Tax Reform and the Housing Market in the Late 1980s: Who Knew What, and When Did They Know It?

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The construction industry in the United States has experienced a remarkable downturn in the past five years. In the mid 1980s, new housing starts averaged nearly 1.8 million per year, slightly below the record pace of 2 million per year in the late 1970s. By 1991, however, the number of new housing starts was just above 1 million. The share of GNP devoted to residential investment fell to 3.3 percent in 1991, the second lowest level in the last three decades. Many factors contributed to the recent decline in new construction, including changes in real and nominal interest rates, a recession, and a sequence of tax reforms.

The Tax Reform Act of 1986 is frequently cited as a key contributor to the recent construction decline, particularly the decline in multifamily housing. One of the Act's objectives was to reduce investment in tax shelters, and rental housing had been one of the most active shelter vehicles in the early 1980s. "Leveling the playing field," the mantra of 1986 tax reformers, required raising the tax burden on rental housing relative to that on corporate capital. The view that the Tax Reform Act of 1986 is the source of the post-1986 real estate malaise underlies the recent political pressure to repeal passive loss restrictions and several other provisions in the Act and to provide new incentives for real estate investment.

It is widely agreed that recent tax reforms have affected incentives for housing consumption and for investment in rental properties. Reductions in marginal tax rates have lowered the value of tax-exempt imputed income for homeowners, with particularly large changes for

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high-income individuals, whose tax rates were 70 percent at the beginning of the 1980s but are 28 percent today. Changes in the tax incentives for investment in rental property have been even more dramatic. The Economic Recovery Tax Act of 1981 liberalized depreciation provisions for rental property, while the Deficit Reduction Act of 1984 and the Tax Reform Act of 1986 reversed these changes. The net effect of all these reforms has been a reduction in the tax incentives to rental construction.

This paper considers the link between recent tax changes and the fortunes of the real estate industry. It investigates the extent to which the effects of the various reforms were predicted, and the dimensions along which actual events were a surprise. The paper is divided into five sections. The first presents summary information on developments in the real estate market in the past decade, placing the fluctuations in housing starts and real estate prices into a broader historical context. The next two sections describe the major provisions of the Economic Recovery Tax Act of 1981 (ERTA) and the Tax Reform Act of 1986 that affected real estate. The fourth section surveys analyses of the tax reform bills when they were enacted, as a guide to the expected effects of each policy. The final section asks whether policy advisors can draw general lessons about either the strengths or the weaknesses of economic analysis of tax proposals from the recent experience.

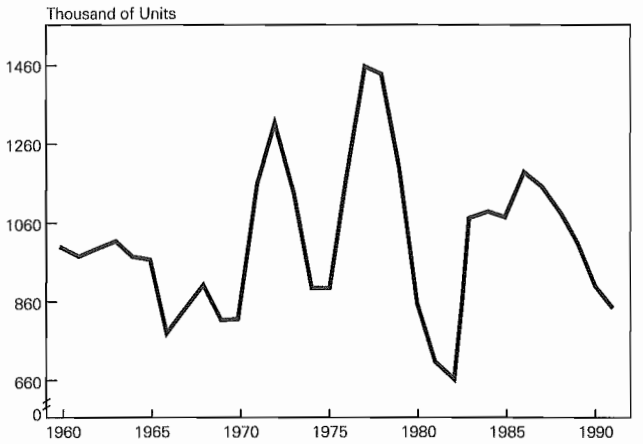
New Construction in the 1980s

Housing has historically been one of the most volatile sectors of the U.S. economy. The 1980s were unusually variable, however, particularly for multifamily construction. Figure 1 plots the number of single-family housing starts in each year since 1960, and it shows the well-known volatility of the construction sector. Single-family starts peaked at more than 1.4 million per year in 1977 and 1978, and averaged less than 0.9 million per year for the 1990–91 period. The figure demonstrates that while the decline in single-family starts since 1986 has been substantial, it is not unprecedented. Even larger declines occurred between 1972 and 1974 and between 1978 and 1981.

Figure 2 displays the time series for multifamily housing starts. The strongest growth in multifamily construction took place in the early 1970s, largely as a result of major public housing initiatives. Multi-unit starts declined sharply in the mid 1970s, tracked the overall economic cycle of the late 1970s, and then surged in the early 1980s, arguably as a result of important tax incentives in the 1981 law. Total multifamily starts rose from 390,000 in 1981 to 670,000 in 1985, with virtually all of the increase in large buildings (five or more units). The decline in construction of rental housing, from more than 650,000 units per year in 1985 and 1986 to an average of 175,000 per year in 1991 and 1992 to date,

Figure 1

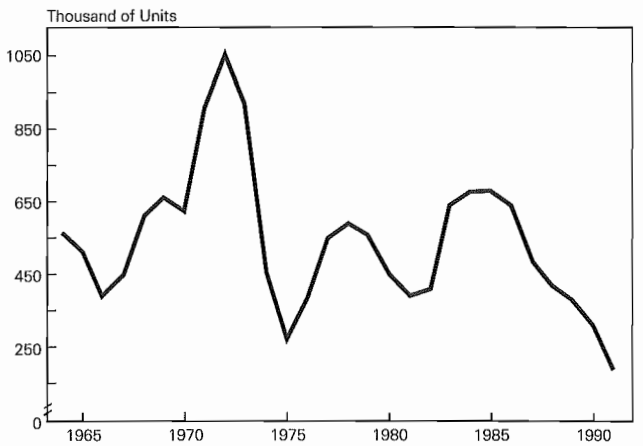
Single-Family Housing Starts, 1960 to 1991



Source: U.S. Bureau of the Census.

Figure 2

Multifamily Housing Starts, 1964 to 1991



Source: U.S. Bureau of the Census.

is much sharper than the drop in single-family starts. Excluding the unusual period at the end of the public housing expansion, it is also the largest contraction in multifamily construction during the past three decades.

Figure 3 shows an alternative measure of the level of housing activity, the share of residential investment in gross national product. Residential investment includes some expenditures on additions and alterations, as well as new construction outlays. The figure shows that the share of GNP devoted to residential investment has declined by more than one-third since 1986. Even with the residential investment boom of the mid 1980s, residential investment as a share of GNP was lower in the 1980s (4.5 percent) than in either of the previous decades (4.7 percent in the 1960s, 5.0 percent in the 1970s).

