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Removing the 1970s Crude Oil Price Controls: Lessons for Free-Market Reform

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Abstract
During the 1970s, the US federal government enacted an evolving set of detailed price controls on crude oil. Yet by early 1981, almost all vestiges of the command-and-control regime had been removed, with a return to a normal market for the resource. This paper explores the factors leading to such a rapid deregulation, distilling lessons that may be useful for other areas of free-market reform. I conclude that absurd unintended consequences, academic unity, public choice considerations, and luck all played a role.

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I. Introduction

"There's nothing more permanent than a temporary government program" is a common and cynical view among market-friendly economists. Ludwig von Mises (1949) and Robert Higgs (1987) both argued that initial government interventions into a sector of the economy will tend to grow. Public choice scholars certainly appreciate the difficulty of rolling back major policy changes when they involve massive flows of wealth to concentrated beneficiaries.

US government intervention into crude oil markets during the 1970s seems a perfect example of this pattern. What started with Richard Nixon's general wage-and-price controls soon evolved—especially after the OPEC embargo—into an intricate system of price and allocation controls in the petroleum market. Lane (1981) summarized the episode: "From their imposition in January 1974 to

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their demise in January 1981, the controls were amended several hundred times, either by rule making, legislation or through issuance of 'interpretative guidelines' . . . an examination of the major regulatory changes in that period illustrates a principal characteristic of this kind of detailed economic regulatory structure—*changes made to 'fix' one kink in the system resulted in new kinks with different individuals or groups as the new winners and losers*" (p. xx, emphasis added).

One might have predicted that once in place, such extensive top-down controls on the oil industry would have been impossible to repeal. And yet, as Lane's summary indicates, the controls *were* ultimately abolished. We no longer have the detailed top-down controls of the 1970s, and indeed the oil market was arguably *freer* by the late 1980s than it had been in the late 1960s.

How was this possible? Why did the cynical pattern not play out as it has in so many other sectors of the US economy? Are there lessons for free-market reform that can be applied outside of the petroleum experience? I seek to answer these questions in this paper.

II. Milton Friedman and the Nuances of Regulation

In his May 1975 *Newsweek* column, Milton Friedman took on "two economic propositions affecting current policy which are wrong yet are treated as self-evident in essentially all public discussion." The first concerned tax policy; the second, crude oil price controls:

> Decontrol of the price of "old" oil would mean a higher price of gasoline and fuel oil to final consumers . . . The price of so-called "old oil"—mostly that part of the oil produced from domestic wells which does not exceed in amount the pre-crisis level of output—has been fixed at $5.25 a barrel, while "new oil" and imported oil have been selling for more than twice as much. Elimination of the price ceiling as proposed by President Ford has been treated by opponent and proponent alike as a measure that would raise the price of gasoline and fuel oil to the consumer . . . this is a fallacy, and again, it arises from looking at *visible* effects alone. The quoted price of "old oil" would unquestionably rise, which appears to raise the cost of gasoline, and—here comes the fallacy—therefore its price. **But surely, the rise in the price of old oil would also give producers an incentive to produce more oil. How can more oil be produced yet the final price of petroleum products be higher?** (Friedman 1975a, italics in original, bold emphasis added.)

To paraphrase Friedman's argument: The federal government's crude oil price controls only locked in the "old" producers at a low price ($5.25 a barrel, at the time Friedman was writing), but allowed "new" domestic producers and foreign importers to sell at the world price. Even so, Friedman argued, the quantity of "old oil" brought to market would surely increase if its owners were allowed to earn the actual market price.

Therefore, if the Ford administration were to get its way and eliminate this particular price control on crude oil, then total US crude output would rise. More total crude delivered to refineries would mean more total gallons of gasoline delivered to market. Since the shortages at the pump had disappeared in early 1974, an increased quantity of gasoline could only be sold (moving along the public's demand curve for gasoline) if the price at the pump *fell*.

It was a beautiful analysis, but it was (probably) wrong. Federal regulations actually *were* holding down gas prices at the pump, because the price controls had been supplemented since November 1974 by the "entitlements" program.[1] Friedman admitted his mistake in a subsequent *Newsweek* column a month later, when he wrote that a former student "has informed me that my [earlier] analysis was incomplete and my final conclusion wrong. My mistake was in not realizing how perverse and irrational are the Federal Energy Administration's regulations" (Friedman 1975b, p. 75). It wasn't often that Friedman had to partially retract an argument he made to the public. Why did it happen?

