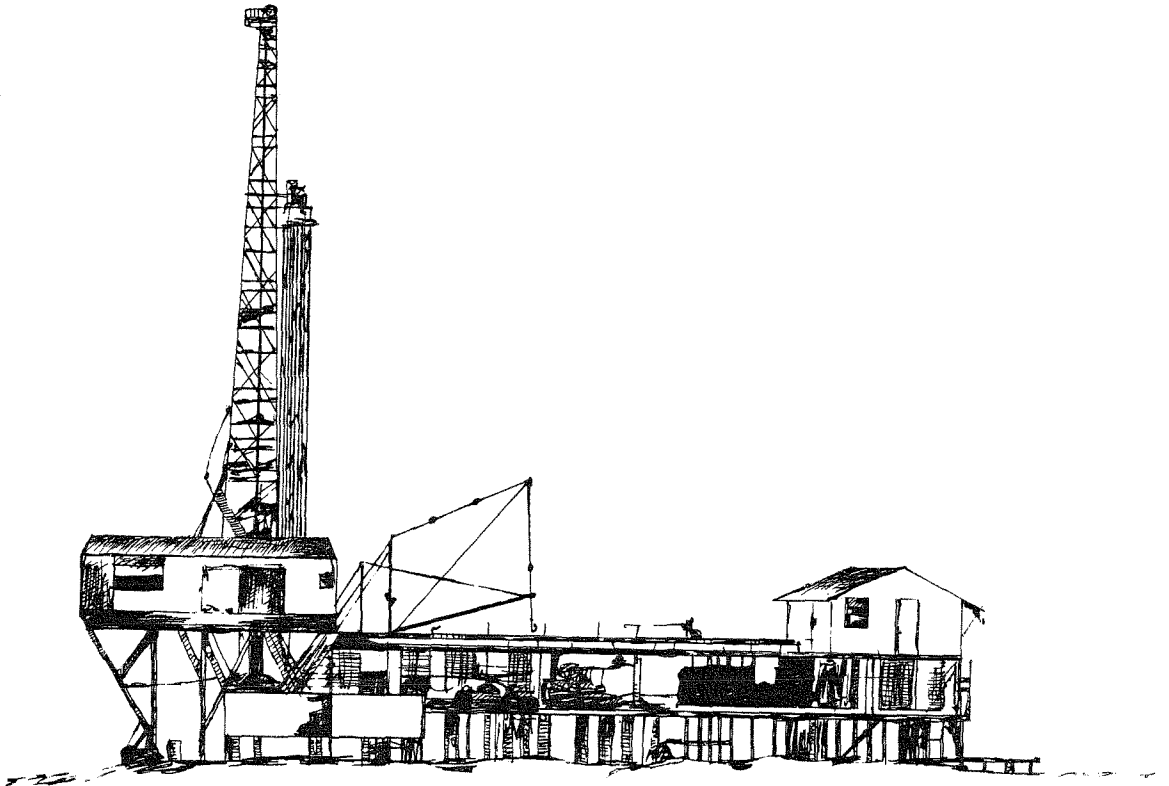


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WINDFALL PROFITS,
INTEREST RATES
AND
INDEX NUMBERS

Windfall Profits, Interest Rates and Index Numbers

Production, investing, and household-buying decisions have all come to be influenced by the past decade's upsurge in inflation and increased government participation in market decisions. This issue of the *Economic Review* presents three studies of this type of influence. One article examines the production losses attributable to price controls — and more recently, windfall-profit taxes — on domestic petroleum producers. Another article evaluates the ability of financial markets, in an inflationary era, to incorporate the best possible interest-rate forecast into current market prices. And a third article analyzes the composition of the price indexes which play such a prominent role, through indexation formulas, in determining household incomes and government expenditures.

Yvonne Levy describes the nation's recent experience with price controls on domestically-produced crude oil, which held the average price of domestic crude below the world market level for almost a decade. Controls thus tended to reduce production substantially below the level that would otherwise have prevailed, aggravating a decade-long downtrend in U.S. production. "As a result, controls worked against the nation's goal of energy independence and led to an inefficient allocation of resources."