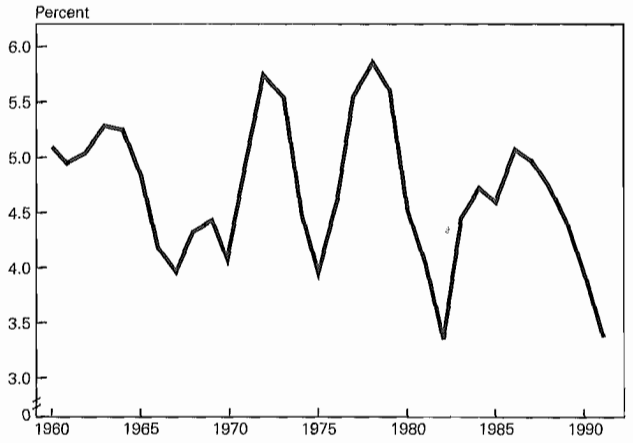
While construction activity has declined, the frequent claim that the United States has experienced a housing "bust" in the past five years, with sharply declining prices, is exaggerated. Real house prices in some regions have fallen by substantial amounts (Poterba 1991), but real house prices for the nation as a whole have declined relatively little. Figure 4 displays the real price of a constant-quality single-family home, deflated to constant 1987 dollars using the personal consumption deflator. Since 1986, real prices have declined by almost 7 percent, or at the rate of approximately 1 percent per year. This experience is striking only when contrasted with the pattern of real prices in the mid and late 1970s. Real single-family house prices rose by 30 percent between 1971 and 1979, in stark contrast to either the previous or the subsequent decade. For households that extrapolated the experience of the 1970s, however, the real decline in house prices during the last decade may have *seemed* like a housing market "bust."

Data on prices of multifamily residential structures comparable to the data on single-family homes are not available, unfortunately. Two time series, however, do provide important information on the rental housing market. The first is the vacancy rate for rental units, shown in Figure 5. Important changes have occurred over time in the vacancy rate. While it declined from the early 1960s through 1981, the rental vacancy rate *increased* from 1981 through 1988. The change between 1984 and 1986, when the aggregate vacancy rate rose by 1.5 percentage points, was the largest uptick in the vacancy rate during the past two decades.

The vacancy rate for large rental properties, those with five or more units, increased even more sharply than the average for all rental units, from 6.5 percent in 1982 to 10.4 percent in 1986. This increase in vacancy rates suggests an important degree of "overbuilding" in the early 1980s, and represents an alternative to the tax-based explanation of the collapse of rental housing construction in the late 1980s. It suggests instead that

Figure 3

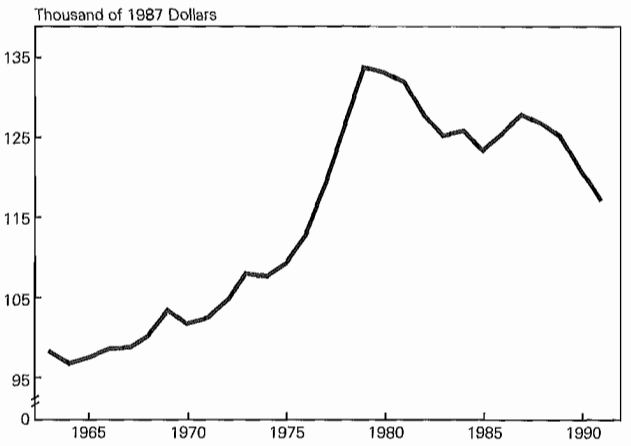
Residential Investment as a Share of GNP, 1960 to 1991



Source: National Income and Product Accounts.

Figure 4

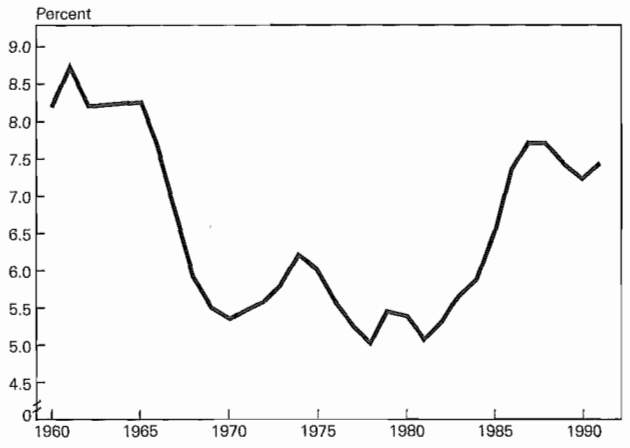
Real Price of Constant-Quality Single-Family Houses, 1963 to 1991



Source: U.S. Bureau of the Census.

Figure 5

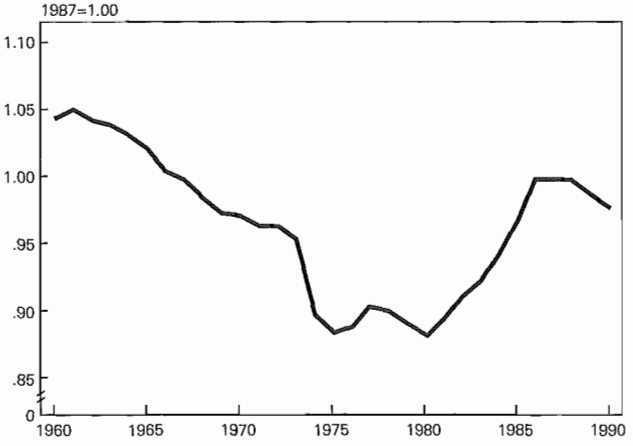
Vacancy Rate for Rental Housing Units, 1960 to 1991



Source: U.S. Bureau of the Census.

Figure 6

Index of Real Rents, 1960 to 1991



Source: U.S. Bureau of Labor Statistics.

the large expansion of the rental housing stock in the early 1980s, possibly the result of tax incentives built into ERTA, could have depressed new construction in the second half of the decade.

A second indicator of conditions in the rental housing market, and one that calls the overbuilding hypothesis into question, is the level of real rents. Figure 6 plots the real value of the implicit price deflator for consumption of rental housing services, a price index drawn from the National Income and Product Accounts, for the last three decades. This index attempts to control for quality change in the rental housing stock. The time series shows an *increase* in real rents during the first half of the 1980s, the period when the rental market was allegedly overbuilt, and a slight decline in real rents during the period since 1987.[1] This pattern is inconsistent with the first-order prediction of most analyses of the two major tax reforms in the 1980s, which suggested that the 1981 reform would expand the supply of rental housing and reduce rents while the 1986 reform would constrict the supply and lead to rising real rents.