To understand just how complex the federal regulations were—and to see why Friedman was amazed at their perversity and irrationality—consider the structure of the original price control scheme. The key component of phase four of the Emergency Petroleum Allocation Act, which began in the late summer of 1973 and was codified in November 1973, "was a two-tier system of price controls on domestically produced crude oil" (Kalt 1981, p. 12). The price of "old oil" and the base production of stripper oil (from wells nearing the end of their useful lives) was "limited to the levels they were at on 15 May 1973 plus $0.35 per barrel," while "new, new stripper, released, and imported oil prices were not controlled" (Kalt

[1] The old oil entitlements program was originally proposed by the Federal Energy Administration in August 1974 and was adopted in December 1974. But it was applied retroactively to begin in November 1974 (Kalt 1981, p. 14). I explain the entitlements program a little later in the text.

1981, p. 12).[2] The controls were meant to limit "windfall" gains to historical domestic producers coming from the sharp increase in world oil prices, while at the same time retaining incentives to develop new domestic sources as well as to bring in necessary imports.

The two-tiered system caused problems immediately. With the domestic crude price at the wellhead of "new" oil averaging $10.13 in 1974, compared to $5.03 for "old" oil (Kalt 1981, p. 18), the obvious consequences ensued. There were reports of refiners paying domestic crude producers well above the world price for "new" oil in order to obtain tie-in contracts to purchase "old" oil at the controlled price.

To prevent this type of maneuvering, on January 15, 1974, the Federal Energy Office (FEO) enacted regulations that "froze buyer-supplier relationships (at all stages except retail) into their 1972 status." Under these rules, "suppliers were required to continue to provide supplies to a customer in accord with the percentage of the supplier's total output provided to that customer in the base period" (Kalt 1981, pp. 12–13).

Yet with one problem solved, a new one arose. By freezing the relationships between domestic crude producers and refiners in their pre-crisis configuration, the new regulations conferred an arbitrary advantage on those refiners who happened to historically have relationships with "old oil" producers. They were now guaranteed first dibs on barrels of crude selling at the controlled price, whereas the refiners who historically had purchased imports had to pay the full market price for their crude.

The solution to this new problem was the old oil entitlements program, which became effective in November 1974. The program gave monthly entitlements to refiners, equal to "the number of barrels of controlled crude oil that that refiner would have used in the previous month had it operated using the national average proportion of controlled to uncontrolled crude" (Kalt 1981, p. 14). The refiners then had to turn in an entitlement for every barrel of controlled crude they used, and there was a market where refiners could buy and sell entitlements according to whether their operations were under or over their "fair share" of oil obtained at the artificially capped price.

The overarching purpose of the old oil entitlements program was to equitably distribute the gains from artificially cheap old oil among all of the nation's refiners. (Small refiners received special advantages

[2] A stripper well produced fewer than ten barrels of oil per day.

that I am neglecting for simplicity.) Under the program, it didn't matter what a refiner *actually spent* on obtaining barrels of crude; he would (retroactively) be either compensated or penalized to make his average cost equal the national average.

However, even though the entitlements program sought to equalize *average* costs to refiners, it drastically altered their *marginal* costs and changed their behavior. For a hypothetical example with unrealistic (but round) numbers, suppose that half of the oil delivered to refiners came from "old oil" sources at a controlled price of $6, while the other half was new oil (or imports), obtained at the market price of $11. In this case, an entitlement would have a market value of $5.

Now consider a refiner who imports an additional 1,000 barrels of crude. The true marginal cost is $11 per barrel × 1,000 barrels = $11,000. Yet because I have (unrealistically) assumed that the old-to-new oil ratio is 50:50,[3] the government in this scenario grants monthly entitlements to a refiner equal to half of the total production from the previous month. By boosting total output by 1,000 barrels, the refiner would receive an extra 500 entitlements, with a market value of $2,500. Thus the actual marginal cost of $11,000 for importing those additional barrels would only feel like $11,000 − $2,500 = $8,500 to the refiner. Even though the world price for crude was actually $11, the entitlements program would make barrels cost importers only $8.50 on net. The same logic would apply to a refiner considering an increase in purchases from *domestic* crude sources producing "new" oil that sold at the unrestricted price.

