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The Crude Oil Windfall Profit Tax of the 1980s: Implications for Current Energy Policy

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Summary

In April 1980, the federal government enacted the crude oil windfall profit tax on the U.S. oil industry. The main purpose of the tax was to recoup for the federal government much of the revenue that would have otherwise gone to the oil industry as a result of the decontrol of oil prices. Supporters of the tax viewed this revenue as an unearned and unanticipated windfall caused by high oil prices, which were determined by the OPEC (Organization of Petroleum Exporting Countries) cartel.

Despite its name, the windfall profit tax (WPT) was actually an excise tax, not a profits tax, imposed on the difference between the market price of oil and an adjusted base price. While most domestically produced oil was subject to the tax (about 2/3 in 1985), the remaining 1/3 that was tax-exempt was significant (1.3 billion barrels in 1985, or 360,000 barrels per day). The $80 billion in gross revenues generated by the WPT between 1980 and 1988 was significantly less than the $393 billion projected. Due to the deductibility of the WPT against the income tax, cumulative net WPT revenues were about $38 billion, significantly less than the $175 billion projected. This report presents estimates of the amount of foregone oil production from 1980-1986 due to the WPT under three alternative supply price responses, reflecting three different assumptions about the price elasticity of the domestic oil supply function, a critical factor (statistic) in estimating lost oil output and increased import dependence. From 1980 to 1988, the WPT may have reduced domestic oil production anywhere from 1.2% to 8.0% (320 to 1,269 million barrels). Dependence on imported oil grew from between 3% and 13%. The tax was repealed in 1988 because (1) it was an administrative burden to the Internal Revenue Service (IRS), (2) it was a compliance burden to the oil industry, (3) due to low oil prices, the tax was generating little or no revenues in 1987 and 1988, and (4) it made the United States more dependent on foreign oil. The depressed state of the U.S. oil industry after 1986 also contributed to the repeal decision.

Reinstating the windfall profit tax would reduce recent oil industry windfalls due to high crude and petroleum prices but could have several adverse economic effects. If imposed as an excise tax, the WPT would increase marginal production costs and be expected to reduce domestic oil production and increase the level of oil imports, which today is at nearly 60% of demand. Crude prices would not tend to increase. Some have proposed an excise tax on both domestically produced and imported oil as a way of mitigating the negative effects on petroleum import dependence. Such a broad-based WPT would tend to reduce import dependence, but it would lead to higher crude oil prices and likely to oil industry profits, potentially undermining its original goals. Because the pure corporate profits tax is relatively neutral in the short run — few, if any, price and output effects occur because marginal production costs are unchanged in the short run — a possible option would be a corporate income surtax on the upstream operations of crude oil producers. Such a tax that would recoup any recent windfalls with less adverse economic effects; imports would not increase because domestic production would remain unchanged. In the long run, such a tax is a tax on capital; it reduces the rate of return, thus reducing the supply of capital to the oil industry.

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Recent high crude oil and petroleum product prices, have sharply increased oil industry profits, which have prompted some policymakers to propose that either the windfall profit tax of the 1980s (WPT) be reinstated or that some new version of that tax be enacted. Currently, fourteen congressional bills propose some type of windfall tax on domestic oil companies. Three of these bills have been offered as amendments to S. 2020, the Senate's tax reconciliation bill. Such proposals are not uncommon when oil prices rise sharply to high levels. The doubling in oil prices from June to August of 1990, due to the crisis in the Middle East (Iraq invaded Kuwait on August 2, 1990), prompted similar proposals to reduce what many policymakers viewed as an unduly large increase in oil industry profits.

This report provides an overview and analysis of the crude oil windfall profit tax that was in existence from 1980 to 1988. The first section provides a brief history of events surrounding enactment of the tax. The second section describes the structure of the tax. The third section discusses the rationale for the tax. The fourth section examines the revenue effects and other economic effects, and shows how the windfall profit tax increased dependence on imported oil. The lessons that can be learned from the eight-year experience with the tax and the implications of reinstating the tax are discussed in the final section.

Background

The Crude Oil Windfall Profit Tax Act (P.L. 96-223) was enacted in 1980 as part of a compromise between the Carter Administration and the Congress over the decontrol of crude oil prices. The structure of the WPT was based on the structure of the oil price control program.

The Oil Price Control Program

From August 1971 to January 1981 the price of domestic oil was controlled by the federal government — it was constrained from rising to market levels. Oil price controls were initiated under President Nixon's general wage-price freeze of August 15, 1971, which consisted of four stages or time periods called phases, each with

various degrees of controls.[1] These controls were not focused on oil alone — they applied generally to most goods and services. The general wage-price freeze terminated in 1973, but under phase IV of the program — effective from August 12, 1973 to April 30, 1974 — price controls on petroleum were retained.

Oil price controls were extended through 1975 under the Emergency Petroleum Allocation Act of 1973 (P.L. 93-159) — enacted in November 1973, at the onset of the Arab oil embargo.[2] This law created the two-tiered price control program, making the structure more complex. Most domestically produced oil was categorized as either "lower tier (old) oil" or "upper tier (new) oil," each with its corresponding controlled base price. Lower tier oil was generally oil from properties that began production before 1973. Under regulations, the price ceiling on this oil was the highest posted price in effect on May 15, 1973 plus $0.35/barrel on all oil produced from wells that produced at less than their 1972 levels, which resulted in a posted price for old oil of about $4.25/barrel. Subsequent regulations increased the ceiling price in 1973 to $5.25/barrel. New oil (oil produced from wells that began production in1973), stripper oil (oil produced from wells that produce 10 bpd or less), and imported oil were not price controlled — it could be sold at the market clearing price, which was determined by the delivered prices of imported crude inclusive of the customs duties. Note that these tiers were artificial designations for the purposes of controlled pricing; the distinctions were made only for purposes of establishing different base prices; they had no other meaning.

Oil price controls were amended under the Energy Policy and Conservation Act of 1975 (EPCA75), and the Energy Conservation Act of 1976 (ECA). EPCA75 (P.L. 94-163) replaced the two-tiered price control system with a three-tier system. Lower tier oil was oil produced below the "base production control level," — the level below the 1975 average monthly production; upper tier oil was output in excess of this base level or output from new wells — those brought into production after 1975. Stripper oil was initially classified as (controlled) upper tier oil, but subsequent changes (see below) decontrolled it altogether. EPCA75 also established a national average price for all oil of $7.66/barrel, the weighted average price of lower tier oil (old oil), which had a ceiling of $5.25/barrel and upper tier oil (new oil and stripper oil), which, by this time also became controlled at $11.28/barrel. The average domestic oil price was permitted to increase at the rate of 10% annually. (In 1975, uncontrolled imported oil sold for about $13.25/barrel. At the onset of the oil price control program, domestic oil prices were just above $3 per barrel.) EPCA75 also gave the President the discretionary authority to end oil price controls anytime between May 31, 1979 and September 30, 1981 — on October 1,1981 all controls would expire. The ECA of 1976 made further (mostly technical) amendments to the price control system — e.g., exempting stripper oil from the price controls — but otherwise it left the basic structure of the oil price control program intact. Thus, in

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[1] Wage and price controls were authorized under the Economic Stabilization Act of 1970.

[2] The Yom Kippur was occurred in October 1973, and the Arab oil embargo lasted from October 1973 to April 1974. The Emergency Petroleum Allocation Act also created the Crude Oil Entitlement Program and other programs intended to subsidize and protect small refiners. For a discussion of that program see CRS Report RL32248, *Petroleum Refining: Economic Performance and Challenges for the Future*, by (name redacted).

1979, on the eve of the WPT, the oil price control program categorized all domestic oil production into these tiers, each with its own corresponding controlled or market price. **Table 1** summarizes this structure, which was the foundation for the 1980 WPT.

EPCA75 also gave the President discretionary authority to gradually phase out oil price controls over the 28 month period between June 1, 1979, and September 30, 1981, after which prices would rise to world market levels. On April 5, 1979, the Carter Administration announced its intention to use that authority, and throughout its remaining term in office price controls on petroleum products and various types of crude were selectively decontrolled. The intent of the gradual decontrol was to promote energy conservation and to stimulate energy exploration and production without the dislocations that might result with sudden decontrol. Between April 1979 and January 1981, oil prices were partially and gradually decontrolled — newly discovered oil was completely decontrolled, but price controls on other types of oil continued. President Reagan repealed price controls on January 28, 1981, which was one of his first official decisions as President.[3]

Origins of the Crude Oil Windfall Profit Tax of 1980

Excess profits taxes are extraordinary measures as tax policy instruments, their use limited to wartime or other periods characterized by economic emergencies and instabilities such as inflations and hyper-inflations. Such was the case with the surtax on business profits imposed as a temporary measure to control large profits earned during World Wars I and II, and the Korean War.[4]

The origin of the 1980 WPT was, as with many other energy taxes and energy tax subsidies, the first oil crisis of the 1970s — the Arab Oil Embargo of 1973-74. Between 1973 and 1980, attempts to decontrol oil prices were accompanied by proposals to impose an excess profits tax. In 1974, the Ford Administration proposed an "emergency windfall profit tax" to recapture oil industry windfalls resulting from price decontrol. In August of 1975, the Senate Finance Committee approved a windfall profit tax conditioned on price decontrol. Congress, however, did not decontrol oil prices. In 1977, the Carter Administration proposed an oil tax similar to the 1980 windfall profit tax — the crude oil equalization tax — as part of a program to restructure the existing price controls.[5] These proposals were the precursors of the 1980 windfall profit tax.

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[3] For more detail on the oil price control program see Kraft, John and Mark Rodekohr. *Crude Oil Price Controls: Their Purpose and Impact.* The Denver Journal of International Law and Policy, winter 1979. pp. 315-333.

[4] Hakken, John. Excess Profits Tax. *The Encyclopedia of Tax Policy*. Joseph J. Cordes, and Jane Gravelle, eds. The Urban Institute Press, 1999. pp. 108-111.

[5] U.S. Congress. Senate. *Energy Tax Provisions, 4: Crude Oil Equalization Tax and Rebate*. Committee Print. Senate Finance Committee. September 19, 1977. U.S. Govt. Print. Off. Washington, 1977.