The Central Provisions of the Recent Tax Reforms

This section focuses on five of the most important elements of the 1981 and 1986 tax reforms.[2]

Marginal Tax Rates

Both tax reforms lowered personal income tax rates. Holding constant the pretax interest rate at which households borrow and lend, this *raises* the after-tax cost of homeownership. In 1980, the weighted-average marginal federal tax rate on mortgage interest deductions for those who claimed these deductions was 32 percent. By 1984, when the rate reductions of 1981 had taken full effect, this average tax rate was 28 percent, and by 1988, the value had declined still further to 23 percent.[3]

Lower tax rates reduce the value of homeowners' deductions for mortgage interest payments and property taxes. Both tax reforms should therefore have lowered the quantity of housing demanded by some homeowners and, holding other factors constant, reduced home

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[1] Quality adjustment is a perennial issue of debate in constructing measures of real rents. If the national income accounts deflator is replaced by the time series on real rents from U.S. Bureau of the Census, *Current Housing Reports* Series H-130, which makes no correction for quality change, the pattern of rising real rents in the early 1980s remains. For this time series, the peak in real rents occurs in 1988, and real rents decline between 1988 and 1991.

[2] This section and the following section draw heavily on the analysis in Poterba (1990).

[3] These estimates were computed using the TAXSIM data base of the National Bureau of Economic Research.

prices. The downward price pressure should have been greatest for high-priced homes, whose owners received the largest marginal rate reductions. Some of these households also received higher after-tax income as a result of the tax reform; this could have blunted the adverse effects of higher user costs.

Standard Deductions

The 1986 reform also reduced the proportion of homeowners who itemized their deductions, because it raised the value of the standard deduction. This further reduced the effective tax subsidy to mortgage interest (Poterba 1992). For a joint filer, the standard deduction rose from $3670 to $5000. The average tax benefit to homeownership, and the tax incentive to own rather than rent, depend on the *total* difference between a household's itemized deductions and its standard deduction.[4] This difference falls when the standard deduction rises, further reducing the incentive for lower- and middle-income households to own their homes.

Depreciation Provisions

The 1981, 1984, and 1986 reforms affected tax depreciation benefits for rental property and thereby changed the incentives for households to own rather than rent their accommodations. Table 1 shows the recent history of depreciation policy for rental property. ERTA shortened the tax lifetime for residential rental property from 32 to 15 years (Hender-

Table 1
Depreciation Provisons for Residential Structures, 1969 to 1988

	Lifetime	Depreciation Schedule
1969–1981	32 Years	150% Declining Balance
1981–1984	15 Years	175% Declining Balance
1984–1985	18 Years	175% Declining Balance
1985–1986	19 Years	175% Declining Balance
1986–	27.5 Years	Straight Line

Source: Author's compilation based on U.S. Internal Revenue Code.

[4] The *marginal* incentive to consume additional housing services depends on the marginal tax rate at which the household can deduct further housing-related costs. This is the focus of the traditional user cost analysis of housing demand, as in Poterba (1984) or Rosen (1984).

shott 1987). The 1986 Tax Reform Act reversed this policy, extending the lifetime to 27.5 years and requiring straight-line depreciation rather than the more accelerated 175 percent declining balance. The reduction in marginal tax rates in 1981 partly counteracted the expanded depreciation benefits in ERTA, but in 1986 less generous depreciation rules combined with lower marginal tax rates to significantly reduce the value of depreciation benefits. Since the present value of depreciation tax benefits is a key consideration in rental investment decisions, these changes should affect rental markets: real rents should increase because of the 1986 Tax Reform Act.

Tax depreciation rules cannot be evaluated without some reference to prevailing economic conditions. When inflation rates are high and nominal interest rates are above 10 percent, even relatively short depreciation lives may yield net tax benefits that are smaller than those of longer lifetimes in a lower-inflation environment. Hendershott (1987) and Follain, Hendershott, and Ling (1992) emphasize that much of the impetus for the tax changes in 1981 was the erosion in the value of depreciation allowances that had resulted from the rapid inflation of the late 1970s.

Capital Gains Tax Rates

Both major tax reforms affected capital gains tax rates, although in opposite directions. ERTA reduced the marginal tax rate on long-term capital gains for top-bracket investors from 28 percent to 20 percent, while the Tax Reform Act of 1986 eliminated the distinction between capital gains and other types of income and *raised* the top tax rate to 28 percent. The capital gains tax may have little effect on most homeowners since the current $125,000 lifetime exclusion on taxation of housing gains makes these gains untaxed except for households in top income brackets, but the capital gains tax rate is potentially important in the rental market. No tax exemption exists for capital gains on rental property, and a substantial fraction of the returns to property investment often accrues as capital gains.

The capital gains tax also has important effects on the incentive to "churn" real property such as investments in rental units. When capital gains taxes are low, the tax burden on the initial owner of the asset is reduced and the incentives for churning are greater (Hendershott and Ling 1984; Gordon, Hines, and Summers 1987). The capital gains tax reduction in ERTA therefore enhanced the depreciation benefits provided by that tax reform, encouraging rapid growth in rental construction. The higher capital gains tax rates in 1986 similarly augmented the changes in depreciation rules to reduce the incentives for investing in rental properties.

Anti-Shelter Provisions

The Tax Reform Act of 1986 included several provisions designed to restrict tax shelter investments, including rental properties. The most important restrictions were passive loss limitations. Prior to 1986, investors in rental properties that generated tax losses could use these losses to shelter other income from taxation. The 1986 Act restricted this practice, allowing only other passive income to be offset by passive losses.[5] This provision limited the loss offset available on unprofitable rental projects, and it also discouraged high-leverage rental projects that were canonical "tax shelter" investments. These investments typically generated losses in their first few years of operations, as rental income failed to cover the high interest payouts and tax depreciation associated with the project. The income from these shelter investments would accrue as capital gains in later years. Prior to the passive loss limitations, investors could shelter current ordinary income with accruing tax losses, deferring realization of income until the sale of the property and obtaining preferential capital gains tax treatment. The Tax Reform Act of 1986 reduced the appeal of these investments along several dimensions by changing capital gains tax rates, loss-offset provisions, and the flow of depreciation allowances.

The anti-shelter provisions in the 1986 Act worked. Real estate partnership sales declined 37 percent between 1985 and 1988, and *more than 90 percent* between 1985 and 1991. Real-estate-related partnerships accounted for over 55 percent of new partnership sales before the 1986 Tax Reform Act, but only 44 percent in 1988 and 37 percent in 1991.[6]

Other Provisions

Many other tax provisions in both ERTA and the 1986 Act affected housing markets. The removal of amortization of interest on "builder bonds" and limits on tax-exempt financing for housing projects in the 1986 Tax Reform Act raised the costs of building new rental properties. Changes in the minimum tax affected the marginal cost of additional housing services for high-income households, and could also have altered their incentives for investing in rental properties.

