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Author(s): Victor A. Canto

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Current Issues: Taxation

Substitution Effects: Perilous to Ignore

by Victor A. Canto, President and Director of Research, A.B. Laffer Associates

It is an article of faith among many economists that short-run substitution effects are either non-existent or small. Martin Feldstein notes, for example:

Although we would expect some increase in work effort from the reduction in the highest marginal tax rates, past evidence all points to relatively small changes. The favorable effect of improved incentives for savings and investment can only be expected after a much longer period.¹

But mounting evidence suggests that substitution effects have been significantly underestimated. As tax rates, preference items and other features of tax codes have changed, traditional economists have made glaring errors in forecasting tax revenues at the federal, state and local levels.

Consider the case of the capital gains tax rate. The increase in the top capital gains tax rate to 28 per cent from 20 per cent, effective in 1987, provided investors with strong incentives to realize capital gains in 1986. These incentives were greater, the longer the investor's planned holding period. Incentives to realize capital gains also existed for individuals in brackets below the top rate. Supply-side economists, recognizing the power of these incentives, predicted a one-time surge in capital gains tax revenues as taxable investors acted to beat the increases in capital gains tax rates.²

Conventional economists failed to foresee the huge increase in capital gains tax receipts in 1987. Then, because they doubted that a one-time opportunity to reduce taxes could have such a pronounced effect, con-

ventional tax revenue forecasters compounded their original error. They assumed that the "surprise" increase in tax collections was a permanent rather than a temporary development. This led them to project higher capital gains tax revenues far into the next decade. Because the special incentives to realize capital gains no longer existed after 1986, however, the projected revenues did not materialize.

The governors of approximately a dozen states are now facing budget deficits because of the "unanticipated" drop in capital gains tax revenues.³ How the governors of these states respond to the revenue shortfalls could have significant effects on their political careers. Governor Mario Cuomo is assuming that about two-thirds of the shortfall in New York is a one-time affair. Consequently, he is planning to reduce spending to bridge the gap. Governor George Deukmejian originally proposed "revenue enhancement" to close the gap in California. However, when attacked by fellow Republicans who clearly saw his proposal as a tax rate increase, the governor rescinded his proposal. Given that California's planned spending path was based on an erroneous revenue forecast, the appropriate response is a reduction in expenditures to match lowered revenue projections.

The presidential aspirations of Michael Dukakis could be affected by his response to the shortfall in Massachusetts. If he follows the leads of the governors of New York and California and proposes spending cuts, he runs the risk of alienating many liberal Democrats. If he raises tax rates, he will alienate Southern and Western conservative Democratic voters. Probably the smart play for Governor Dukakis is to do nothing before November and hope to be in the White House when budget-deficit-closing decisions must be made in Massachusetts.

Similar examples can be found at the federal level. The consensus among economists is that the 1986 income tax reforms lowered the effective tax rate on income from labor and raised the effective tax rate on income from capital. Although no explicit reference was made to marginal tax rates, the conventional wisdom assumes that the average and marginal tax rates moved in the same direction.⁴ Stories now reported in the press suggest that, although businesses are paying more, lawmakers and economists underestimated the ability of corporations and individuals to avoid taxes:

It's also a game that's helping hold corporate tax collections stubbornly below original and even revised projections. The take is up. But last fiscal year—in a slow economy—it missed original Treasury goals by about \$21 billion. This year the economy is better and so are payments, but they may still be \$9 billion to \$11 billion short of initial targets. So far, You-Know-Who has more than covered the shortfall because of unexpectedly strong personal income.⁵

In reporting these facts, analysts are missing the key point of the story. An increase in tax rates on corporations will increase incentives to avoid and evade corporate taxes. The tax base to which a higher corporate tax rate is applied will therefore contract. Conversely, reducing the rates applied to personal income leads to an expansion of the individual income tax base. Because conventional analysts discount or ignore the magnitudes of these supply-side substitution effects, their forecasts underestimate personal income tax receipts and overestimate corporate tax collections.