Table 1. Summary of the Oil Price Control Program in 1979

Type of oil	Definition	Quantity of production (million barrels/day)	Price at the wellhead ($/barrel)
Lower Tier Oil (Old Oil)	Oil from properties that began producing before 1973	3.0	$5.86
Upper Tier (New Oil)	Oil from properties that began producing after 1973	3.0	$13.06
Uncontrolled Oil	Stripper oil, Alaskan North Slope oil, and oil from the Naval Petroleum Reserve	2.6	$18.50[a]

Source: U.S. Congressional Budget Office, *The Decontrol of Oil Prices: An Overview*, Background Paper, May 1979, pp. 5-7.

a. Price for uncontrolled oil is at the refinery gate, which is basically the import price plus transportation costs.

The windfall profit tax that was ultimately enacted in 1980 originated with President Carter's April 5, 1979 decision to gradually phase out price controls between June 1, 1979, and September 30, 1981, as discussed above. At the same time, the Carter Administration announced its proposal to impose a WPT "to prevent unearned excessive profits" by the oil industry. In Congress, the Carter Administration's original windfall profit tax bill, H.R. 3919, was proposed by Representative Al Ullman, Chairman of the Ways and Means Committee. The House approved an amended version on June 28, 1979. The Senate approved its version at the end on 1979, and the House-Senate Conference deliberated for about three months. President Carter signed the bill into law on April 2, 1980.

Amendments to the Windfall Profit Tax

The WPT was amended many times after it was enacted in 1980. Virtually every tax law that was enacted between 1980 and 1988 made some type of amendment to it, usually minor and technical, but sometimes, significant. For example, the Technical Corrections Act of 1982 (P.L. 97-448) made several minor and technical amendments. Major changes were made, however, under the Economic Recovery Act of 1981 (P.L. 97-34), which reduced tax rates on newly discovered oil, made stripper oil (from small wells) tax exempt, and introduced a tax credit for royalty owners.

Soon after enactment of the WPT there were proposals to reduce tax rates, liberalize some of the provisions. Proposals to repeal the WPT altogether were also common throughout the eight-year life of the tax. Repeal was part of President Reagan's platform in the 1980 presidential campaign and repeal proposals were

embodied in the Administration's FY1988 and FY1989 budgets.[6] WPT repeal was part of the Treasury Department's tax reform proposal of 1984 as part of a compromise that would have repealed the oil industry's two major tax incentives (subsidies): the percentage depletion allowance and expensing of intangible drilling costs. In the spring of 1986, there was speculation that a WPT repeal proposal would be part of the tax reform bills of 1986. The eventual law — the Tax Reform Act of 1986 (P.L. 99-514) — did not, however, repeal the WPT.

Another major repeal attempt was made through an amendment to the 1986 debt limit bill (H.J.Res. 668) which would have increased the debt ceiling to over $2.3 trillion through FY1987. This amendment was approved by the House and Senate, but it was deleted in conference. Some Members of Congress also favored repeal; congressional support for repeal probably reached a peak in 1987 and 1988. In May 1987, for example, ten bills were pending in the Congress proposing to repeal the WPT.

Repeal of the Windfall Profit Tax

The actual repeal of the WPT in 1988 was made through an amendment to omnibus trade legislation (H.R. 3). After hearings in the summer of 1987, the Senate voted 58-40 in favor of a repeal amendment to the trade bill. The original House trade bill, however, did not contain the amendment. While House conferees were generally opposed to WPT repeal, conferees from the Senate Finance and House Ways and Means Committees did agree on a repeal amendment on March 31, 1988. The House approved H.R. 3 with the repeal amendment on April 21, by a vote of 312-107. The Senate approved the conference report on H.R. 3 on April 27. Enactment of H.R. 3 including the WPT repeal amendment was precarious because President Reagan — objecting to several of the provisions in the trade bill — had threatened to veto it. Eventually, however, these problems were resolved and the trade bill with the repeal of the WPT was signed in August of 1988.[7]

Structure of the Tax

Despite its name, the crude oil windfall profit tax was not a tax on profits. It was an excise tax — or more accurately, a system of excise taxes — on domestically produced oil effective March 1, 1980. The tax was imposed on the difference between the market price of oil, which was technically referred to as the removal

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[6] Executive Office of the President. Office of Management and Budget. *Budget of the United States Government: Fiscal Year 1988*. January 1987. U.S. Govt. Print. Off. Washington. p. 2-42; and Executive Office of the President. Office of Management and Budget. *Budget Document of the United States Government: Fiscal Year 1989*. February 1988. U.S. Govt. Print. Off. Washington. p. 4-16.

[7] The tax was repealed by §1941(a) of P.L. 100-418, The Omnibus Trade and Competitiveness Act of 1988.

price, and a statutory 1979 base price that was adjusted quarterly for inflation and state severance taxes.[8]

All domestically produced oil that was not specifically tax-exempt was classified into one of three categories or "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. For example, tier I oil was oil classified as lower and upper tier oil under price controls; tier II and tier III oil was oil exempt from price controls. Domestic crude oil is oil produced from an oil well located in the United States, or in any of its possessions, and it includes the Continental shelf area of the United States.

For each oil category there was a corresponding tax rate (or rates, as explained below) and a corresponding adjusted base price. The tax rates and adjusted base prices differed not only according to the type of oil but also according to whether an oil producer was an integrated producer (called a major) or an independent oil producer. The tax rates applicable to oil sold by an independent oil producer were lower than the tax rates applicable to oil sold by a major integrated producer.[9] The windfall profit tax liability on any barrel of oil was limited to 90% of the net income (profit) from the sale of that oil, which was basically the taxable income (gross income less costs) corresponding to that same oil.

Five categories of oil were originally exempt from the windfall profit tax: (1) oil owned by a state or local government or any political subdivision thereof; (2) oil owned by a qualified educational institution or a charitable medical institution; (3) oil owned by Indian tribes or individual Indians on January 21, 1980, over which the U.S. exercises trust responsibilities; (4) new oil produced from much of Alaska; and (5) "front-end tertiary oil."[10] Stripper oil, and a limited amount of oil produced by royalty owners, became tax exempt under an amendment in the Economic Recovery Tax Act of 1981. **Table 2** shows the structure of the tax just prior to its repeal. Note that newly discovered oil is oil produced from a well which was not producing in 1978. For perspective, the average world market price was $32.37 in 1980, and $13.25 in 1988.

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[8] P.L. 96-223 also contained amendments to the energy tax credits, as well as to several non-energy tax provisions. See Joint Committee on Taxation. *General Explanation of the Crude Oil Windfall Profit Tax Act of 1980 (H.R. 3919, 96th Congress; Public Law 96-223).* Joint Committee Print. U.S. Govt. Print. Off. Washington, 1981.

[9] An independent producer was one that was not a integrated producer, i.e., one with no more than 50,000 barrels per day in refinery capacity and $5 million or less in revenue from any gasoline retailing operations.

[10] This was oil from *any* well subject to price controls the revenues of which were used to finance enhanced oil recovery projects up to $15 million. That is, only oil that generated $15 million in revenues or less for such projects was exempt from the WPT, and only through September 31, 1981. Tertiary oil is oil that is recovered through certain enhanced oil recovery techniques such as flooding the reservoir with hot water or steam, or gases such as carbon dioxide. This is oil that is usually not recoverable through secondary recovery methods.

Table 2. Structure of the Crude Oil Windfall Profit Tax

Oil Type (1)	Tax Rate (2)	Average Base Price in 1980 ($/barrel) (3)	Average Base Price in 2nd Quarter of 1988 ($/barrel) (4)
Tier I (most domestic oil in reservoirs productive before 1979)	70% for Majors	$12.81	$19.54
	50% for Independents	$12.81	$19.54
Tier II (oil from stripper wells and the Naval Petroleum Reserve)	60% for Majors	$15.20	$23.19
	30% for Independents	$15.20	$23.19
Tier III (heavy oil, incremental tertiary oil, and newly discovered oil)	30% for heavy oil and incremental tertiary oil	$16.55	$22.92
	22.5% for newly discovered oil	$16.55	$22.92

Source: Sections 4986-4998 of 1986 Internal Revenue Code; Commerce Clearinghouse, 1987; and Research Division of the Internal Revenue Service.

Notes: Tier I oil is oil that was lower and upper tier oil under EPCA75, and Sadlerochit oil from Alaska's North Slope; Tier II and Tier III oil was uncontrolled oil under EPCA75; The 1981 ERTA legislation changed the rate structure as follows: (1) The tax rate on new oil was reduced gradually, but further reductions were frozen in 1984 so that the rate remained fixed at 22.5% until 1988; (2) Stripper oil produced by independents was made tax-exempt; (2) Royalty owners received a tax credit followed by an exemption for limited amounts of oil production.

The WPT was imposed on domestic oil producers at the point of the first sale of taxable oil, which was generally to a refiner. The refiner — known also as the first purchaser — withheld the tax from the amounts otherwise payable to a producer and deposited the funds semi-monthly into an account. In other words, the tax amount per barrel was subtracted from the oil's purchase price. The first purchaser was required to file tax returns on a quarterly basis. In cases where withholding was not required, such as when the producer and first purchaser were one and the same, the tax was paid directly to the Treasury.

The WPT was a deductible expense in determining an oil producer's income tax liability because, as with all other excise taxes, it was considered a cost of doing business. As explained in a later section, this meant that, as a result of paying the WPT, a producer's income tax liability was lower than it would have been without the tax.

The WPT was a temporary tax. The statute provided that the tax would *begin* to phase out sometime during the three-year period between January 1988 and

January 1991. The precise starting point for the phase out depended on cumulative net revenues. If the Secretary of the Treasury reported that, on a given month beginning January 1988, cumulative net revenues would exceed the pre-established target of $227.3 billion, then the phaseout of the tax would begin on the month following the attainment of the target. If estimated cumulative net revenues would not exceed $227.3 billion between January 1988 and January 1991, then the phase out of the tax would begin January 1991. Irrespective of the onset of the phaseout, once the phaseout began, the tax was to have been phased out over a 33-month period by reducing each producer's tax by 3% each month (with 4% on the last month).

Cumulative net revenues, which totaled about $43 billion between 1980 and 1987, fell far short of the $227.3 billion target. Hence, had it not been repealed, the WPT phase out would have begun January 1991 and the tax would have terminated on October 1, 1993. As already discussed, the WPT was repealed in August 1988, before the onset of the phase-out rules.

