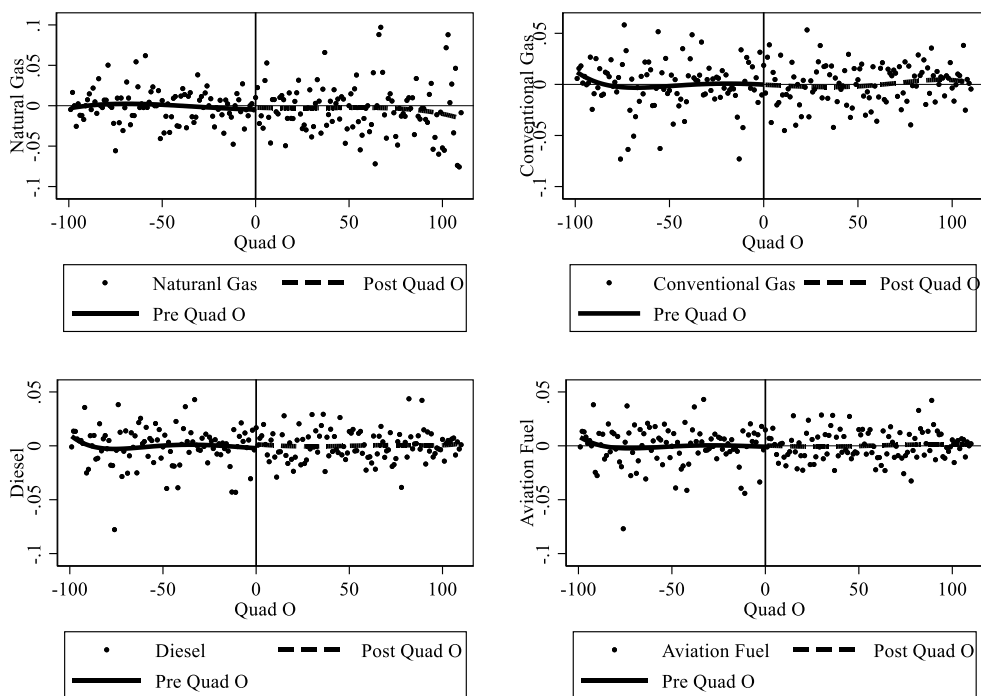


Figure 4, Pre and Post Quad-O Natural Gas and Distillate Returns Regression Discontinuity

Source: Natural gas, <https://fred.stlouisfed.org/series/DHHNGSP>

Conventional Gas, <https://fred.stlouisfed.org/series/DGASUSGULF>

Diesel, <https://fred.stlouisfed.org/series/DDFUELUSGULF>

Aviation Fuel, <https://fred.stlouisfed.org/series/DJFUELUSGULF>