Thus the entitlement program (presumably unintentionally, at least at first) subsidized the expansion of oil refined from "new" domestic and foreign sources. Economists described the combination of price controls on domestic old oil and the entitlements program as a tax-and-subsidy scheme, in which the inframarginal units of old oil wells were taxed to provide a revenue-neutral subsidy to new domestic sources and foreign imports of crude oil. The total effect was likely an expansion of the total amount of crude oil to be refined, meaning that gasoline prices for American motorists were probably lower than they otherwise would have been.[4]

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[3] To be sure, the proportion of old to new oil would reflect the equilibrium import decisions of all the nation's refiners, but on the margin, a given refiner's decision to import an extra 1,000 barrels would not budge the national ratio.

[4] Kalt (1981) devotes an entire chapter to the "Effects of Regulation on Refined Product Prices." Some experts—mostly notably Phelps and Smith (1977)—argued

The entire situation was rather ironic. The government measures ostensibly designed to protect American motorists at the expense of American producers—namely, the price controls on "old oil" and gasoline—did not fulfill their purpose; they merely rewarded certain refiners and (for two periods in the 1970s) led to long lines and even fistfights at the pump. Yet the government measure designed to ensure fairness to refiners—namely, the entitlements program—encouraged dependence on hostile OPEC producers but had the unwitting effect of expanding oil refining and probably helped American motorists.

III. Ingredients for Free-Market Success: Unintended Consequences, Academic Unity, Public Choice, and Luck

Given what we know about the controls, what factors might explain their rapid and complete elimination? In a deal approved under the Carter administration and accelerated when Reagan took office, the price controls (all in the energy sector) that still remained from Nixon's original broad-based freeze were removed by 1981 and replaced by a windfall profits tax (WPT) on crude oil that was to be in force until 1988. However, the WPT did not collect nearly as much revenue as policymakers anticipated, such that the energy sector was arguably closer to a free market in the mid-1980s than it had been in the late 1960s.

This development is an amazing one for advocates of economic freedom. It seems to belie the standard cynicism about the prospects for regulatory reform. Four things explain this remarkable turnaround in the energy markets: (1) unintended and absurd consequences, (2) academic unity, (3) public choice considerations, and (4) luck.

A. Unintended (and Absurd) Consequences of the Price Control Program

The most memorable unintended consequence of the overall price

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that the United States was a price taker in the petroleum market and thus federal policy couldn't alter prices at the pump. Kalt rejects these views as simplistic. (For example, the RAND study looked at US gasoline prices before and after the entitlements program, rather than the more relevant comparison of US versus foreign gasoline prices before and after the entitlements program.) After reviewing his own econometric estimates, Kalt concludes that "the data examined here strongly suggest that, in the case of gasoline, *a large portion of the entitlements subsidy to domestic refining has been shifted to product consumers. . . . Termination of federal oil price regulations would have significant impact on domestic gasoline prices*" (1981, pp. 175–76, emphasis added).

rationing scheme was the gasoline lines. Yet only two periods of prolonged waiting at the pump occurred (Glasner 1985, pp. 120–24), meaning the American public didn't directly confront the aggravation of shortages throughout the 1970s. However, other unintended consequences did undermine support for the federal controls.

1. Low Prices Encouraged Domestic Energy Consumption

Artificially low prices led consumers to drive more than they otherwise would have, directly contradicting the pleas for Americans to reduce their energy consumption as one way to deal with the ostensible crisis. Regarding price controls on natural gas, one analyst observed, "Given the [Carter] Administration's emphasis on conservation, the inconsistency is offensive" (Samuelson 1977, p. 1653).

2. Low Prices Stifled Domestic Oil Production

Price controls on domestic oil reduced domestic crude production, though the nuanced measures (including pass-through provisions for cost increases, the distinction between "old" and "new" oil, and the provision for "released" old oil) were not as blunt as a simple price ceiling. Stockman (1978, p. 42) pointed out a particularly absurd implication of a proposed application of the entitlements program, which would have required certain producers "to pay $12 per barrel to stimulate additional production of oil for which they may legally charge only $5.40—an excellent way to discourage production of domestic oil."