Finally, while the tax was called a "profit" tax, it was not really a profit tax but rather a special type of excise tax — a selective excise tax on oil producers. The tax was paid first, before profits from the sale of the oil were determined. And except for the net income limitation, profits had no bearing on how much WPT was paid. The base prices had no precise or even approximate relationship to the costs of oil production. This difference between an excise tax and a true excess profit tax is crucial because, as will be demonstrated, the two taxes have very different economic effects, particularly on energy prices and oil imports.

Rationale for the Windfall Profit Tax

The WPT resulted from a compromise between the Carter Administration, which wanted to decontrol oil prices, and the Congress, which generally did not; without the tax, many doubted that the Congress would have supported oil price decontrol.

The reasons for the tax are manifold and complex; they transcend economics and they concern the image and perception of the oil industry. The record does show, however, that the Congress was concerned that the industry would reap enormous revenues and profits as a result of decontrol to world oil price levels. The Congress believed that the projected huge redistribution of income from energy consumers to energy producers would not be fair. The Congress was concerned that the oil industry was not paying its fair share of federal taxes. And finally, the Congress was looking for additional sources of revenue.

Oil Price Decontrol and Windfall Profits

Price decontrol implied that domestic crude oil prices would rise from an average of about $14 per barrel (1979) to world market levels, which at that time

were averaging about $24 per barrel and projected by some to rise to $50-$60 per barrel or more by 1985.[11]

In 1979, many analysts were predicting sharp increases in domestic oil prices and, with them, significant increases in oil industry revenues and profits. The Joint Committee on Taxation had estimated that decontrol would increase oil industry revenues by about $1 trillion from 1980-1990 and profits by over $400 billion. Federal policymakers believed that these added profits were in the nature of a "windfall" — an unearned, unanticipated gain in income through no additional effort or expense. This windfall was thought to provide no additional incentive to produce more oil, especially "old oil," which was already being produced under the preexisting controlled price regime. Rather, existing oil reserves would simply be worth more — command a higher price by virtue of price decontrol. Moreover, all oil would command a higher price, including oil that was discovered at historically low costs, and produced at the controlled price. Old oil, which was primarily owned and produced by the major oil companies, was selling for about $6 per barrel prior to decontrol; after decontrol it would have increased to a market price of about $24 per barrel. The Congress was concerned that no additional effort, investment, or cost would be incurred by oil producers in generating the added profits. The Congress also believed that a higher price was not needed for all oil in order to stimulate its production — but that a higher price might be needed for new oil. The decision to produce much of the oil had been made with the expectation of a return based on the controlled price.

The following quote illustrates the concerns of the Congress:

> For most types of oil, after a certain point, these higher prices will only lead to very limited increases in production. The revenues resulting from these higher prices, however, would provide income to oil producers far in excess of what most of them originally anticipated when they drilled their wells and in excess of what they might now be expected to invest in energy production. Indeed, some producers are now using their excess revenues to acquire unrelated businesses.
>
> Thus, the committee believes that the additional revenues received by oil producers and royalty owners, both as a result of decontrol of oil prices and as a result of increases in world oil prices substantially above those prevailing in 1978, are an appropriate object of taxation. The windfall profit tax in this bill will tax away a fair portion of these additional revenues while allowing producers to receive very high prices for those types of oil whose production can be expected to increase in response to that incentive.[12]

Other motivations and factors underlying imposition of the windfall profits tax were that

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[11] CRS Report 88-147, *Oil Price Projections and the Windfall Profit Tax on Crude Oil*, by (name redacted).

[12] U.S. Congress. House. *Crude Oil Windfall Profit Tax Act of 1979*. Report of the Committee on Ways and Means. Report No. 96-304, June 22, 1979. U.S. Govt. Print. Off. Washington, 1979.

- Domestic crude prices would rise to market levels that did not reflect competitive market forces but the market power of OPEC; and, further, OPEC's prices were projected to increase in real terms at very high rates, usually assumed to be 3% per year.

- The market price of oil was believed to be in a sense "unanticipated," unearned, and unneeded for the profitability of the oil industry.

- Society should share in the economic return to natural resource production.

- Oil is a natural resource whose long-run supply is fixed; it is not like other factors of production such as labor and capital. The stock of natural resources is fixed in the long run whereas the stock (or supply) of the other factors is variable. Since the stock of oil is fixed, some argued that high levels of industry income were not necessary to ensure adequate supplies. If low levels of income would ensure adequate oil supplies, then any industry income above that income earned from alternative use of industry resources could be deemed excessive (economic rents) and should be taxed away.

- Some believed oil industry income was excessive to start with due to the concentrated structure of the domestic oil industry and due to the fact that domestic price of oil was not a competitively determined price.

Additionally, it should be remembered that the WPT was enacted in the wake of two oil shocks in the 1970s: (1) the 1973-1974 oil embargo, which raised oil prices fourfold and (2) the 1978-1979 Iranian revolution, which doubled oil prices, and created gasoline shortages (and long lines of motorists at the gasoline pumps). Also there was a certain amount of public suspicion of the oil industry; suspicion that the energy crisis was not real but a contrivance of the industry in concert with OPEC for the purpose of profiteering.

Distributional Equity ("Fairness")

Another rationale for the windfall profit tax was equity or "fairness." It was estimated that oil price decontrol would cause a large redistribution of income from energy consumers to energy producers. Policymakers concluded that it was unfair for the oil industry and landowners to experience such sharp increases in income when so many consumers — particularly low-income consumers — would see a sharp increase in their energy bills. They believed that society at large, through the federal government's policies, should also share in some of the income gains.

The fairness rationale was strongly influenced by the impact of higher energy prices on poorer consumers. Although all energy consumers would experience a higher absolute burden due to higher oil prices, including higher electricity prices, natural gas prices, and coal prices, poorer people would experience a higher relative burden. That is, in relation to their income, poorer persons spend more money on

energy and other necessities than higher income persons. Therefore, energy costs represented a higher proportion of low income persons' budgets than high-income persons' budgets — the burden from decontrol would be greater for low-income persons than from high-income persons.

The windfall profit tax was intended to be the instrument for achieving a more equitable redistribution of the income which would result from oil price decontrol. Underlying this instrument was the belief that the oil companies were entitled to a fair and reasonable return but not an "excessive" return, which was in any event determined by OPEC-set prices rather than competitive prices.

The Industry's Historically Low Effective Tax Rates

Another powerful argument for enacting the WPT was that the tax helped to offset the oil industry's low effective income tax rates due to the availability of two oil industry tax subsidies (incentives): the percentage depletion allowance and the provision which permits companies to expense (deduct fully in the initial year) the intangible costs of drilling.

The percentage depletion allowance permits oil producers to deduct an amount for the exhaustion of an oil reserve equal to a percentage of revenues. In theory, the deduction should be based on the actual oil output and the actual investment costs of the deposit — it should be cost depletion. The percentage depletion allowance was introduced in 1926. In 1975 the allowance was eliminated except for a limited amount of oil produced by independents. The deduction for intangible drilling costs permits oil producers to expense — deduct contemporaneously — costs that, according to economic theory and standard financial accounting practices, should be capitalized over the income-producing life of the deposit. This subsidy or incentive was introduced in a 1918 administrative ruling by the Treasury Department. The cumulative value of these tax and other nontax subsidies from 1964-1977 has been estimated at over $100 billion.[13]

In recent years, the value of these oil and gas subsidies has declined,[14] but the addition of other tax subsidies, such as the enhanced oil recovery tax credit, and, more recently, the oil and gas tax breaks in H.R. 6 (P.L. 109-58) have, at a time of very high oil prices, created more support for a windfall profit tax.[15]

The combined effect of the two major oil tax provisions was to lower effective income tax rates for oil extraction below the comparable effective tax rates in other industries and below the top marginal statutory income tax rate of 34% for

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[13] Pacific Northwest Laboratories. *An Analysis of Federal Incentives Used to Stimulate Energy Production.* Prepared for the U.S. Department of Energy. December 1978. P.226.

[14] According to the Joint Committee on Taxation, repealing the two oil and gas tax subsidies would increase tax revenues by about $1 billion per year. See CRS Issue Brief IB10054, *Energy Tax Policy*, by (name redacted).

[15] For a brief discussion of the energy tax provisions in H.R. 6, see CRS Issue Brief IB10054, *Energy Tax Policy*, by (name redacted).

corporations in 1980. This is supported by early as well as more recent empirical research studies on effective tax rates.[16]

In the early studies, Harberger (1955) and Steiner (1959) demonstrated that oil and gas, as well as other minerals, received approximately twice the amount of tax incentives as other industries. In the category of effective tax rate studies, a 1971 report by U.S. Oil Week showed that major oil companies had an effective tax rate of 8.7% in 1970. Cox and Wright (1973) calculated rates ranging from 8.3% to 14.7%, depending upon accounting methods and income measures used.[17]

Studies on effective tax rates published between 1973 and 1980 attempted to include the cutback in subsidies and the windfall profits tax and gave mixed results. Some studies, for example, showed that oil and gas extraction was subject to very low effective tax rates. Several studies by the Congressional Research Service published between 1977 and 1983 (when the corporate tax rate was 46%) show very low and, under certain circumstances, even negative marginal effective tax rates. For example, expensing of intangible drilling costs and dry hole costs and a 22% depletion rate resulted in an effective tax rate of -3.0% without the minimum tax and 12.0% with the minimum tax.[18] One CRS report, which included the effects of the crude oil windfall profits tax, again showed generally low effective tax rates for oil and gas extraction. In cases where the effective tax rates were low, however, the crude oil windfall profits tax constituted a significant part of the total effective tax burden.[19] In an inter-industry comparison, oil extraction and production had the lowest effective tax rates of eleven major industries — 14% compared to 17% for construction (the next lowest) and 30% for the trade industry (the highest).[20]

Marginal effective tax rates in the oil and gas industry after 1986 increased due to the repeal of the 10% investment tax credit, the lengthening of the recovery period for depreciation, and the change in the depreciation methods. Studies continue to

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[16] A few representative studies include Harberger, Arnold C. *The Taxation of Mineral Industries*. In U.S. Congress. Joint Committee on the Economic Report. *Federal Tax Policy for Economic Growth and Stability*. Joint Committee Print, 84th Congress, 1st session. November 9, 1955. Washington, U.S. Govt. Print. Off., pp. 439-449. Steiner, Peter O. *Percentage Depletion and Resource Allocation.* In U.S. Congress. House. Committee on Ways and Means. *Tax Revision Compendium*. Committee Print, 86th Congress, 1st session, vol. 2, November 16, 1959. Washington, U.S. Govt Print. Off., p. 949.