Other tax provisions affected particular types of housing, for example, rental properties for low-income households. The 1986 change in depreciation benefits for such housing was even more dramatic than

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[5] Special provisions apply to passive losses of landlords with adjusted gross incomes below $100,000. These landlords may deduct $25,000 in passive losses against other income.

[6] Information on sales of real estate and other partnerships was provided by Robert A. Stanger and Company.

that for other rental housing, with a switch from double-declining balance depreciation on a 15-year lifetime to straight-line depreciation on a 27.5-year life. Most of the discussion at the time of the tax reforms, however, focused on general purpose rental housing.[7]

Estimating the Effects of Tax Changes on Housing Markets

The net effect of the tax code on incentives for owning a home rather than renting and for housing consumption can be formalized by computing the after-tax user costs of owner-occupied and rental housing under various tax regimes. The user cost of homeownership measures the marginal cost of an incremental unit (say another 100 square feet of living space) of owner-occupied housing, including the forgone return on the owner's equity. The user cost for rental property reflects the landlord's cost of investing in the property; in equilibrium, the landlord must earn rents equal to his user cost. A brief Appendix describes the specification of the user costs and the choice of various parameters for evaluating these costs.

Table 2 shows estimates of the user cost of homeownership for three households at various times during the past decade. The first panel considers the user cost for fixed rates of interest and expected inflation, thereby highlighting the effect of tax changes. The second panel evaluates the tax code of each year using interest and expected inflation rates that prevailed at that time, thus indicating the net change in incentives for homeownership.

The results illustrate that recent reforms had their most pronounced effect on the cost of homeownership for high-income households. For a family with adjusted gross income (AGI) of $250,000 in 1988, the Tax Reform Act of 1986 lowered the marginal tax rate from 50 percent to 28 percent and raised the user cost of homeownership from 0.094 to 0.114, assuming an interest rate of 7 percent and a 3 percent expected inflation rate. The 1986 tax reform would have needed to reduce the real interest rate by nearly 300 basis points to offset this effect. The actual change in the user cost of homeownership since 1986, recognizing variations in interest rates and inflationary expectations, was an increase from 0.074 to 0.095 for this household. Assuming a price elasticity of demand of

[7] One of the potential lessons of the 1980s tax reform experience is that specialized tax provisions that affect relatively few *taxpayers* can actually have important effects on aggregate investment activity. The tax returns of high-income households are complex and are often affected by changes in relatively obscure tax rules. High-income taxpayers may, however, account for an important share of the investment flow to some activities.

Table 2
Estimated User Costs of Owner-Occupied and Rental Property, 1980 to 1988

	1980	1982	1984	1986	1988
Case 1: Fixed Parameters: Interest Rate = 7 percent, Expected Inflation Rate = 3 percent					
User Cost of Homeownership					
1988 AGI = $ 25,000	.120	.122	.125	.125	.126
1988 AGI = $ 45,000	.110	.113	.117	.117	.114
1988 AGI = $250,000	.081	.094	.094	.094	.114
Rental User Cost	.126[a]	.116	.117	.118	.132
Case 2: Prevailing Interest and Inflation Rates					
User Cost of Homeownership					
1988 AGI = $ 25,000	.080	.094	.098	.115	.109
1988 AGI = $ 45,000	.064	.077	.089	.104	.095
1988 AGI = $250,000	.017	.042	.049	.074	.095
Rental User Cost	.096	.096	.104	.137	.149
Parameter Values					
Nominal Interest Rate	.127	.151	.124	.103	.091
Expected Inflation Rate	.085	.093	.072	.037	.034

Notes: AGI = adjusted gross income. Calculations for both cases assume $\tau_p = .02$, $\delta = .014$, $\alpha = .04$, and $m = .025$. Rental user costs assume no churning, with marginal tax rates for the rental landlord of 50 percent in 1980–1986 and 28 percent in 1988.

[a]This entry for 1980 is notable because it does *not* assume the highest possible marginal tax rate for the rental landlord; it assumes a 50 percent rather than a 70 percent marginal rate. At the 70 percent rate, this value would be 0.117. See the Appendix, or Poterba (1990), for a more detailed discussion.

−1.0 for owner-occupied housing (Rosen 1984), this tax change could have large effects on both demand and house prices. Simulation evidence, such as that in Poterba (1984), suggests that such changes could induce a 10 percent decline in real house prices for the homes typically demanded by very high-income households. The change after 1986 for these households is small, however, relative to the change from the beginning of the 1980s, when the estimated user cost was 0.017.[8]

The effect of rate reductions on homeownership incentives for those in lower income brackets is much smaller, since the decline in tax rates in the 1986 reform was less pronounced. For the household with an adjusted gross income of $25,000 in 1988, the tax reform lowered the marginal tax rate from 16 percent to 15 percent and raised the user cost (in the benchmark case) from 0.125 to 0.126. Some middle-income households, such as the $45,000 example presented here, even experienced increases in their marginal tax rates, and for them housing costs

[8] The estimates for the early 1980s probably understate the user costs that households considered in their housing decisions, because households did not expect the low user cost of 1980 to prevail forever. This would make them reluctant to pay as much for a home as this user cost would suggest, since higher future user costs would lead to capital losses.

declined. Hausman and Poterba (1987) found that only 59 percent of taxpayers would receive tax rate reductions as a result of the Tax Reform Act of 1986.

The results in the lower panel of Table 2 show that the combination of high expected inflation rates and high marginal tax rates at the beginning of the 1980s made user costs relatively low, particularly for high-income households. For the household with an adjusted gross income of $45,000 in 1988, the user cost of homeownership increased nearly 50 percent—from 0.064 to 0.095—during the eight years following 1980. This reflects rising real interest rates as well as the decline in tax incentives.

Table 2 also shows the user costs of rental housing. Assuming that the marginal supplier of rental units was an individual in the top marginal tax bracket, the rental user cost rose from 0.137 to 0.149, or 9 percent, between 1986 and 1988. The increase would have been larger if the real interest rate had not declined during this period, and in the case of constant interest and inflation rates, the rental user cost rises by 12 percent. These calculations almost certainly understate the effect of the Tax Reform Act of 1986 in raising rental user costs, because they do not incorporate the changes in passive loss rules, the at-risk regulations, or the possibility (before 1986) of depreciating the same property multiple times.