3. Low Prices Exacerbated Supply Disruptions

Besides a general deadening of incentives, the controls also gave market participants the wrong signals during crises. In his detailed 1981 report prepared for an industry trade association, William Lane argued that the Arab embargo and the 1979 Iranian disruption caused higher spikes in world oil prices *because* of US regulations that shielded consumers from the full cost of gasoline. He also argued that the "price and allocation regulations . . . increased U.S. vulnerability by reducing the level of inventories held by private firms prior to both supply disruptions, and by contributing to the unnecessary building of stockpiles during the disruptions" (Lane 1981, p. xvi).

4. "Daisy Chains" and Other Dubious Petroleum Trading Boomed

Robert Bradley, in his 1996 treatise *Oil, Gas, and Government*, documented the trading boom in crude oil (and petroleum products) that was spawned by the price controls. I can only give an abbreviated version of the saga here, but the entire story is a beautiful illustration of unintended consequences. It also sheds light on the failure of the price controls to achieve their intended purpose: to suppress "windfall" gains to domestic crude oil owners in order to keep down prices at the pump.[5]

Traditionally, "gatherers" provided a midstream intermediary service by physically moving oil from the wellhead to the refinery. (This physical transportation was contrasted with "in-line" trading, in which the oil did not move; only the title to it changed hands.) Not wanting to cripple the reseller market, the federal price controls allowed for "cost-plus" pricing. The rationale was to provide an incentive for legitimate intermediary services without letting the intermediaries pocket the full markup between "old oil" prices and the world price for imported crude. However, what really happened is that this opportunity gave a tremendous advantage to oil resellers, especially in-line traders who never handled the physical inventory. Bradley (1996) reports, "Over 100 new firms, the great majority of which did not have storage facilities or transportation equipment, would enter in the 1973–77 period" (p. 690).

Although his example is hypothetical, Bradley (1996, p. 690) illustrates the general principle involved:

> Assume that Class A gathering margins are $0.15 per barrel and Class B telephone-trading margins are $0.50 per barrel in August 1974, at which time old oil was at $5.25 per barrel and new oil was at a market price of $10.00 per barrel. The following scenario was typical:
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> Step one: Gatherer A buys old oil at $5.25 per barrel at the lease and transports it to a pipeline connection point where it is sold to Reseller [B] for $5.40 per barrel.

[5] Earlier (when discussing Milton Friedman's *Newsweek* column) I explained that the crude oil price controls in conjunction with the entitlements program may have indirectly and on net led to more gasoline delivered to consumers, through the subsidy given to foreign crude imports. In contrast, in discussing the "daisy chains" and other elements of the crude oil trading boom in this section, I am explaining why the ceilings on crude oil prices did not directly translate into lower gasoline prices for motorists. The rents extracted from crude oil owners were largely transferred to "middle men" through various techniques, as described in the main text.

> Step two: Reseller B sells to Reseller C for $5.90 per barrel.
> . . .
> Step eight: Reseller H sells to Reseller I for $8.90 per barrel.
> Step nine: Reseller I sells to Gatherer A for $9.40 per barrel.
> Step ten: Gatherer A ships the crude in his facilities to [a refiner] who purchases it for refining at $9.55 per barrel.

Stepping back and looking at the whole process, what has happened "physically" is what *used* to happen in this particular operation: Gatherer A buys the oil from the well's domestic owner, moves it to a pipeline, and then transfers it to a refiner. But because the cost-plus regulations would have limited him (as a "gatherer") to a 15-cent markup, and because there existed a $10 − $5.25 = $4.75 arbitrage opportunity because of the artificial wedge driven between "old" and "new" oil, it made sense to add eight steps to the historical process. In Bradley's hypothetical example, Resellers B through I didn't *do* anything with the oil; they merely made phone calls and consummated paper transactions. But the regulations allowed an additional 50-cent markup with each such resale, which was quite profitable considering the volume of oil moving through the system. The entire "daisy chain" mechanism ensured that traders, not the driving public, would benefit from the rents made possible by the crude price controls imposed on domestic owners.[6]

Other examples of regulatory arbitrage were of even more dubious legality. For example, traders swapped the official "tier" certifications applicable to physical barrels of oil coming from different regions when such swapping allowed a greater total markup. (Bradley 1996, p. 696).