[17] Much of this early empirical evidence is cited in U.S. Congress. Senate. Committee on Interior and Insular Affairs. *An Analysis of the Federal Tax Treatment of Oil and Gas and Some Policy Alternatives*. Committee Print, 93rd Congress, 2nd session. Washington, U.S. Govt. Print. Off., 1974. p. 18.

[18] CRS Report 77-238, *Tax Provisions and Effective Tax Rates in the Oil and Gas Industry,* by Jane Gravelle.

[19] *Effective Federal Tax Rates on Income from Oil and Gas Extraction.* Typed Report by Jane Gravelle, April 13, 1983.

[20] Gravelle, Jane G. *Effective Federal Tax Rates on Income from Oil and Gas Extraction.* Paper presented at the annual meeting of the Conference for Taxation, Resources and Economic Development. October 1983. Cambridge, Mass. p. 6.

show, however, marginal effective tax rates below the statutory top marginal tax rate, and below the comparable rate for most other industries.[21]

A 2000 Institute on Taxation and Economic Policy (ITEP) study found that, for the three-year period 1996-98, petroleum and pipeline companies had the lowest effective tax rate (12.3%) of 20 industries (the average effective tax rate for all the industries was 21.7%).[22] The study sampled 250 of the nation's largest corporations. In a 2004 update of the 2000 study, ITEP found petroleum and pipeline companies had effective federal tax rates of 13.3% for the three-year period 2001-2003, but were no longer ranked number one of the 20 industry classifications — they were ranked 6th.[23] Gruber (2005) found that the mining and extraction industries combined had an average marginal effective tax rate of 16.8%. While this was significantly below the 35% marginal statutory tax rate for the period, it was only slightly below the industry average of 17.4%.[24]

Budget Deficits and the Need for Additional Revenue

There were also important fiscal reasons for enacting the WPT — the federal government needed money. Between 1961 and 1979 the federal budget was in deficit in every year but one (there was a small surplus in FY1969). In FY1976 the deficit reached $71 billion, which at that time was the highest level in U.S. history. This deficit was 4.2% of Gross Domestic Product (GDP) the highest since 1946. In fiscal years 1977, 1978, and 1979, the deficits were lower but still sizeable — $50 billion, $55 billion, and $38 billion, respectively. Certainly they pale in comparison to the deficits of the eighties and early 1990s but according to the standards of that time they were still large. Recent deficits have been larger in absolute terms but somewhat smaller relative to GDP. For example, in FY2004, total federal budget deficits was $413 billion, which was 3.6% of GDP.[25] In any event, revenues and

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[21] Rates for integrated oil companies ranged from 6% to 15%; rates for independent producers ranged from 5% to 14%. This includes the effect of the minimum tax, which basically raises the rate, and repeal of the windfall profit tax, which basically lowers the rate. See Lucke, Robert and Eric Toder. *Assessing the U.S. Federal Tax Burden on Oil and Gas Extraction.* Energy Journal, vol. 8, no. 4, 1987. CRS calculations showed an effective marginal tax rate of 17% for integrated oil and gas producers. The rate for independents was not reported. See also U.S. General Accounting Office. *Tax Policy: Additional Petroleum Production Tax Incentives Are of Questionable Merit*. GAO/GGD-90-75, July 1990. Washington, 1990. p. 58.

Statutory marginal tax rates varied, and generally declined, during the life of the windfall profit tax from 46% in 1980 to 34% in 1988, when the WPT expired.

[22] *Corporate Income Taxes in the 1990s*. Institute on Taxation and Economic Policy, October 2000.

[23] *Corporate Income Taxes in the Bush Years*. Institute on Taxation and Economic Policy, September 2004.

[24] Gruber, Jonathan and Joshua Rauh. *How Elastic is the Corporate Income Tax Base?* National Bureau of Economic Research. June 2005, Table 1.

[25] Executive Office of the President. Office of Management and Budget. *Budget of the U.S.*
(continued...)

deficit reduction have not been the driving force behind the recent WPT proposals in the Congress, although with large federal spending on the Iraq war, and hurricane relief, any additional revenues would, if not spent, reduce the deficit.

Economic Effects

The major economic issues concerning the WPT and its effects were: revenues, increased dependence upon foreign oil, economic efficiency, and the tax's administrative and compliance burden. As discussed above, the need for revenue was one of the reasons for enacting the windfall profit tax and was a principal issue in the debate over its repeal. However, the tax's role in increasing dependence on imported oil, distorting resource use in the energy markets and the economy, as well as the administrative and compliance burden of the tax, all played a role in its repeal.

Revenue Effects: Projections vs. Realizations

Table 3 compares the original projections of gross windfall profit tax revenues with actual revenues for fiscal years 1980-1990. Gross revenues are the actual tax monies collected by the Internal Revenue Service (IRS) as a result of applying the WPT rates to taxable crude oil production — they are revenues before any deductions or allowances, and offsets. Note that these original 1980 projections are not adjusted downward for changes in the tax laws enacted in 1981, 1982, and 1984, which tended to reduce windfall profit tax revenues.[26]

As these data show, estimates or *projections* of the additional tax revenues from decontrol with the WPT indicated that the federal government would generate, over the 11-year period between fiscal years 1980-1990, an additional $393 billion in gross revenues. Net revenues for this period were projected at $223 billion, reduced by the loss of $170 billion in business income tax revenues due to the deductibility of excise taxes as a cost of doing business. Including state and local severance taxes and income taxes, and taxes on royalty income, all levels of government were projected to receive about 50% of the additional revenue from oil price decontrol. The oil industry was projected to receive the remaining 50%.[27]

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[25] (...continued)
Government, FY2006: Historical Tables. Table 1.2, p. 24.

[26] The Economic Recovery Tax Act of 1981 (P.L. 97-34) made several changes to the windfall profit tax which reduced revenues. The Tax Equity and Fiscal Responsibility Act of 1982 (P.L. 97-248) increased the tax on Alaskan oil which increased revenues by about $150 million per year. The Technical Corrections Act of 1982 (P.L. 97-448) made very minor changes in the windfall profit tax which reduced revenues negligibly.

[27] Berry, John M. And Art Pine. *Conferees Approve $227.7 Billion Oil Tax.* Washington Post, February 2, 1980. p. A1. Under the original House and Senate Finance Committee bills government would have received 75% and 54% of revenues from decontrol and a WPT, respectively (25% and 46% for industry, respectively). See U.S. Congressional Budget Office. *The Windfall Profits Tax: A Comparative Analysis of Two Bill*. Staff Working Paper. November 1979. p. xviii.

Table 3. Gross Windfall Profits Tax Revenues: Projected vs. Actual, Fiscal Years 1980-1990

($ millions)

Year	Projected tax revenues (1)	Actual tax revenues (2)	Projected less actual (1) - (2) = (3)	Actual as % of projected (4) = (2)/(1)
1980	5,159	3,052	2,107	59%
1981	20,955	16,931	4,024	81%
1982	32,293	22,036	10,257	68%
1983	35,124	15,660	19,464	45%
1984	37,129	8,120	29,009	22%
1985	39,535	5,073	34,462	13%
1986	40,923	8,866	32,057	22%
1987	52,524	15	52,509	0%
1988	44,181	373	43,808	1%
1989	46,270	30	46,240	0%
1990	48,538	(86)	48,624	N.M.
Total: 1980-1990	**392,931**	**80,070**	**312,861**	**20%**

Sources: (1) Projected figures are from U.S. Congress. Joint Committee on Taxation. *General Explanation of the Crude Oil Windfall Profits Tax Act of 1980* (H.R. 3919, 96th Congress; P.L. 96-223). Joint Committee Print. Washington, 1981. p. 15; (2) Actual tax revenues for FY1980-FY1986 are from quarterly excise tax reports published by the Internal Revenue Service. Data for 1986-1991 were obtained from the Congressional Budget Office.

N.M. = not meaningful.

Large overestimates of projected revenues occurred in the original forecast of revenues made in 1979 and 1980, reflecting overestimates of crude oil prices.[28] The decline in oil prices in the mid-1980s was not anticipated even in 1981. In fact, it was after 1983 that analysts began to adjust their oil price forecasts downward in consideration of new sources of oil supply, increased conservation of oil, and the development of alternative energy resources.

Table 3 also shows that, for the same period, actual gross revenues were about $80 billion, significantly short of projections — 80% less than the projected amount

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[28] Bureau of National Affairs. *Daily Tax Report*. JCT Staff Memorandum to Members of Senate Finance and House Ways and Means Committees on Windfall Profits Tax Revenue Estimates. March 23, 1981. Washington. p. J-1.

of $393 billion — but still a sizeable sum.[29] Most of this gain was accumulated over the years 1981-1983, when gross revenues totaled nearly $55 billion. These large initial revenues from the windfall profit tax were also an important reason in the early part of the 1980s for not repealing the tax, despite President Reagan's campaign promise and numerous congressional attempts to repeal it.[30]

Finally, note also that after FY1982, gross revenues (column [2]) began to decline, sharply beginning in 1984, and down to nearly zero in 1987. There are three reasons for this. First, market crude oil prices declined markedly from 1982 to 1986. Second, since 1980 base prices had been gradually adjusted upward due primarily to inflation, as specified by law. The result was two forces acting to reduce the tax base — the so-called "windfall profit." The third reason was the decline in domestic oil production. As will be discussed in a forthcoming section, the small amount of revenue collected from the WPT in 1987 and 1988 was a principal reason for the repeal of the tax.

Revenue Effects: Gross vs. Net Actual Revenue

Table 4 shows the estimated net WPT revenues, after adjusting for income tax offsets, and receipts from federal oil interests. Column (1) is the same as column (2) in **Table 3**. Column (2) shows WPT payments on federally owned oil attributable to the economic interests of the U.S. Government — WPT assessed on oil produced from federal lands. These figures are included in the gross WPT liabilities reported in column (1) because, under the law, oil produced from federal properties was not tax-exempt. In effect, then while the federal government was collecting WPT revenues on its properties, it was also receiving equally less in price because first purchasers subtracted the tax from the purchase oil price. Column (3) shows estimated foregone payments of income taxes — reduced income tax collections — due to the deductibility of the WPT against the income tax liability as a cost of production. Net revenues are shown in column (4).