The table also provides evidence on the effect of ERTA on rental user costs. If the nominal interest rate and expected inflation rate had been at their 1980 levels in 1982, rental user costs would have declined from 0.096 (assuming a landlord tax rate of 50 percent in 1980) to 0.089, a decline of 7.3 percent. The increase in real interest rates between 1980 and 1982, however, counteracted this effect so the reported user costs in the lower panel of Table 2 show virtually no change.[9] These calculations probably understate the favorable effect of the 1981 law, however, because they do not incorporate the churning of these assets.

The calculations in Table 2 are partial-equilibrium in nature, so they ignore the changes in the tax treatment of other assets in both the 1981 and 1986 tax reforms. These changes can affect the housing market by changing the required return on all investments, that is, by altering the interest rate that enters the housing user cost. General equilibrium simulations of the type performed by Hendershott (1987) and others are needed to aggregate the different tax changes for different assets into predictions for the housing market, but they generally yield results similar to those reported here.

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[9] If the marginal investor in rental property in 1980 was in the 70 percent tax bracket, then the net change from 1980 to 1982 is an *increase* in rental user costs since the reduction in the landlord's tax rate outweighs the increasingly generous depreciation provisions.

What Did Experts Think the Tax Reforms Would Do?

This section provides some evidence on the prevailing perceptions and beliefs when the two major tax reforms of the 1980s were enacted. Because real estate provisions were debated as a central component of the 1986 reform, the discussion begins with the Tax Reform Act of 1986, and then turns briefly to beliefs in 1981, when the Economic Recovery Tax Act was enacted.

The Tax Reform Act of 1986

The majority of policy analysts who reviewed the proposals leading up to the 1986 Tax Reform Act, as well as the Act itself, viewed the reform as anti-housing. There was little doubt that the reform would reduce incentives for rental housing construction,[10] but less agreement on the implications for the owner-occupied housing market.

The reduction in rental housing incentives in the 1986 tax reform was largely by design. One of the central objectives of the advocates of tax reform was to eliminate abuses of the tax system, particularly tax shelters. The Treasury report that started the tax reform process, the President's 1985 proposals, and much of the rhetoric that supported the Act berated shelters. Investments in sheltering assets enabled high-income taxpayers to avoid paying their "fair share" of taxes, and this was considered a central problem of the existing tax code.

In part as a result of the 1981 tax reform, the volume of tax shelter activity increased sharply in the early 1980s. New public offerings of partnerships grew from $38 billion in 1979 to $64 billion in 1982, with oil and gas and real estate partnerships the two most important types from the standpoint of tax policy (Steuerle 1992).

The objective of limiting tax shelter investments was implemented in many different ways. The Joint Committee on Taxation document (1987) describing the provisions of the Tax Reform Act, which includes sections on "Reasons for Change" associated with each provision, cites the need to reduce real estate tax shelters as part of the rationale for limitations on passive loss offsets, changes in at-risk rules, and modifications of the depreciation schedule for rental property.

The notion that reducing tax shelter activity would reduce housing investment was also understood, although not emphasized, in the policy debate. The Joint Committee on Taxation (1987, p. 98) wrote in its justification for changing the Accelerated Cost Recovery System (ACRS):

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[10] One notable exception to the near consensus on the detrimental effects of tax reform on rental housing was Gravelle's (1985) analysis, which argued that corporations, not individuals, were the "marginal investors" in rental housing projects. Events since 1986 have cast doubt on this view of the rental housing market.

> . . . too much investment occurred in tax-favored sectors, and too little investment occurred in sectors that were more productive but which were tax-disadvantaged. The nation's output can be increased simply by a reallocation of investment. . . .

This general discussion of the long-run benefits of equalizing tax burdens across industries and assets was typical of the analysis surrounding the 1986 Tax Reform Act. With respect to rental housing, the most commonly debated "summary statistic" for the reform was its effect on real rents. Follain, Hendershott, and Ling (1987), for example, concluded that real rents were likely to increase by between 6 and 10 percent. Their findings are representative of the results from discounted rental project models, which were widely used in analyzing the Tax Reform Act of 1986.

Few analysts drew the link, however, between reduced incentives for housing investment, rising real rents in the long run, and the *short-run* decline in construction and asset values. A notable exception is the National Association of Home Builders (1986) assessment of the consequences of the Tax Reform Act, which claimed (pp. 4 & 5):

> The decline in multifamily starts may be as large as one-third from the already reduced levels of 1986, or about 200,000 units. The decline in resale values may also be significant. . . . Even if rents for a building are expected to rise soon, current resale value could fall by 10 to 20%.

Relatively few studies called attention to this consequence of the Tax Reform Act of 1986, but the basic result was implicit in virtually all of them. Raising rents requires a reduction in the rental housing stock, which in turn requires a reduction in construction relative to what it otherwise would have been.

Analyses of the effects of the Act on owner-occupied housing were less consistent than studies of the rental housing provisions. This reflected both the conflicting incentive effects in the reform legislation and the importance of general equilibrium effects in determining how the tax bill would affect homeowners. *If* the tax reform significantly reduced real interest rates, as some studies suggested it would, then the increase in after-tax homeowner costs from marginal rate reductions could be offset by lower borrowing costs.[11] If the reform did not change interest rates, however, it would reduce the demand for owner-occu-

[11] One of the central features of the Tax Reform Act of 1986 was an increase in effective tax burdens on new investment, financed in part by a reduction in taxes on existing assets. When the tax rate on corporate capital rises, some of this tax can be "shifted back" to investors in the form of lower real returns. This effect is a subject of empirical controversy because its magnitude depends on the degree of integration of world capital markets, the substitutability of corporate and other capital, and many other parameter values.

pied housing at high incomes and have varied effects at lower incomes depending on a household's particular circumstances.

The Economic Recovery Tax Act of 1981

Housing was not a central focus of the reform debate leading up to the Economic Recovery Tax Act of 1981. There was general concern that the high inflation rates of the late 1970s had eroded the real value of depreciation allowances on physical investments, but most of the attention focused on business investment, not real estate.[12] The generous real estate provisions of the 1981 law actually generated backlash in subsequent years, even before the watershed changes of 1986. The depreciation lives for rental real estate were extended in the Tax Equity and Financial Responsibility Act (1982) and in the 1984 tax bill, suggesting that the generous treatment of real estate in 1981 may have been partly an accident.