Crude-oil price controls were finally eliminated this past January, but producers still are not realizing the world price — although they are receiving considerably more than they would have done with continued controls. The reason is the windfall-profit tax, which has been returning to the Federal Government much of the added revenue that otherwise would have accrued to producers through

decontrol. "With the tax, future domestic production will be lower than it otherwise would have been, although higher than with continued controls. Similarly, imports will be higher than otherwise, and the misallocation of resources will continue."

Levy provides a number of scenarios of production possibilities with different long-run supply elasticities and with different rates of increase of (uncontrolled) crude prices. All of the scenarios show that the decline in domestic production expected over the 1979-85 period with continued controls might have been reversed without controls. But the windfall-profit tax would substantially reduce the positive impact.

Levy thus concludes, "As a measure to reduce dependence on foreign-oil imports and improve the allocation of resources, decontrol is a step in the right direction. But by the same token, the windfall-profit tax is a step in the wrong direction." She adds that policymakers should consider altering the tax to make it a true tax on profits, rather than an excise tax on a portion of the selling price. In that way, it would not affect production decisions at the margin.

Adrian Throop points out that volatile financial markets in this inflationary period have put a premium on accurate forecasts of interest rates. Thus, he examines the degree to which the Treasury-bill market efficiently utilizes all available information so as to incorporate the best possible interest-rate forecast into current market prices. This involves an evaluation of the applicability of the "efficient market" hypothesis to the Treasury-bill market. Hence he examines two types of independent forecasts — an autoregressive forecasting

equation based on the past history of the bill rate, and the forecast of a selected panel of market professionals.

If the market is not efficient, Throop argues, a group of investors could improve their returns by altering the maturity of their investments in light of superior interest-rate forecasts. "Whether or not investors can profit by 'speculating' on interest rates, through holding other than their normally preferred maturities, depends critically on whether available interest-rate forecasts are more accurate than the market's." If the market is efficient, the information in these forecasts would already be incorporated into the prices of securities, and therefore nothing would be gained. In that case, investors would be better off by simply "hedging" their positions with maturities equal to their planned investment periods, thereby avoiding possible risk.

Throop shows that professional analysts' predictions of the Treasury-bill rate two quarters ahead are significantly more accurate than market predictions. "This indicates that the market does not efficiently utilize all available information in making bill-rate forecasts." The analysts' ability to "beat the market" stems from a better utilization of information about past movements in the bill rate, and also from a more efficient utilization of other sorts of information.

Herbert Runyon then turns to the question of measuring inflation, which, as he emphasizes, means an increase in the *general* price level rather than separate price increases for individual commodities. Since numerous goods and services are bought and sold daily in the markets, an index number represents the only feasible way of describing the general movement of prices through time. But this index number should give an accurate representation of changes in living costs — at least indirectly through market observations as consumers reveal their individual preferences by

purchasing certain goods and services. For the household sector, the standard measures include the Consumer Price Index (CPI) and the Personal Consumption Expenditure (PCE) deflator.

The CPI — a "Laspeyres" index — uses quantities purchased in a certain base year as a reference point from which to measure changes in prices of a basic (presumably unchanging) consumer-expenditure pattern. The PCE — a "Paasche" index — uses the current-period expenditure pattern as a reference base for comparison with expenditures in earlier periods. For structural reasons, the CPI tends to overstate — and the PCE to understate — what consumers actually pay for at the checkout counter. As a practical matter, the CPI and PCE were quite close in their measurement of living costs from 1960 through 1977. But in the 1978-80 period, the CPI rose at a much faster rate — not so much because of the indexes' different statistical composition as because of their different treatment of sharply rising homeownership costs. Among other things, the CPI's weighting of homeownership overstates its importance in the cost of living.

Runyon argues that the use of the CPI in recent years has overcompensated many income recipients — especially beneficiaries of Federal programs, since the Federal government depends on the CPI as a standard index in its efforts to offset the impact of inflation on such individuals. This overcompensation has several public-policy consequences. "Overcompensation leads to unwarranted increases in Federal expenditures and in the Treasury deficit. Beyond that, it introduces inequities relative to those individuals not receiving indexed benefits, and thus amounts to an unintended redistribution of income." Thus, he concludes, recent experience suggests that the PCE index is the more equitable choice for determining cost-of-living adjustments.