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[29] From 1991-1998, the WPT revenues were a negative $1.146 billion, representing IRS refunds and adjustments due to overpayment and over-withholding on prior returns, i.e., prior production. WPT revenues during this period were also affected by IRS efforts and legal cases to claim back taxes from companies that allegedly underestimated the market oil prices and consequently underpaid the Treasury. See Rose, Frederick. "ARCO Says IRS Asks $1 Billion for Back Taxes." *The Wall Street Journal*. July 19, 1988. p. 6. Thus, the actual gross revenues from 1990-98 were $78.923 million ($80.07 billion - $1.146).

[30] The need for revenue became even greater in the early 1980s than in the middle 1970s as budget deficits began to mushroom. As a result of the 1981-82 recession, tight monetary policy, the large tax cuts in 1981, and continued spending increases, the federal budget deficits were extremely large — over $1 trillion cumulatively for the period FY1981-FY1986. Between FY1986 and FY1987, the annual budget deficit dropped from $221.2 billion to $150.4 billion, but later it was projected to increase again. Deficits were large relative to our overall economy — in FY1985 the deficit as a share of GNP was about 5%, higher than any time in the 1970s.

Table 4. Estimated Revenue Effects of the WPT, Fiscal Years 1980-1990

($ millions)

Year	Gross Revenues (1)	Less Receipts from Federal Interests (2)	Less Estimated Foregone Income Tax Payments (3)	Equals Estimated Net Revenue Effect (4)
1980	3,052	492	1,404	1,156
1981	16,931	1,105	7,788	8,038
1982	22,036	1,092	10,137	10,807
1983	15,660	902	7,203	7,555
1984	8,120	757	3,735	3,628
1985	5,073	601	2,334	2,138
1986	8,866	567	4,078	4,221
1987	15	1	6	8
1988	373	N.A.	127	246
1989	30	N.A.	10	20
1990	(86)	N.A.	N.A.	N.A.
Total: 1980-1990	**80,069**	**5,517**	**36,685**	**37,817**

Sources: Column (1)data are from Francis, Brian. *Federal Excise Taxes, Including the Slow Death of Expired Taxes.* Internal Revenue Service. Statistics of Income Bulletin, summer 1999. pp. 185-189. Note that 'Gross Revenues' includes adjustments made as a result of errors, IRS and court challenges, and other factors; column (2) data are from Hakken, John. *Windfall Profit Tax Liability and Receipt Estimate*. U.S. Treasury. Office of Tax Analysis; column (3) is calculated by the author based on the marginal statutory corporate tax rate at the time (46% except for 40% in 1987 and 34% in 1988.

N.A. = not available.

The estimated net revenue gains from the WPT — the amount which actually went into the Treasury's general fund — were nearly over $38 billion, less than of gross revenues, and 17% of the net revenues predicted in 1980 over the 1979-1990 period.[31] Most of the difference between gross and net revenues was attributable to losses in business income taxes (both individual and corporate) due to the

[31] It is important to underscore the point that net revenues are not reported on any tax return — they must be estimated from tax return data on gross revenues and marginal personal and corporate tax rates. The WPT statute required the Treasury Department to estimate net revenues. These are the figures shown in column (4) of **Table 4**.

deductibility of the gross WPT payments. Between 1980 and 1989, as shown in column (4), income tax revenues were estimated to be about $37 billion lower as a result of the deductibility of the WPT. The remaining revenue losses were due to receipts from federal interests (column [2]).

Effects on Domestic Oil Production and Oil Imports

The WPT had the effect of reducing the domestic supply of crude oil below what the supply would have been without the tax. This increased the demand for imported oil and made the United States more dependent upon foreign oil as compared with dependence without a WPT. Nevertheless, oil price decontrol, by increasing prices should have increased domestic production and made the U.S. less import dependent. And further, while a WPT made the U.S. more dependent on imported oil, decontrol and a WPT made the U.S. less dependent than controls without WPT.

The WPT was a excise tax on oil produced domestically in the United States; it was not imposed on imported oil. In economic terms, such taxes increase marginal production costs, and profit maximizing firms respond to the tax by reducing output and raising prices. The WPT increased the marginal or incremental cost of domestic oil production subject to the tax — every barrel of oil produced cost more to produce by the amount of the tax. However, in the case of domestic crude oil, the higher marginal costs are not to be shifted as higher oil prices, because, oil being priced in the international (world) oil market — oil prices are exogenous to the U.S. (the U.S. is a price taker, rather than a price setter).[32] Oil producers could not shift the tax forward as a higher oil selling price because the purchaser would merely substitute imported or tax-exempt crude. Instead, the WPT reduces the net selling price paid to producers. As noted earlier, the first purchaser (generally the refiner) subtracted the tax from the price paid to the producer (supplier) — the producer's net selling price of each barrel of oil was less by the amount of the WPT.

This inability to shift the tax forward implies that the entire effect of the tax is to reduce domestic production and supply. In other words, U.S. domestic oil production was, to some degree, lower as a direct result of the WPT. But, as oil imports to the United States are a residual, the difference between aggregate demand for oil and aggregate domestic oil supply, the effect of this is an increase in the demand for oil imports.[33] Another way of stating this point is that imported oil is the marginal source of oil — whenever an extra barrel of oil is needed to meet an increase in demand, it is imported. Any condition or factor which either reduces domestic supply (such as higher industry taxes) or which increases the aggregate demand for oil (such as higher national income) will increase oil imports. and therefore also reduced the supply of the taxed product.

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[32] There may be some small price effects if the export supply curve is not perfectly elastic.

[33] This is discussed in detail in two other CRS reports: CRS Report 86-637, *Energy Taxes: A Comparative Analysis of the Gasoline Excise Tax and an Oil Import Tax and Their Effect on the States*, by (name redacted); and CRS Report 86-572, *Oil Import Taxes: Revenue and Economic Effects*, by (name redacted) and (name redacted).

Estimates. The magnitude by which the WPT reduced domestic oil supplies and increased imports depends on two variables: (1) the magnitude of the decline in the supply price of domestic crude oil (the amount of the WPT), which determines the after-tax price received by oil producers; and (2) the price elasticity of the supply curve, which determines the reduction in oil production in response to the lower price (net of the WPT) received by oil producers. Since oil prices are determined in a world market, it is assumed that the WPT had no effect on pre-tax oil prices in the United States. This means that the after-tax price received by domestic oil producers is lower by the full amount of the WPT per barrel. (That is, as noted above, the WPT cannot be shifted forward in higher prices; producers absorb the entire tax in terms of lower profits.)

The second variable that determines the output effects is the price elasticity of the oil supply curve, which measures the responsiveness of oil production to changes in oil price.[34] An elasticity of +1.0 means that a 10% reduction in the net price of oil to the producer translates into a 10% reduction in the quantity of oil supplied; an elasticity of +0.5 means that a 10% reduction in price would reduce output by half that or 5%. The price elasticity of oil supplies is determined by the technology underlying domestic oil production.

There is little doubt that crude oil production is relatively inelastic in the short run — even large price increases are unlikely to elicit substantial increases in production. Over the long-run however, producers can increase their investment and capital to increase production (development wells) from existing fields and increase exploration of new fields. The percentage reduction in oil production in response to the WPT would be the product of the percentage reduction in the after-tax price of oil times the price elasticity of supply. Oil supply price elasticities are difficult to estimate; few studies generate reliable estimates and in fact some studies estimate negative supply elasticities, which are not plausible. In developing our assumptions about the price elasticity of the crude oil supply curve we surveyed 20 studies.[35] In general, studies from the 1970s and early 1980s report larger supply price elasticities ranging from .1 to .8, with a mean of about .5.[36] Studies from the mid-1980s and more recent studies tend to show smaller supply elasticities. For example, a 1985 study for the Department of Energy found a convergence around a number ranging

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[34] This estimate is quite sensitive to the assumed supply price elasticity, which is also unknown and has been derived from other studies. Generally, the more price elastic is the supply of oil, the larger would be the additional oil imports induced by the WPT.

[35] Dahl and Duggan (1996) survey many, but not all elasticity studies. See Dahl, Carol and Thomas Duggan. *U.S. Energy Product Supply Elasticities: A Survey and Application to the U.S. Oil Market.* Resource and Energy Economics, vol. 18, October 1996. pp. 243-254.

[36] For example, Mancke (1970) estimates a supply price elasticity ranging between 1 and 2. See Mancke, R. B. The Long Run Supply Curve of Crude Oil Produced in the United States. *Antitrust Bulletin.* Winter 1970. Kaplan, Seymour. *Energy Economics: Quantitative Methods for Energy and Environmental Decisions.* McGraw-Hill, New York. 1983. p. 67. More recent econometric studies tend to show less elastic supply curves. For example, Hogan (1989) estimates a long run supply curve of 0.58. See Hogan, William W. *World Oil Price Projections: A Sensitivity Analysis.* Energy and Environmental Policy Center. John F. Kennedy School of Government. Harvard University, 1989.

from .2 to .4; it used a value of 0.31 in its calculations.[37] Reflecting this uncertainty production losses are estimated under three alternative elasticity scenarios: a price elasticity of oil supply of +0.2 (short run), +.5, and +.8.

Table 5 presents estimates of annual domestic oil production that was lost in response to the WPT based on conventional assumptions. Note that unlike **Tables 3 and 4**, data are presented in calendar years to conform with the reporting of production and tax data. Estimates were prepared for the period 1980-1986. From 1986-1988 there are no output effects because the WPT liability was zero in those years. (The WPT was zero because market crude oil prices were below inflation adjusted base prices.) For perspective, the annual estimates of production losses are compared to the actual levels of domestic oil production and imported oil.

These estimates indicate that the windfall profit tax caused domestic oil production losses in every year but 1986, when crude prices declined below adjusted base prices resulting in zero WPT. Over the entire 1980-1986 period, it is estimated that, depending on the assumed supply curve price elasticity, the WPT reduced domestic oil production from between 320 million barrels (1.2% of domestic production) and 1,268 million barrels (4.8% of domestic production). The effect of reducing domestic oil production was to increase the level of imported oil. Columns (3), (6) and (9) show the estimated production losses caused by the WPT, as a % of the actual level of imported oil, under the assumed three supply curve elasticities range from 3.2% of total imports to 12.7% of imports for this period, depending on price elasticity.

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[37] Applied Management Sciences, Inc. *The Nonconventional Liquid Fuels R&D Analysis System: A Microcomputer-Based World Oil Market Model.* February 1, 1985. Prepared for the Department of Energy.