The effects of the 1981 reforms on owner-occupied housing also received relatively little discussion in the policy debate. Lowering marginal tax rates substantially increased the real cost of homeownership for many households. As in the analysis of the 1986 Act, however, the precise magnitude of these effects was sensitive to assumptions about how the overall reform would affect interest rates.[13]

Lessons for Policymaking

The discussion in the previous section suggests that the adverse effect of the 1986 Tax Reform Act on rental housing construction should come as no surprise to those who followed the commentary leading up to the tax change. In fact, shifting investment from real estate to corporate capital was one of the *objectives* of the reform. The magnitude of the multifamily housing collapse may, however, have surprised some analysts. This section identifies several systematic features of the policy process that did not emphasize, or understated, the potential adverse effects of the 1986 reform on the level of construction activity.[14]

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[12] See Steuerle (1992) for a summary of the policy debate.

[13] One issue of controversy, at least after the 1981 tax law was enacted, was how this bill affected the incentives for owning rather than renting housing. The 1981 act reduced the marginal tax rate applicable to top-bracket rental landlords, which would raise the required rent on new rental projects, other things equal. It also provided more accelerated depreciation and, if investors "churned" their properties, this effect could overwhelm the tax rate changes. Gordon, Hines, and Summers (1987) discuss these issues in detail.

[14] This section does not address the analytic inputs to the 1981 tax reform in any detail, since I have argued above that the generous provisions toward real estate seemed more accidental than intended.

Short-Run Construction Levels Not a Focus of Policy Studies

The central objectives of the 1986 reform movement were reducing tax rates on individuals and equalizing effective tax rates across different industries and asset classes. The disparities between the effective tax rates on general industrial machinery and on buildings, for example, were widely cited as an inefficiency of the post-ERTA tax system that could induce misallocation of capital. Most of the academic and policy research leading up to the Tax Reform Act of 1986 therefore focused on measuring effective tax rates. Armed with a set of effective tax rates, a few simple assumptions, and a production function, it is a straightforward exercise to compute the long-run change in the composition of the capital stock following a tax policy change. The estimated changes in capital stock can be used to compute the efficiency gains relative to a more distorted economy. Many studies did just that, and pointed out that the long-run stock of rental housing would decline as a consequence of the tax reform.

The focus on effective tax rates and efficiency gains drew attention away from analysis of the short-run investment response to tax reform. Policy analysts may not have dwelt on the short-run dynamics in part because most of the models used to analyze the tax reform and its efficiency effects lack a well-calibrated model of new construction. Steady states can be described more easily than transition paths, and as a result, the vocabulary of the policy debate largely omitted short-run adjustment issues.

A number of examples illustrate the lack of information on short-run adjustments. Follain, Hendershott, and Ling (1987) argued that their predicted rise in real rents could occur over horizons of between three and 10 years, depending on the conditions in the local housing market. Goulder and Summers (1987) developed a computational general equilibrium model in which the behavioral equation for the supply of multifamily housing was based on the single-family investment supply equation in Poterba (1984). Their model reflects the lack of systematic empirical evidence on the links between public policies, rental market conditions, and the level of new construction. Even the short-run dynamics of the single-family housing market are controversial, as Topel and Rosen (1988) emphasize in their study of how capital can flow into and out of the construction sector.

Most studies of how the 1986 tax changes would affect the housing market implied a substantial rise in rents (say 10 percent) and an associated decline in rental construction. Assuming a price elasticity of demand for rental housing of -1.0, a 10 percent rent increase would require a 10 percent decline in the real stock of rental housing. If effective demand grows at about 2 percent per year because of population and real income growth, and depreciation on the existing housing

stock is 1 percent each year, the required adjustment could be achieved with just over three years of *no* new building. With some new building taking place, the depression in new construction could last significantly longer. The models were typically calibrated for the nation, and they were consistent with much sharper declines in new construction in some regions, where the rate of demand growth was below the national average.

Anti-Tax-Shelter Fever

A second factor that made it difficult to predict the effect of the Tax Reform Act, in this case for both the long and the short run, was the presence of overlapping and often complex provisions that reduced the incentives for rental housing construction. These resulted from a desire to make sure the reform succeeded in reducing the amount of tax shelter investment.

The rental project analyses that evaluated the legislative proposals leading up to the 1986 tax changes, like those of user costs described above, incorporated changes in depreciation lifetimes, tax rates on rental landlords, and in some cases changes in capital gains taxes.[15] They often ignored the effects of limits on passive losses, at-risk regulations, and most of the tax changes affecting builders. These omissions were largely due to the difficulty of incorporating these reforms in the standard framework for analyzing tax policies. In this case, a sequence of different reforms operated in the same direction to reduce the attraction of investing in rental projects.

Some studies of effective tax rates may not have captured the full effect of these changes because the models did not reflect the peculiarities of residential real estate investments. Gordon, Hines, and Summers (1987) and Scholes and Wolfson (1991) argue, for example, that "churning," the process of depreciating a property several times by reselling it, was potentially very important in increasing the present discounted value of depreciation deductions on rental properties under ERTA. Yet many analyses did not consider churning, focusing instead on the case in which properties are depreciated a single time.

Other issues of specification in effective tax rate calculations masked the effects on real estate. For example, real estate assets can usually bear more debt than other assets. In some computational general-equilibrium models, the mix of debt and equity does not vary across industries or

[15] Capital gains taxes are difficult to incorporate in the standard rental project analysis, because realization decisions are endogenous. Rental project investors may pursue various tax-minimizing strategies that reduce their effective capital gains tax burden below the statutory tax rate.

asset types. Such models could substantially misstate the increase in tax burdens from the Tax Reform Act for high-debt activities, since the value of interest deductions fell along with changes in investor marginal tax rates.

Hitting a Market When It Is Down

The depth of the contraction in rental housing construction in the late 1980s is difficult to blame entirely on the 1986 Tax Reform Act.[16] Signs were clear *even before the legislation was enacted* that the rental real estate market for both apartments and office buildings was weakening. Yet little discussion took place about the short-run distributional or adjustment effects associated with the reduction in tax benefits for real estate.[17]

The signs of trouble in real estate were easy to see. In February 1986, for example, *The Stanger Report,* a newsletter on limited partnership activities, reported (p.1):

> Problems in real estate syndications are on the rise. This year, you'll see some big name syndicators . . . begin to bleed from overbuilding in office markets, depressed economies in energy-industry cities, and the challenge of spending wisely the huge increase in partnership funding since 1980.