In spite of mounting evidence that their tax forecasts are grossly inaccurate, some of the presidential candidates' economic advisors continue to

1. Footnotes appear at end of article.

ignore substitution effects. Dukakis's economic advisor, Lawrence Summers, advocates adding taxes on transactions in financial markets. He has said, "We need to make those who have enjoyed the party—the top one percent of the population—pay for it."⁶ George Bush's economic advisor, Martin Feldstein, advocates an income tax surcharge of approximately 5 percentage points on corporate and personal income tax rates.⁷

In proposing increases in the top personal income tax rate to collect more tax revenues from the rich, both Summers and Feldstein choose to dismiss the research of their colleague at both Harvard and the National Bureau of Economic Research, Lawrence Lindsey.⁸ In discussing Professor Lindsey's research, Professor Feldstein notes:

Lindsey reports that about 65 percent of the induced offsetting rise in tax revenue reflects higher pretax wages, salaries, and business profits than would have been anticipated without changes in the tax rules, 25 percent reflects an increase in realized capital gains, and the remaining 10 percent is due to reductions in various itemized deductions. These induced offsetting effects are very small among taxpayers with incomes below \$20,000. Only among taxpayers whose initial marginal tax rates exceeded 50 percent was there evidence that the rate reduction did not reduce federal revenue at all.⁹

Lindsey's findings are understandable from a supply-side perspective. Consider the changes in take-home pay resulting from the first Reagan tax rate reductions. Before the cuts, a person in the 70 per cent bracket kept 30 cents of each extra dollar of taxable income. After the top rate was cut to 50 per cent, that person could keep 50 cents on the dollar. That is a 67 per cent increase in incentives. In contrast, a person facing the lowest marginal rate of 14 per cent prior to tax reform retained 86 cents on the marginal dollar. The reform dropped the lowest tax rate to 11 per cent, and taxpayers in this bracket could then retain 89 cents on the dollar. The increase to 89 cents

from 86 cents is only a 3.5 per cent increase in incentives. Given the far greater changes in incentives in the higher income brackets, the economic responses and the resulting changes in tax revenue collections at the various income levels are predictable.

Similar controversy surrounds the taxation of capital gains. Treasury Undersecretary Michael Darby directed a study that found that the tax rate for maximizing revenue from capital gains falls between 15 and 22 per cent.¹⁰ Darby's findings suggest that the current system, which imposes top rates of 28 and 33 per cent on capital gains, is costing the Treasury revenue as well as impairing the economy's efficiency. Darby's work is being channeled to Vice President Bush through the former Treasury Secretary, James Baker. Thus reports that supply-side ideas are in short supply on Bush's team are exaggerated greatly.¹¹

Substitution effects are also ignored by most financial analysts. In assessing the impact on stock prices of the elimination of the investment tax credit, the lengthening of depreciation schedules and the other changes in business taxation embodied in the Tax Reform Act of 1986, most analysts focused on capital intensity. If an industry was capital intensive, the tax payments of companies in that industry would rise and their stock prices would be depressed. If an industry was labor intensive, tax payments would fall and stock prices would rise.

This reasoning is flawed because it ignores the difference between the initial incidence and final burden of a tax. The person upon whom a tax is levied may well experience no loss in net income if he passes the tax forward onto consumers or backward onto suppliers. Likewise, a person upon whom no tax has been levied may well suffer large net income losses as a consequence of taxes levied on others. In the words of Nobel Laureate Paul Samuelson:

Even if the electorate has made up its mind about how the tax burden shall be borne by individuals, the following difficult problems remain:

Who ultimately pays a particular tax? Does its burden stay on the

person on whom it is first levied? One cannot assume that the person Congress says a tax is levied on will end up paying that tax. He may be able to shift the tax; shift it 'forward' on his customers by raising his price as much as the tax; or shift it 'backward' on his suppliers (wage earners, rent, and interest receivers) who end up being able to charge him less than they would have done had there been no tax. Economists therefore say: We must study the final incidence of the tax totality of its effects on commodity prices, factor-prices, resource allocations, efforts, and composition of production and consumption. Tax incidence, thus, is no easy problem and requires all the advanced tools of economics to help toward its solution.¹²

Supply-side analysis recognizes that a tax is not always paid by the agents upon whom the tax is levied. The capital-tax-sensitivity (CATS) approach must be employed to capture the final burden of a tax rate change or other economic shock.¹³

The Tax Reform Act of 1986 presented an opportunity to test the traditional and supply-side approaches by comparing the accuracy of the stock price forecasts made with the two approaches. During 1987, we predicted that low-CATS industries would be top performers and that high-CATS industries would perform poorly.¹⁴ If the substitution effects were important, as we anticipated, then

- low-CATS industries should have been outstanding performers even if they were capital intensive (i.e., the taxes paid by these industries increased more than average corporate tax payments as a result of tax reform) and
- high-CATS industries should have been relative laggards even if they were labor intensive (i.e., their tax payments declined or increased less than average).