Table 5. Estimated Reduction in Domestic Oil Production in Response to the Windfall Profit Tax

	ϵ_p^s = +.2			ϵ_p^s = +.5			ϵ_p^s = +.8		
Year	Million barrels (1)	% of Total domestic output (2)	% of Imports (3)	Million barrels (4)	% of Total domestic output (5)	% of Imports (6)	Million barrels (7)	% of Total domestic output (8)	% of Imports (9)
1980	74.0	2.0	3.9	184.0	5.0	9.6	294.0	7.9	15.3
1981	77.0	2.1	4.8	194.0	5.2	12.1	310.0	8.3	19.3
1982	58.0	1.6	4.6	145.0	3.9	11.4	232.0	6.2	18.2
1983	41.0	1.1	3.4	103.0	2.7	8.5	164.0	4.4	13.5
1984	36.0	1.0	2.9	101.0	2.6	8.1	161.0	4.2	12.9
1985	35.0	0.9	3.0	71.0	1.8	6.1	114.0	3.0	9.8
1986	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1980-1986	320.2	1.2	3.2	794.5	3.0	8.0	1,268.8	4.8	12.7

Source: Author's estimates based on data published by the Department of Energy and the Internal Revenue Service.
Note: E^Ps denotes price elasticity of domestic oil supplies. This measures the responsiveness of domestic oil supplies to changes to the domestic price of oil. For example, an elasticity of +0.5 means that as the price of oil increases by 10%, the quantity of oil supplied increases by half that or 5%.

If lag effects are discounted, the largest output effects were in 1981. That year the estimated loss in domestic oil production in response to the WPT ranged from 77 million barrels (2.1% of total domestic output) to 310 million barrels (8.3% of output), depending upon the assumed price elasticity. As a fraction of total imports, these constituted 4.8% and 12.1%, respectively.

Estimated annual production losses declined steadily between 1981 and 1986. This was due to the combined effect of declining market prices and increasing base prices over this period. In 1986 production losses were estimated to be zero because average market oil prices were below average base prices (the average windfall profit was negative in each of these years). It is important to note that the estimates in **Table 5** assume that the production losses occur in the same year as the tax increase. In reality there may be lags in the effect of the WPT on domestic oil production. To this extent, the aggregate production losses estimated over the 1980-1986 period are probably more meaningful than the losses estimated for any one year.

On this basis the WPT increased oil imports and made the United States somewhat more vulnerable to sharp oil price increases or complete oil supply embargoes from foreign oil producers. If accurate, these estimates suggest that oil production losses in response to the WPT may have been from 3% to 13% of total oil imports.

Economic Efficiency and Resource Allocation

The efficiency effects of the WPT on the allocation of resources are less clear than some of the other economic effects. From an economic perspective, excise taxes distort the price system's ability to efficiently allocate resources among competing economic sectors. But the windfall profit tax had little if any effect on oil prices simply because such a tax cannot be forward shifted i.e., producers are not able to pass the tax forward by increasing prices to refiners because refiners would merely substitute imported oil. The reason for this is that oil prices in the United States are a given — they are determined or established in the world oil market in which the United States is only one of many producers.

In the long run, a permanent excise tax reduces the rate of return in the taxed sector and resources are allocated toward the non-taxed sectors. But the WPT was a temporary tax when it was enacted, and it was repealed two and one-half years before expiration. It is difficult to say whether this is a long enough period of time to cause resources to be reallocated in any significant way.

The other complicating factor was the decontrol of oil prices. It is a fundamental economic law that, generally, price controls cause serious distortions and create allocational inefficiencies. Oil price decontrol on January 28, 1981, when the WPT was about 10 months old, completely removed these distortions and inefficiencies. In all probability, decontrol with a WPT was less distorting than controls without a WPT.

The efficiency effects of the WPT also hinge on the question of whether oil production creates costs — these are called external costs — that society incurs but that producers do not account for. If the business of producing oil domestically

creates these external costs, then an economically appropriate policy would have imposed some type of excise tax on oil production. The WPT that was in effect was not inconsistent with this policy and, to this extent, may have contributed to economic efficiency.

The WPT, however, may have distorted the way resources were allocated within the oil industry. Since the tax was imposed on oil production — i.e., upon its removal and sale — extraction (and other upstream operations) was penalized and other aspects of the business (refining and marketing, the downstream operations become relatively favored. Thus it created financial incentives to shift resources from exploration and drilling to refining and marketing.[38]

There may have been additional distortions within the oil-producing sector as a result of the structure of the tax. Under WPT, different tax rates and base prices applied to taxable oil, depending upon its classification in one of three tiers as described in **Table 1**. These differences seemed to favor oil from newer wells as opposed to oil from older wells, and oil produced from small wells and by independents, as opposed to oil produced from larger wells and by integrated producers. While this was probably done to minimize the adverse effects on supply, the structure of the WPT created artificial tax incentives based on the age and infrastructure of production and who owned the oil.

In addition to the above distinctions, the following categories of oil were tax exempt: (1) oil produced from a property owned by a state or local government or any political subdivision of a state government; (2) oil produced by educational institutions or charitable medical institutions; (3) oil produced from wells in certain regions of Alaska; (4) oil owned and produced by certain American Indian tribes; and (5) front-end tertiary oil and royalty oil.

Even so, it must be underscored that the distortions under the windfall profit tax with decontrol were probably less than the distortion under full price controls without a WPT.

The Burden of Tax Compliance and Administration

After 1986, the WPT imposed little or no tax liability on oil producers because oil prices were below the threshold base prices that triggered it. Oil producers were obliged to comply with the paperwork requirements of the law, however, and the Internal Revenue Service (IRS) was compelled to administer the system despite the fact that the tax generated no revenue.

The oil industry maintained all along that the WPT was an extremely complicated tax to comply with and to administer. The IRS and the General Accounting Office (GAO, now the Government Accountability Office) both agreed

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[38] These incentives were more than offset by other factors, including environmental regulations, low rates of return, and other factors inhibiting the flow of capital into refining and marketing. For a discussion see CRS Report RL32248, *Petroleum Refining: Economic Performance and Challenges for the Future*, by (name redacted).

with the industry's claim, and the eight-year experience with the tax also tended to support this.[39]

The process of complying with the WPT involved a complicated system of interactions between a variety of oil industry entities and a variety of separate tax laws and energy regulations. The windfall profit tax was imposed on oil producers when taxable crude oil was removed from the oil-producing property. Any individual or business with an economic interest in an oil-producing property was considered as a producer and subject to the tax. There were four kinds of producers — independent producers, integrated oil companies, royalty owners (landowners), and tax-exempt parties. According to a 1984 GAO report, there were about 1 million oil producers (persons, institutions, and businesses) in the United States in 1984.[40]

Operators were the approximately 18,000 persons in the business of managing oil properties. The property operator supplied the relevant information to the agent who withheld the tax. The operator had to determine the proper tier, how much oil was sold, and who had the economic interest. Sometimes there were hundreds of people having a fractional economic interest in a single oil-producing property. Even determining the proper tier was no easy task. According to a 1982 GAO report, considerable uncertainty surrounded the concept of oil property, thus making it difficult to classify oil into tiers.[41]

The withholding agent had to compute and withhold the windfall profit tax based on the information supplied by the operator. The withholding agent, also called the first purchaser, was usually an integrated oil company, but it could also have been an independent producer or refiner.

To compute the windfall profit tax amount, the agent subtracted from the removal price the base price and the corresponding state severance tax (if any). This computation required the following steps: (1) knowing the category of oil; (2) determining the removal (selling) price; (3) adjusting the corresponding base price; (4) subtracting the state severance tax; and (5) testing for the 90% net income

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[39] In a several reports, the GAO stated that the WPT was a complex tax. For example, in a 1984 report the GAO states: "The tax is very complex in design and operation and requires interaction among producers, operators, and withholding agents." See U.S. General Accounting Office. *Response to Questions About the Windfall Profit Tax on Alaskan North Slope Oil.* GAO /GGD-85-12. December 10,1984, p. 1. See also: U.S. General Accounting Office. *IRS's Administration of the Crude Oil Windfall Profit Tax Act of 1980.* GAO/GGD-84-15, June 18, 198; and U.S. General Accounting Office. *Uncertainties About the Definition and Scope of the Property Concept May Reduce Windfall Profit Tax Revenues.* GAO/GGD-82-48, May 13, 1982.

[40] U.S. General Accounting Office. *IRS's Administration of the Crude Oil Windfall Profit Tax of 1980.* Report to the Chairman, Subcommittee on Commerce, Consumer, and Monetary Affairs, House Committee on Government Operations. GAO/GGD-84-15, June 18, 1984. Washington, 1984. p. i.

[41] U.S. General Accounting Office. *Uncertainties about the Definition and Scope of the Property Concept May Reduce Windfall Profit Tax Revenues.* Report to the Secretary of the Treasury. May 13, 1982. GAO/GGD-82-48. Washington, p. 14.

limitation.[42] Even some of the basic steps in this computation could be complex. For example, in 1983 there was some controversy over how to determine the "removal price" in the case of certain Sadlerochit oil in an Alaskan North Slope reservoir. Three different methods were used by the oil companies. The IRS had to issue several rulings before the matter was settled.

Having computed the tax liability, the first purchaser deducted this from the purchase price to be paid to the operator, and deposited the money in a Federal Reserve Bank. Integrated producers were required to deposit twice per month; independent producers were required to deposit every 45 days. The tax payment process did not, however, end there. In the event of overpayment or underpayment, due primarily to the net income limitation and underwithholding respectively, this required either refunds or additional payments.

Throughout this compliance process many tax return forms and information forms were required. The process was further complicated due to the numerous exceptions to the basic general rules and due to possible interactions between the windfall profit tax rules, the personal and corporate income tax rules, energy regulations, and state and local tax and energy laws.

The windfall profit tax also appeared to be a significant administrative burden for the IRS. The tax statute itself encompassed 13 sections in 25 pages of the 1986 Internal Revenue Code.[43] In addition, the IRS had to promulgate dozens of separate regulations, revenue rulings, letter rulings, and information releases to enforce it. Furthermore, there had been statutory amendments to the WPT in virtually every tax bill enacted between 1980 and 1988.