Finally, if certification swapping pushed the limits of legality, then outright certification fraud was clearly over the line. The most memorable example here is Robert Sutton, whom the DOE accused of miscertifying several hundred million barrels of oil as "stripper oil" from 1976 to 1980. The legendary Sutton reputedly started with a borrowed telephone in 1973 and built an empire of more than fifty companies. He eventually was found guilty of miscertifying 167 million barrels and was ordered to pay refunds of $211 million. Sutton, whom Bradley dubs "the first 'regulatory billionaire' in U.S. history," said in a 1981 interview that the government "made it easy

[6] Glasner (1985, p. 125) explains that there were also "daisy chains" established for petroleum products (such as gasoline), but crude oil eventually attracted so much scrutiny and outrage because it had the largest margins.

for us to make money—the rules did. If they are going to make it that easy—I had to take it" (Bradley 1996, p. 710).

From the beginning, the government officials charged with overseeing the energy sector could see that the controls weren't "working." For example, Nixon's Treasury Secretary William Simon said, "In allocating crude oil and product we have a situation not unlike the passengers on a sinking ship fighting for top position at the mast head," and officials in the Ford administration repeatedly brought up suggestions for decontrol, only to be rebuffed by Congress (De Marchi 1981, p. 433; Grossman 2013, pp. 143–55). Even the cursory treatment in this paper demonstrates how one intervention spawned new problems that invited the next round of measures.

B. Academic Unity

The public's general distrust of "big oil" was an obvious element in the persistence of controls in the energy sector. To understand how it became possible to remove the controls, we must note the role of economists from across the political spectrum who pointed out the measures' absurdity. My argument is not that the economists changed public opinion per se, but rather that by the end of the 1970s, it was well known among serious policy analysts that the price and allocation controls were nonsensical.

For example, in Milton Friedman's (1975b) *Newsweek* article that I discussed earlier, he concluded, "Over a year ago, during the chaos that followed the oil embargo, I wrote in this space: *'The way to end long lines at gas stations is to abolish FEO [now FEA] and end all controls on the prices and allocation of petroleum products.' That is also currently the way to strike a major blow at the oil cartel"* (Friedman 1975b, p. 75, bracketed phrase in original, emphasis added). For another example, in the "neoconservative" magazine *The Public Interest* (founded by Irving Kristol and Daniel Bell), David Stockman—who would go on to become budget director in the Reagan administration—wrote in the fall of 1978, "It is time to discard our medieval energy maps. . . . rather than institute a politically imposed and bureaucratically managed and enforced regime of domestic-energy autarky, *we need do little more than decontrol domestic energy prices, dismantle the energy bureaucracy, and allow the U.S. economy to equilibrate at the world level. Energy supply and demand will take care of itself, no less efficiently than were the commodity soybeans or Saran Wrap"* (Stockman 1978, p. 40, emphasis added).

A year before Stockman's piece, an article by the distinguished economists Robert E. Hall and Robert S. Pindyck (1977) also ran in *The Public Interest*. It begins, "National energy policy faces a deep conflict in objectives, which has been a major reason for the failure to adopt rational measures." Hall and Pindyck go on to argue that "painful choices regarding the objectives of energy policy will force themselves upon the United States in the next few years."

For a critique of US energy policy from a "centrist" organization, consider the influential 108-page RAND study (Phelps and Smith 1977), which also argued for decontrol, claiming that there was no trade-off between price flexibility and low gas prices.[7]

Yet it was not just "right wing" and centrist thinkers and outlets that called for abolishing price controls. The distinguished but left-leaning economist Kenneth Arrow coauthored a study (with Joseph Kalt) on petroleum price regulations in 1979 for the American Enterprise Institute. The study decomposes the efficiency losses from the regulations among different categories and seeks to quantify them. Arrow and Kalt (1979, pp. 26–27) sum up their estimates in this way:

> On the demand side, every barrel of crude oil now imported produces goods and services that are worth less to the American public than the cost of acquiring the oil from foreign sellers. . . . The annual waste that results is estimated (on the basis of May 1979 data) to be approximately $500 million.
>
> On the supply side, petroleum price regulations discourage domestic production and encourage the importation of foreign oil. Every extra barrel of oil that is imported could be replaced by output that uses national resources worth less than the payment made to the sellers of foreign oil. . . . Over the longer run, increasing the uncertainty of investors may impose even larger costs by discouraging substantial exploration and development. Taking account of this effect, the supply-side costs of current policies could be amounting to as much as $4.0 billion annually.