Capital-intensive industries that are low-CATS and labor-intensive industries that are high-CATS provide the test of the two approaches. The evidence (in Table I) clearly supports the

Table I Capital Tax Sensitivity versus Capital Intensity: 1987 Performance of Standard & Poor's Stock Indexes

<i>High-CATS/Low-Capital-Intensive Industries</i>	<i>Per Cent</i>	<i>Low-CATS/High-Capital-Intensive Industries</i>	<i>Per Cent</i>
Beverages/Brewers	24.24	Agricultural Machinery	53.90*
Beverages/Soft Drinks	8.43	Aluminum	9.09
Computer and Business	7.52	Banks/NYC	-29.15
Computer Services	7.31	Banks/Outside NYC	-21.89
Department Stores	-16.55	Coal/Bituminous	-14.15
Entertainment	19.69	Containers/Paper	9.30*
Foods	2.94	Copper	-0.48
Hospital Management	-1.22	Gold Mining	55.68
Hospital Supplies	4.55	Machine Tools	0.61
Leisure	-13.11	Machinery/Specialty	35.03
Publishing	9.34	Metals/Miscellaneous	19.70*
Radio/TV Broadcasters	35.97	Metals/Non-Ferrous	43.90*
Restaurants	-3.22	Oil Well & Service	-0.48
Retail Food Chains	2.94	Oil/Offshore Drilling	26.98
Tobacco	6.93	Paper	6.98
Toy Manufacturers	-35.93	Railroads	9.09
		Steel	56.99
Average S & P 500	3.74 2.01	Average	15.36

* Investor's Daily stock index performance.

CATS approach.¹⁵ Low-capital-intensive high-CATS industries, which the conventional wisdom expected to benefit from tax reform, gained an average of only 3.74 per cent. Capital-intensive low-CATS industries, which the conventional wisdom expected to be hurt by tax reform, gained an average 15.36 per cent.

The significance of substitution effects is undeniable. Portfolio managers choosing to ignore substitution effects do so at their peril!

Footnotes

1. M. Feldstein, "Supply-Side Economics: Old Truths and New Claims," *American Economic Review*, May 1986, pp. 26-30.
2. T. A. Clark, "When to Realize Capital Gains: Update," *Investment Observation*, A. B. Laffer Associates, September 26, 1986.
3. D. Walters, "Which One is Reaching for Taxes in Budget Pinch,"

4. On this issue see "Flat Taxes and Capital Formation," by J. L. Praken, L. H. Meyer and C. P. Varvares (Formal Publication No. 65, Center for the Study of American Business, Washington University, St. Louis, October 1984). See also D. R. Burton, "About that Fall in Business's Tax Share," *Wall Street Journal*, May 2, 1985, p. 28.
5. L. Berton, "Business as Usual: Under New Tax Law, Corporations Still Find Ways to Reduce Taxes," *Wall Street Journal*, June 2, 1988, p. 1.
6. D. Shubman, "The Dukakis Circle: On Economic Matters Candidate Gets Advice Starting at Harvard," *Wall Street Journal*, May 23, 1988, p. 1.
7. M. Feldstein, "Halving the Pain of Budget Balance," *Wall Street Journal*, May 25, 1988, p. 24.

8. L. B. Lindsey, "Estimating the Revenue Maximizing Top Personal Tax Rates" (National Bureau of Economic Research, 1985). Professor Lindsey estimates the revenue-maximizing personal income tax rate to be 43 per cent.
9. Feldstein, "Supply-Side Economics," op. cit., p. 29.
10. "Soak the Rich, Again," *Wall Street Journal*, June 1, 1988, p. 22.
11. A. Murray, "The Supply-Side is Short on the Bush Team," *Wall Street Journal*, May 23, 1988, p. 6.
12. P. Samuelson, *Economics* (New York: McGraw-Hill, 1973).
13. Analyses of the CATS strategy are in the following *Financial Analysts Journal* articles by V. Canto: "The CAT's Meow: A Portfolio Strategy for the Modified Flat Tax," January/February 1986, pp. 35-48, "The Fat CATS Strategy for Portfolio Selection," January/February 1987, pp. 44-51 and "Fine-Tuning the CATS Meow," November/December 1987, pp. 56-66.
14. V. A. Canto and W. S. Sharp, "The Joy of the Marathon," *Supply-Side Indicators*, A. B. Laffer Associates, January 12, 1987; Canto, "What, Me Worried?" *Supply-Side Indicators*, A. B. Laffer Associates, April 3, 1987.
15. The industry groups were first reported in Canto, "The CAT'S Meow: Sharpening Our Claws," *Economic Study*, A. B. Laffer Associates, July 18, 1986. The only difference in the two tables is that we excluded telephone companies from the new table. Originally telephones were classified as low-CATS. In a subsequent study (Canto, "Industry Classification Update: Different Breeds of CATS," *Investment Observation*, A. B. Laffer Associates, September 26, 1987), the industry was redefined as high-CATS and therefore excluded from the analysis.