The IRS acknowledged the administrative burden of the tax in 1981 hearings before the House Subcommittee on Government Operations. A 1984 GAO report seemed to support this when it referred to the tax as "perhaps the largest and most complex tax ever levied on a U.S. industry."[44] Fortune magazine referred to the tax as one of "the most monumental excises ever levied in U.S. history...."[45]

Reasons for Repeal of the Windfall Profit Tax

As was discussed in the background section, the crude oil windfall profit tax was repealed in August of 1988 — two and one-half years before the legislated termination date in January 1991. There was no one reason for repeal of the tax. Rather, repeal was caused by the confluence of several factors and conditions from

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[42] The net income limitation restricted the windfall profit tax liability to no more than 90% of the net income per barrel of oil. Net income was defined in terms of taxable income per barrel, with some adjustments.

[43] U.S. Code Title 26, Internal Revenue Code Sections 4986-4990.

[44] U.S. General Accounting Office. *IRS's Administration of the Crude Oil Windfall Profit Tax*. p. 1.

[45] Chapman, Stephen. Government's Windfall from Windfall Profits. *Fortune*, March 24, 1980. p. 60.

1987-1988. Yet, the anti-WPT sentiment was fairly widespread and numerous bills were introduce to repeal the tax.[46]

The Congress became convinced that the tax was a complex and costly tax to comply with and to administer. It was a compliance burden to the oil-producing industry and an administrative burden for the Internal Revenue Service even though, after FY1986, the tax generated little or no tax 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. The fact that the tax was generating little or no revenue, however, made the argument that the tax was a burden easier to accept.

Another apparent reason for the repeal of the WPT was the recognition that the tax kept domestic oil production below what it would have been without the WPT and increased petroleum imports above the level of imports without the WPT.[47] This made the United States more dependent upon foreign oil and therefore more vulnerable to either a price upsurge or a supply disruption. Petroleum imports were growing. From 1985 to 1986, there was a sharp increase in the share of oil use being met by imports. Oil imports as a percent of total U.S. oil consumption increased from 32% to nearly 38% — one of the largest annual increases on record. Moreover, projections showed this degree of dependence rising to over 50% by 1990, a projection which has been realized.[48] Today, petroleum imports account for nearly 60% of consumption and are projected by the Department of Energy to rise to nearly 70% by 2025.

Finally, the domestic U.S. oil industry was experiencing difficult economic conditions due to the collapse of oil prices in 1986. Crude oil prices dropped from about $30 per barrel in the fall of 1985 to just over $10 per barrel in the summer of 1986. After 1986, oil prices were volatile but basically increasing. At the time of repeal, oil prices were about $18 per barrel. Prices increased during the Persian Gulf war of 1992 but collapsed again in the fall/winter of 1998/1999.

There was little question about the effect of the rapid price decline on the U. S. oil-producing industry. It had a strong negative effect on oil producers (i.e., drillers, operators, and landowners with an economic interest in oil) in general, and the small independent producer in particular. According to industry data, earnings from exploration/production operations of selected companies in the first half of 1986 declined by about 60% from the first half of 1985.[49] This decline mirrored, roughly,

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[46] There were 18 such bills in the 100th Congress.

[47] See, for example, U.S. Congress. Senate. *Energy Taxation Issues.* Hearings before the Subcommittee on Energy and Agricultural Taxation of the Committee on Finance, 100th Congress. January 30, 1987.

[48] CRS Report 87-779, *Oil Import Taxes: An Economic Analyis of S.694, The Economic Security Act of 1987*, by (name redacted).

[49] Beck, Robert J., and Glenda E. Smith, "Unparalleled Drop in Crude Prices Reduces Earnings for OGJ Group," *The Oil and Gas Journal*, vol. 84, no. 35, Sept. 1986, pp. 17-22.

the percentage decline in crude oil prices. After that, profits started to recover, especially for independents.[50]

Declining profits from oil production sharply reduced drilling and exploration expenditures and employment. In the long run, oil production was expected to decline significantly. Two states in particular, Texas and Louisiana, were hit hard by low crude oil prices. In these states, oil and oil dependent businesses (such as banks and other financial institutions) became bankrupt, large numbers of employees were laid off, and revenues to State and local governments plummeted. According to the Bureau of Labor Statistics, the oil and gas extraction industry nationwide lost about 130,000 jobs from the second quarter of 1985 to the second quarter of 1986.[51] Between 1982 and 1988, this industry lost about one-third of its jobs.[52] However, the collapse of oil prices helped some segments of the industry such as independent refiners and marketers.

The Congress came to view the windfall profit tax as a burden on an industry that was becoming severely depressed due to the sharp drop in oil prices and due to the volatility in oil prices. Repealing the WPT did not reduce industry tax payments so it was of little actual economic benefit at that time because oil prices were below base prices and there was no tax liability to producers. However, higher oil prices in the future might have exceed base prices and the WPT would have been triggered. At the very least, repealing the WPT reduced business costs and improved industry profitability somewhat by eliminating the compliance burden of the tax.

Opponents of repeal basically made the following arguments: (1) the oil industry's income is an economic rent or monopoly profit to a highly concentrated industry which society, through taxation, should share in; (2) the oil industry benefits from other tax subsidies which have traditionally kept effective income tax rates very low; (3) if oil prices rise above base price levels, then the tax would generate additional revenues which are badly needed to reduce large federal budget deficits; (4) the administrative apparatus is already in place and it makes little sense to eliminate the tax now, given that the tax is temporary. This final argument in favor of retaining the WPT was, in effect, a counterargument to those who have criticized the tax as a compliance and administrative burden. The point was that, even admitting its complexity, the WPT system was already in place. Much of the costs of administering the tax were fixed costs — they had been, in large part, already incurred, since most of the regulations had been promulgated. Given that the IRS had already incurred the fixed costs of running the WPT system, and given that the system would only be in effect for seven more years, they argued it made little sense to eliminate it.

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[50] Beck, Robert J. "Without Texaco, OGJ Group Earnings Increase 25.1% in 1987." *Oil and Gas Journal*, vol. 86, March 28, 1988. p. 6.

[51] U.S. Department of Labor. Bureau of Labor Statistics. *Monthly Labor Review*, vol. 109, no. 8, August 1986. p. 6.

[52] U.S. Department of Labor. Bureau of Labor Statistics. *Monthly Labor Review*, vol. 111, no. 3, March 1988. p. 72.

Windfall Profit Tax Legislation in the 109th Congress

There are currently 14 bills in the 109th Congress to impose some type of WPT. These fall generally into one of two categories: those that impose an excise type of WPT and those that would impose an income type. In addition, the bills differ in the way the WPT receipts would be used. Some bills would allocate the receipts to offset the cost of supplemental spending bills targeted to aid victims of Hurricanes Katrina and Rita. Others would allocate them to the highway trust fund to compensate for any losses from the proposed commensurate reduction in motor fuels excise taxes to offset the WPT. Several bills would appropriate the proceeds for the Low-Income Home Energy Assistance Program, which gives grants to poorer households to offset high energy bills and for residential weatherization.

Excise Tax Type of WPT

The excise tax type of WPT would generally impose an excise tax equal to 50% of the windfall profits not reinvested in either (1) oil/gas exploration and drilling, (2) refineries, (3) renewable electricity property, or (4) facilities for producing alcohol fuels or bio-diesel. Windfall profit would be defined as the difference between the market price of oil (at the wellhead) and a base price of $40/barrel, which would be adjusted for inflation. The bills that would impose this type of tax are S. 1631, H.R. 3752, H.R. 4203, H.R. 4248, H.R. 4449, H.R. 4263, S. 1981, and S. 2103. S. 1631 (Dorgan) was offered as an amendment to S. 2020, the Senate's version of tax reconciliation now in conference, but it was ruled out of order.

Three of the WPT bills are variations on this type of tax. For example, H.R. 2070 (Kucinich), H.R. 3664 (Kanjorski), and H.R. 3544 (DeFazio) would impose a graduated excise tax with the rates — 50%, 75%, or 100% — dependent on the extent to which profits exceed a reasonable level, as determined by a specially created board or commission. Also, the tax would be imposed on the windfall profit from and natural gas (and products thereof). These bills differ, however, on how the tax's proceeds would be used.[53]

Income Tax Type of WPT

The income tax type of WPT would impose a 50% tax on the excess of the adjusted taxable income of the applicable taxpayer for the taxable year over the average taxable income during the 2000-2004 period. The 50% tax would apply to crude producers and integrated oil companies with sales in 2005 or 2006 above $100 million. The tax would be temporary and apply to petroleum products as well as crude oil. The two bills that would take this approach are S. 1809 (Schumer) and H.R. 4276 (Larson) in the House. Senators Schumer and Reed sponsored S. 1809 as

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[53] H.R. 3544 (DeFazio) would impose price controls on gasoline, ban drilling in the Arctic National Wildlife Refuge, mandate minimum levels of inventory of crude oil and petroleum products, ban the export of Alaskan oil, and facilitate the draw down of the Strategic Petroleum Reserve. H.R. 2070 (Kucinich) would fund income tax credits for the purchases of fuel-efficient passenger vehicles, and to allow grants for mass transit.

an amendment to S. 2020 (S.Amdt. 2635, and S.Amdt. 2626). In both cases, the amendments were ruled out of order.

A variant of the income tax type of WPT is H.R. 3712 (McDermott). This bill would impose a 100% tax on any profit above a 15% rate of return from the sale of crude oil, natural gas, or products of crude oil and natural gas. Revenues would be used to fund a program of gas stamps, which would be similar to the current federal food stamp program;

Economic and Policy Issues

This is not the first time policymakers have proposed a WPT on crude oil. In just two months from the beginning of July 1990 to August 1990, domestic oil prices (the spot price of West Texas Intermediate) nearly doubled increasing from just over $16 per barrel to nearly $32 per barrel. This was sufficient to prompt policymakers to call for reinstatement of the 1980 windfall profit tax.

These bills raise a number of economic and policy issues. The remaining sections discuss some of the more important economic issues surrounding proposed legislation, and draw relevant policy implications. The final section discusses alternative policy options.

Current Market Conditions. The first issue is the difference between the current market conditions and those when the 1980 WPT was imposed. As noted above, the 1980 WPT was imposed as part of compromise to decontrol crude oil prices — a *quid-pro-quo*. From a control regime level of about $6/barrel, crude prices were allowed to rise gradually to market levels (as influenced strongly by OPEC), which at that time were about $24/barrel. By contrast, today there are no price controls on crude oil and prices are determined in a generally competitive market, one in which the United States is a price taker, and one in which OPEC plays a relatively smaller (but still important) role. Crude oil prices have increased for significantly different reasons than was the case in the 1970s.