The vacancy rate for rental units in large rental buildings, those with five or more units, increased from 7.1 percent to 10.4 percent between the second quarter of 1984 and the second quarter of 1986. Vacancy rates above 10 percent were virtually unprecedented in this market, and a savvy analyst would have predicted in early 1986 that new construction would decline even *without* changes in tax provisions.[18]

The vocabulary of the tax reform debate did not encourage analysts to consider the current state of the real estate market. Instead, much of the discussion centered on comparisons of steady states, where calibration was often based on aggregate national data averaged over periods of several decades. While they included numerous descriptions of the winners and losers from tax reform, these discussions were rarely

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[16] Hendershott and Kane (1992) provide a careful analysis of the factors leading to the collapse in both rents and new construction in the office market. They identify tax changes, high real interest rates, and the recent recession as contributory factors in the office market decline. Similar arguments can be applied to the rental housing market.

[17] This is not to suggest that the efficiency objectives of the reform were not laudable, or that they did not outweigh the potential short-run costs of reductions in rental construction.

[18] These vacancy rates were occasionally noted in the tax reform discussion, usually as evidence that the post-ERTA tax rules had led to overbuilding and inefficient capital allocation.

integrated with the changes already taking place in various markets and industries.

Subtle Influences of Tax Reform on Financial Institutions

Ex post analysis of any legislation as complex as the Tax Reform Act of 1986 is bound to reveal effects that were overlooked or not considered in sufficient detail. The most prominent example in this case is the impact of tax reform on the balance sheets of financial institutions, and the resulting consequences for the supply of funds to new investment. While the Tax Reform Act of 1986 was only one of the factors contributing to the fall in property values for rental residential and commercial real estate, the late 1980s demonstrated that changes in *existing* asset values could have important effects on investment in new assets. This position runs counter to the usual public finance analysis, which views taxes that reduce the value of existing assets as a non-distorting way to raise revenue.[19]

The complexity in this case arose from the leverage of existing assets and the role of these assets in supporting loans to new projects. Tax and other factors that reduced asset values weakened the balance sheets of lending institutions. In extreme cases, thrifts and other institutions became insolvent and were reorganized as part of the federal bailout. Even in less extreme situations, however, falling property values reduced the ability of lenders to commit funds for new projects.

Calibrating the links between existing tax policies, asset values, the health of financial institutions, and the cost of funds for new investment is a major research project. The limited discussion of these links in the 1986 tax reform discussion, the potential importance of these channels for public policy influence in the subsequent years, and the increased research attention to these issues at present, provide an important example of how the art and science of public policy analysis move forward.

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[19] Kotlikoff and Summers (1987) survey tax incidence and highlight the role of taxes in affecting "old" versus "new" capital.

Appendix: The User Costs of Owner-Occupied and Rental Housing

The user cost of homeownership is defined as

$$c_o = [(1 - \Theta)(i + \tau_p) + \delta + \alpha + m - \pi_e]P_o \tag{A.1}$$

where i is the the nominal interest rate, τ_p is the property tax rate per dollar of property value, Θ is the household's marginal federal income tax rate, δ is the physical decay rate for the property, α is the risk premium for housing investments, m is the cost of home maintenance as a fraction of house value, π_e is the expected rate of house price appreciation, and P_o is the real price of owner-occupied housing.[20] Equation (A.1) applies to taxpayers who itemize. For non-itemizers, $(1 - \tau)i$ is replaced by $[(1 - \lambda)(1 - \tau) + \lambda]i$, where λ is the loan-to-value ratio for the house.

The user cost for rental property is

$$c_r = \{[(1 - \tau)i + \delta + \alpha - \pi_e](1 - \tau * z)/(1 - \tau) + \tau_p + m\}P_r \tag{A.2}$$

where the parameters not defined above are τ, the marginal income tax rate of the rental landlord, P_r, the real price of rental property, and z, the present value of tax depreciation allowances.[21] In equilibrium the rent charged must equal c_r so that the landlord is willing to hold the rental property. Poterba (1990) discusses the choice of parameters for calculating the owner and rental user costs in more detail.

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[20] This equation assumes that all capital gains on owner-occupied dwellings are untaxed. If gains are taxed, π_e would be replaced with $(1 - \tau_g)\pi_e$ where τ_g is the effective capital gains tax rate. The equation also assumes that households face identical borrowing and lending rates.

[21] If the government does not completely share the risks with private investors, as it may not if loss offsets are limited, the term in (A.2) would no longer be multiplied by $(1 - \tau * z)/(1 - \tau)$.

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Discussion

*Martin Feldstein**

James Poterba's paper is about the unexpected consequences of government actions, particularly about the effects of the tax changes of the 1980s on the housing market. Poterba has been a long-time student of the effects of taxation on real estate. He understands the complex ways in which tax rules and inflation interact to influence the prices of, and the demand for, both owner-occupied housing and multifamily rental housing. He has built on this expertise to raise important questions about the short-term macroeconomic effects of the tax changes of the 1980s.

Interaction of Inflation and Tax Rules

Since this is a Federal Reserve conference, it is particularly important to emphasize the fact that it was the decline in the rate of inflation that really caused the changes in effective tax rates on residential capital in the 1980s. The success of the Federal Reserve in reducing the rate of inflation had a much bigger effect on the real user cost of capital, for both homeowners and owners of rental property, than did the legislated changes in the tax law itself. It is because tax rules ignore inflation, and base tax obligations on nominal receipts and nominal costs, that the decline of inflation caused substantial changes in the real user cost of capital.

So taxes matter in an important way, but it was the changes in the

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inflation rate in an economy with nominal tax rules that caused the important changes in the real user cost of residential capital. Lower inflation helped to reduce the bias toward excess investment in owner-occupied housing relative to nonresidential capital, but also tilted the incentives strongly away from renting and in favor of owning.

To see this more concretely, consider first the effect on the user cost of capital for middle-income homeowners (those with $45,000 adjusted gross income in 1988 dollars). Their user cost of homeownership capital rose from 6.4 percent in 1980 to 9.5 percent in 1988, an increase of 3.1 percentage points. (See Poterba's Table 2.) But if the inflation rate and interest rate had remained unchanged, the rise in the user cost of homeownership capital would have been negligible, only 0.4 percentage points.