Finally, consider the case of staunch Keynesian Paul Samuelson. In the fall of 1975, he devoted his *Newsweek* column to "Oil Economics." After contrasting the standard free-market call for

[7] As I pointed out earlier in the paper, Kalt (1981) actually disagrees with the RAND conclusion regarding the impact of crude controls on gasoline prices.

immediate decontrol with a macro concern for inflationary pressures due to unfettered oil prices, Samuelson summed up his position: "First, a slow phasing out of controls offers a good, perhaps the best, plan. Second, even instantaneous decontrol needn't negate healthy recovery" (Samuelson 1975, p. 74).

Economists famously disagree on just about everything, but during the 1970s, economists of all political leanings (including at least three American Nobel laureates) and from both within and outside the government provided a fairly consistent message in outlets ranging from popular magazines to wonkish think-tank studies:[8] price controls were an ineffective way to shield American motorists from high world oil prices, and they contradicted other policy objectives such as reduced reliance on Middle Eastern oil. The economists may have disagreed about the speed of decontrol and what (if any) policies to put in place of the price ceilings, but there was broad agreement that the price controls were not a viable regime, and it was clear that their arguments were not merely ideological.

C. Public Choice

Students of public choice economics recognize that we cannot simply look at the "official" rationales given for the interventions into energy markets in the 1970s. We need to look at the winners and losers of such policies to understand how the massive top-down controls were finally removed.[9]

The price ceilings on "old oil" transferred enormous rents away from domestic producers and into the hands of domestic refiners. In combination with the entitlement program, refiners shared these

[8] In late 1978, Deputy Energy Secretary John O'Leary argued, "Seven years of price controls and general regulatory uncertainty have inhibited investment in the refinery expansions and improvements needed to make unleaded gasoline, or to make gasoline-range material out of heavy and high sulfur domestic crude oils. . . . Price controls have discouraged refinery improvements that increase efficiency, since they require that the full amount of such cost savings be passed on in the form of lower product prices" (quoted in Bradley 1996, pp. 1191–92, ellipsis in original). Similarly, John Berry of the *Washington Post* in 1979 wrote a story discussing an unpublished Energy Information Agency analysis concluding that eliminating crude price controls would barely hurt motorists (through gas prices).

[9] It lies beyond the scope of the present paper, but I will mention an interesting theory put forward in a *Forbes* article (which itself elaborated on the idea advanced by MIT economist M. A. Adelman) that the State Department intervened in the negotiations between Western oil companies and Middle Eastern oil producers at critical junctures in order to augment OPEC's pricing power because of Cold War geopolitical motivations (*Forbes* 1976, p. 85).

rents with the final consumers. However, one group of beneficiaries of the full US regulatory apparatus was foreign sellers of crude oil. Because oil decontrol would effectively involve a tax cut on American producers and a subsidy cut to foreign producers, it was presumably easier to achieve than if the industry had been largely domestic.

Just as "only Nixon could go to China," the gradual removal of the price controls was actually set in motion under President Carter. Bradley (1996, p. 503) explains: "On April 5, 1979, President Carter, under ECPA authority, announced his intent to deregulate crude-oil prices from June 1, 1979, to September 30, 1981." Reagan would simply accelerate the decontrol, when—on January 28, 1981, eight months ahead of schedule—he signed Executive Order 12287, abolishing the remaining price controls.

From a public choice perspective, the single most important element that made decontrol feasible was the windfall profits tax. It was not enough that outside economists had made such a convincing academic case for abolishing the controls. The WPT allowed legislators to reassure a skeptical public that oil decontrol wouldn't translate into huge profits for the oil companies. "Both politically and financially the windfall profits tax was an indispensable component of [President Carter's] energy program," explained Yager (1981, p. 628). Politically, "without a substantial tax on the increased earnings of the oil companies, the President's phased decontrol of the price of domestically produced crude oil would [have been] vulnerable to attack from the liberal wing of his own party," and financially, "revenues from the tax were needed . . . to finance the development of a large synthetic fuel industry and a number of other energy measures proposed by the President" (Yager 1981, p. 628).

Despite its name, the windfall profits tax was actually an *excise* tax on oil, applied to the difference between the market price of crude and a "statutory 1979 base price" that was adjusted quarterly for price inflation and state severance taxes. Furthermore, all domestic oil was classified into three tiers "based upon the age of the well, the type of oil, and the amount of daily production. These categories were a carryover from the oil price regulations which also categorized oil into various tiers" (Lazzari 1990, pp. 1–2). The WPT applied a different tax rate depending on the oil's classification. For example tier I oil was taxed at 70 percent for the major oil producers and 50 percent for the independents, while tier III heavy oil was taxed at 30 percent (Lazzari 1990, p. 3).