Also, on August 8, 2005, President Bush signed a comprehensive energy policy bill (P.L. 109-58) that provides over $2.5 billion in energy tax breaks (over 11 years) to the domestic oil and gas industry. Some have questioned the wisdom of providing additional tax subsidies to the oil industry at a time of high crude and petroleum product prices, and have proposed either reducing or eliminating these subsidies in lieu of the WPT.

The Question of Windfall Profits. Of course the fact that current high prices are due to reasons different than in the 1970s does not belie that there may be windfalls. Crude prices marched steadily upward during 2004 (averaging $37/barrel) and reached new highs in 2005.[54] The price of West Texas Intermediate (WTI) reached $55/barrel in October 2004, a 60% increase over the January 2004 price of $34/barrel. Prices reached $60/barrel during the summer of 2005 and peaked at

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[54] As noted the new highs are when measured in nominal terms (i.e., in current dollars). In real terms, the all time high was above $90/barrel reached in April 1980.

nearly $70/barrel in August 2005.[55] After a short stay in the high $50's, prices hovered in the high $60's for several months, and in early 2006 stood at about $65/barrel.[56] Petroleum product prices have also spiked and continue to remain high. Increases in crude prices, in effect increase the value of oil reserves, and increase the revenue from the sale of domestically produced oil just as any higher market price for a commodity makes inventories or other stock of that product more valuable.[57]

The extent to which recent high petroleum prices have increased profits has been reported in the press and is discussed in two recent CRS reports; it is not discussed here.[58] A more intractable issue is whether any increased recent profits are true windfalls, and whether windfalls accrue to both crude oil and refinery products. The sharp and rapid increases in prices, if they are realized as higher profits, would be a pure windfall in the sense that they are an unforeseeable, unanticipated gain that accrues to owners of the Nation's stock of oil reserves. Most of any additional revenue and profit would accrue to the major oil companies since they own most of the reserves and produce the bulk of the oil in the United States. In a sense they are unearned: little or no additional cost or effort is incurred in generating this additional income; oil that would have been produced at $26 or $37 per barrel, can now be sold for $62 per barrel or more. In another sense they are earned: increased profits are the reward for the risks the industry takes to provide petroleum products to consumers.

As an illustration, using domestic oil production of 5.5 million barrels per day, a doubling of crude oil prices from $35/barrel to $70/barrel would generate an additional $70 billion in annual revenue to oil producers. If the baseline started at $10/barrel and prices rose to $70/barrel and stabilized at that rate for one year, revenues would increase by about $120 billion. Profits would also increase, but not by the increased revenue because income taxes — federal, state, and local — would have to be paid on the windfall. Thus, even without a windfall profit tax government tax revenues would increase commensurate with any oil industry windfall. This is because as profits of the oil producers increase so does taxable business income. Since there is little or no cost incurred in generating the added profits, then all of the revenue gains likely would be taxable. At a marginal tax rate of 35% — the marginal corporate tax rate — the federal government would gain about 35% of any oil industry windfall.[59]

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[55] In August 2005 prices on the futures market, for the near term contract, reached $69.81/barrel, the highest price ever recorded on the Nymex exchange.

[56] September 2005 also witnessed the biggest one-day surge in oil prices on record: $4.39/barrel

[57] An example is the stock of homes. As the price of new homes increases — due to inflation, increase in relative prices, or other reasons — the value of the existing stock of homes also increases so that homeowners experience a windfall.

[58] See CRS Report RL33021, *Oil Industry Profits: Analysis of Recent Performance*, by Robert L. Pirog.

[59] The marginal statutory rate is the appropriate rate to use in this instance rather than the marginal effective tax rate. The marginal rate includes the effects of intangible drilling costs

(continued...)

In addition to the higher profits accruing to oil producers, there appear to be additional profits accruing to refiners, but these increases have been smaller than the profits accruing to producers. But these profits are not true windfalls as they are in the case of crude oil. While refinery margins and profits can and have increased, even sharply, they are due to the constraints on the supply capacity — essentially the supply or cost curve — of the refinery industry.

Another problem is one of timing. There is no question that producers and refiners could reap enormous windfall profits if the recent price upsurge is sustained. But it is not a certainty that the recent price spike will be sustained. Recently crude oil prices, while still high, declined somewhat from their peak of nearly $70 per barrel. Even though they are high there is no guarantee that they will not fall, possibly precipitously, and become losses in the near future if crude and product prices decline. And barring any other problems abroad, or natural disasters, prices would be expected to decline somewhat further. It should be remembered that oil prices declined from a high of over $30 per barrel in the early 1980s to about $10 per barrel at their low point in the spring of 1986. From 1986-1999 oil prices averaged about $17.00 per barrel, but fluctuated between $12 and $20 per barrel — the fluctuations including the most recent four-year period have been even greater. Domestic crude oil prices reached a low of about $8/barrel in December 1998, among the lowest crude oil prices in history after correcting for inflation. From this volatile behavior of oil prices derives the volatility of oil industry profits, and it is not clear that there will be a persistent windfall profit over the longer run.

Economic Implications. Depending on how the tax were structured, reinstating the windfall profit tax might make the United States more dependent upon foreign oil. This is likely to be a more serious problem today than in 1980 because, unlike then when the United States was importing about 40% of its petroleum use, the nation is now importing close to 60%.

As the above analysis suggests, a windfall profit tax in the form of an excise tax — H.R. 3752, and S. 1631 — could reduce domestic oil production and increase the demand for imported oil and petroleum products. In economic terms, oil producers would view the tax as an increase in the marginal cost of domestic oil production. During the 1980s, the marginal cost (the incremental cost) of producing every barrel of taxable crude oil was higher with the WPT than without it. In consequence, the WPT reduced the supply of domestic oil to some extent; at every possible market oil price, it is estimated that domestic oil production was lower with the WPT than it would have been without it. The tax increased the marginal cost of producing domestic oil, thereby reducing domestic production and increasing the demand for oil imports both in the short run and long run. This is a result of the fact that oil imports to the United States are a residual, the difference between aggregate demand for oil and aggregate domestic oil supply. Any condition or factor which either reduces domestic supply (such as higher industry excise taxes) or which increases the

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[59] (...continued)
and other tax provisions which enter into the calculation of the tax on income from the marginal *investment*. In the windfall profits tax situation in the text, there is no marginal investment, hence these oil and gas tax incentives/subsidies do not enter into the calculation.

aggregate demand for oil (such as higher national income) will increase oil imports. Crude oil prices might increase somewhat as the demand for imported oil increases, because the export supply of oil to the United States is somewhat elastic. The size of the effect would depend on the magnitude of the excise tax and the price elasticities of oil demand and supply in the United States, as well as the oil export supply to the United States.

Reinstating the windfall profit tax would probably raise the question of the burden and cost of compliance and administration of the tax, which was an important rationale for repeal of the tax in 1988. This issue seems to become more of a concern when WPT revenues don't live up to expectations. Unless the tax were greatly simplified, or unless a large amount of revenue were generated from the tax, past experience suggests that this could be a serious problem in reinstating the WPT. Many analysts believe, based on market fundamentals, that the recent oil price upsurge will not be a lasting one, and since oil prices have been highly volatile in recent years, there is no way to judge whether WPT revenues would be large enough to justify the alleged high costs of compliance and administration.

Alternative Policy Options

If, instead, an excise tax were to be imposed broadly on both imported as well as domestically produced oil (as proposed in the early 1980s by the Reagan Administration) much greater price effects would be expected — the price of crude oil in the United States would tend to be much higher than under the WPT on domestic oil alone. This is because the tax is imposed on imports, which are the marginal source of oil supplies and therefore the benchmark for crude oil prices. In this case, the tax would both increase the marginal costs of oil imports (an upward shift in the oil import supply schedule) and cause a slight movement along the schedule due to increased demand for oil imports, and thus have a bigger price effect.

An excise tax holiday — suspension of the 18.4¢/gallon tax on gasoline — combined with an equal revenue WPT on oil would be completely counterbalanced or offsetting. Eliminating the gasoline tax would cause refiners to reduce prices over time by the amount of the tax (or somewhat less depending on tax incidence, which depends on the ratio of price elasticities of the demand and supply schedules), but the WPT on all crude oil (which remember is actually an excise tax) would be shifted as a higher price of crude oil bought by refiners, thus offsetting the decline in product prices.[60]

From an economic perspective, the only tax that would be relatively neutral in the short run — that would have no (or few) price effects and other economic effects — would be a pure corporate profits tax, since this tax does not affect marginal production costs, and cannot be shifted in the short run. Thus, to the extent that a surtax on the corporate income of crude oil producers on their upstream operations could approximate such a tax, this would not raise crude oil prices and would not

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[60] Eliminating the gasoline tax would deny the Highway Trust Fund of its principal source of revenue unless some adjustment were made. See CRS Report RL30497, *Suspending the Gas Tax: Analysis of S. 2285*, by (name redacted).

increase petroleum imports *in the short run*. While the current corporate income tax is not a pure corporate profits tax, a surtax for oil companies would arguably be an administratively simple and economically effective way to capture estimated oil windfalls in the short run. In the long run however, all taxes distort resource allocation and even a corporate profit tax (either of the pure type or the surtax on the existing rates) would reduce the rate of return and reduce the flow of capital into the industry, adversely affecting domestic production and increasing imports.

Technical Appendix

The algebraic formula for the WPT liability is as follows:

$$T_t = \tau [P_t^m - P_t^b (1+ \pi_{t-2})](1- s) (1- c)$$

where

T_t = the WPT in $/barrel, in time t (e.g., in the 1st quarter of any year),
τ = the WPT tax rate in percent (see **Table 2** in the text),
P_t^m = the market (removal) price of domestic crude oil at the wellhead at time t,
P_t^b = the base price corresponding to the type of oil produced, as specified by law (see **Table 2**)
π = rate of inflation, as measured by the GNP deflator, so that π_{t-2} is the GNP deflator lagged two quarters,[61]
s = the rate of State severance tax, if any
c = the rate of federal corporate income tax

[61] Except that for Tier III oil, the base price increases by 2% per year, so that the quarterly inflation adjustment for Tier III base prices is π_{t-2} + .005.