The move from price ceilings to "unregulated" prices but with a draconian (for some producers) excise tax could be viewed as a moderate win for pro-market reform. Although the WPT still created huge disincentives for domestic production, removing price controls at least allowed oil to be channeled to its most valuable uses. In other words, although the supply side still contained massive distortions, the demand side had been made much more efficient.

D. Luck

The final element in our historical narrative is luck. In general, if the goal is outright repeal of a top-down government intervention into an industry, it is risky to replace the controls with large taxes. After all, federal regulators did not directly benefit from the price ceilings and entitlements program of the mid-1970s, and so mounting evidence of their irrationality might have eventually tipped the scales toward full repeal. But might a deal that introduced the new windfall profits tax not have ensured a perpetual federal boot on the necks of domestic oil producers?[10]

What happened in this case is that world oil prices collapsed, frustrating the designs of the architects of so-called national energy policy. Even though government analysts in 1980 projected "$175 billion in net revenues," in practice, "between 1980 and 1988, the WPT generated about $79 billion in gross revenues," but because the WPT was deductible against income, "cumulative net WPT revenues were . . . only about $40 billion" (Lazzari 1990, summary).

The WPT was terminated in August 1988, a few years ahead of schedule, for a variety of reasons, including its complexity and the advantage it gave to imported oil. However, at the time of repeal, "the tax generated little or no . . . revenues. It is doubtful that the Congress would have repealed the WPT had it been generating significant revenues at that time or had it been expected to generate significant revenue in the future" (Lazzari 1990, pp. 23–24).

IV. Conclusion and Lessons

The US federal intervention into the petroleum industry in the 1970s was arguably the largest peacetime government interference with the economy in the nation's history. Yet by 1981, most of the direct

[10] For example, some carbon-tax advocates claim that the taxes are a necessary bargaining chip in repealing command-and-control regulations on emissions. However, some free-market critics of carbon taxes worry that once the legislature opens the spigot to a flood of new revenues, it will be difficult to turn it off later.

controls had been eliminated, and by 1988, even the last vestiges of a largely irrelevant tax were removed.

This unusual turn of events was due to several factors, only some of which can be repeated in other policy areas. Obvious unintended consequences were not only undesirable but directly opposed "national energy policy" objectives. Furthermore, economists from across the political spectrum were united in their opposition to the controls, and they were willing to publicly argue as such. An additional factor was the convenient fact that foreign oil producers benefited from the status quo. Finally, the ability to enact a "windfall" tax seemed to achieve the controls' public relations purposes while directly funding the government to boot. Yet the dangers of this route were, in the case of petroleum intervention, closed off because of the widely unexpected (and massive) collapse of oil prices during the 1980s.

If today's market-friendly reformers want to derive lessons from the episode, we can certainly say that it helps if economists can demonstrate that particular government interventions *achieve the exact opposite* of the government's official rationale. It's even better if Nobel laureates from across the ideological spectrum endorse such a critique. What may have helped the reform effort in the case of the 1970s controls was that the interventions were imposed fairly rapidly, so that even the executive branch officials tasked with implementing them could recognize the problems (with supply bottlenecks, perverse incentives, etc.). In contrast, the federal government's encroachment into (say) health care and health insurance has been more gradual, so that (unfortunately) it is not as obvious to regulators or the general public that the "absurdities" in this sector are also the result of price and allocation controls.

Politically, it certainly helps if the unintended beneficiaries of a particular measure include foreigners, *not* because of ethical judgments, but simply for public choice considerations: it will be harder for US legislators to repeal policies that shower benefits on *domestic* special interests. It also helps if the initial drive for reform can be introduced by the party that is not associated with such a stance ideologically, because, presumably, voters will be less suspicious of ulterior motives (e.g., Nixon going to China, and Carter deregulating energy prices).

Finally, one might be tempted to conclude that swapping in a new tax in exchange for deregulation might be a win-win (since it arguably increases economic freedom while giving legislators more

revenue), but as I pointed out, this outcome seems to have been "lucky" in the sense that world oil prices collapsed. Had the windfall profits tax yielded revenue in the range originally predicted, it might not have been repealed as early as it was. The general lesson on this score is not as obvious as it is for the other elements of the saga.

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