Only for very high-income taxpayers did the changes in tax rules have any significant effect, and even for them the effect is much smaller than the effect due to the fall in inflation and nominal interest rates. The user cost of capital for high-income homeowners (those with $250,000 adjusted gross income in 1988 dollars) rose from 1.7 percent in 1980 to 9.5 percent in 1988, but less than half of this 7.8 percentage point increase was due to the tax rule changes alone. Poterba's calculations show that with fixed interest rates and inflation, the rise in the user cost of capital for those same homeowners was only 3.3 percentage points, from 8.1 percent to 11.4 percent. Thus, while the actual user cost rose nearly 500 percent, the rise due to the tax change alone was only 40 percent.

The user cost of capital for rental housing also rose in the 1980s, increasing from 9.6 percent in 1980 to 14.9 percent. For a family with a $45,000 income (adjusted gross income in 1988 dollars) that faced the choice between renting and owning, the user cost of capital for homeownership fell from about 17 percent below the user cost of capital reflected in rental housing in 1980 to nearly 40 percent below the user cost of rental capital in 1988. The distortion in the rental-ownership decision for such taxpayers in 1980 was significant, and by 1988 the bias in favor of home ownership was much greater.

These figures make it clear that the most important changes in the user cost of capital for residential real estate in the 1980s were due not to the tax legislation but to the Federal Reserve's successful policy of reducing inflation. To the extent that unexpected changes occurred in the real estate market in the 1980s, they should be attributed to the change in inflation rather than to the changes in tax rates and depreciation rules.[1]

This experience should also be a useful reminder to those macro-

[1] An exception to this was the changes in rules affecting tax shelter investments in real estate. These are not reflected in Poterba's Table 2 calculations. I will return to this below.

economists who persist in talking about the neutrality of inflation or the neutrality of changes in money growth. In every major economy in the world, tax rules interact with inflation in ways that cause changes in inflation to have powerful effects on incentives to invest and to save.[2]

Short-Run Effects on Aggregate Demand

Since the changes in tax rates and depreciation rules had very little effect on the user cost of capital for either homeowner or rental property, it should not be surprising that analysts paid relatively little attention to the short-run macroeconomic effects of the reforms. Of course, even a small change in the incentive to invest would have some effect, and these effects were in fact noted at the time.

Within a few months after the October 1986 passage of the Tax Reform Act, the Council of Economic Advisers was noting (in its 1987 *Report*, p. 93) that the "TRA will slow the growth of investment to a modest extent as the capital stock adjusts to its new long-run equilibrium growth path. Hence, unless consumption or net exports takes up the slack, aggregate demand growth will be dampened somewhat." In fact, weakness of aggregate demand was not a problem in either 1986 or the next few years. Real GDP rose at above-trend rates throughout the period, and the unemployment rate fell from 7.1 percent in 1985 to 6.9 percent in 1986, 6.1 percent in 1987, and 5.4 percent in 1988.

Despite the sharp fall in multifamily housing starts, total real residential investment remained essentially unchanged. The National Income and Product Accounts report that residential investment in 1987 dollars actually rose from $202 billion in 1985 to $226 billion in 1986 and then stabilized at that level ($225 billion in 1987 and $223 billion in 1988). Employment in construction continued to expand throughout the period, rising from 4.7 million workers on construction payrolls in 1985 to 4.8 million in 1986, 5.0 million in 1987, and 5.1 million in 1988. The average wage of construction workers remained 18 percent higher than average manufacturing wages from 1986 until at least the end of the decade.

Tax Shelter Investments in Real Estate

Although the changes in tax rates and depreciation rules had very little effect on the incentive to invest in real estate, the special changes in the Tax Reform Act of 1986 targeted at tax shelter investments in real estate did have a dramatic effect on the attractiveness of such invest-

[2] These issues are explored in a number of papers collected in Feldstein (1983).

ments. The new "passive loss" rules that stopped individuals from reducing total taxable income by offsetting the losses on such real estate investments against other income essentially stopped all such high-leverage tax shelter investments in real estate.[3]

The Treasury economists and outside academic economists who participated in the tax reform analysis were less concerned with these tax shelter changes than with the effects of the basic changes in tax rates and depreciation rules. But the potential macroeconomic effect of the change in tax shelter rules was not ignored. The *1987 Economic Report of the President* notes (p. 95): "Construction in particular will be adversely affected because the new tax rules will limit the ability of individuals to deduct net losses on investments in commercial structures and rental housing in exchange for later capital gains. These provisions of TRA have probably contributed to the recent slowdown in the construction industry. . . . Multifamily housing starts in 1986 were down 12 percent from the pace of 1985."

Effects on Financial Institutions

Although aggregate demand and even construction activity continued at a healthy pace in the years after the enactment of the Tax Reform Act of 1986, the changes in the tax shelter rules probably contributed significantly to the troubles of the financial institutions in the second half of the 1980s. The high inflation rates and favorable depreciation rules had led to an overbuilding of all types of rental property in the first half of the 1980s. This was encouraged also by thrift institutions that were looking for opportunities to substantially expand their lending. They hoped to "grow their way out" of their financial problems with the help of brokered deposits, after Congress in 1980 raised the insurance coverage to $100,000 per account, the deposit size at which interest rates were no longer subject to Regulation Q restrictions.[4]

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[3] Note that the tax losses in tax shelter investments were the excess of interest payments and depreciation over rental income. Although the interest payments were actual cash outlays, the depreciation costs were not. A real estate investment could therefore have a positive cash flow even though it showed an accounting loss.

The difference between the actual value of the property and its depreciated book value would in principle be recognized as a taxable capital gain when the property was eventually sold, but there was no reason to expect the property to be sold at any time in the twentieth century. If the investor died before the property was sold, the capital gains obligation accrued through that date would be forgiven. The 1986 rise in the capital gains tax rate therefore had no material effect on the attractiveness of new tax shelter investments. The use of real estate investments as tax shelters was killed by the change in passive loss rules and by the reduction of the top marginal tax rate from 50 percent to 28 percent.

[4] On the disastrous effects of the congressional decision to raise the insurance coverage to $100,000, see Sprague (1991).

The excess building would probably have caused a glut by the late 1980s, leading to falling asset values and declining rents. To the extent that the tax changes and the decline in inflation reduced the incentive to invest, the excess supply was actually reduced somewhat, and rents fell more slowly than they otherwise would have.

But the retroactive character of the changes in the tax shelter rules reinforced the decline in real estate prices and weakened financial institutions. The Tax Reform Act of 1986 provided that passive losses on past investments would be phased out rapidly over five years. After 1986, an existing multifamily housing investment that was previously expected to generate tax losses for another 15 years would have deductible losses for only five more years, with the loss in each of those years scaled down by 20 percent. For most of the limited partners in the partnerships that owned the tax shelter real estate, the best thing to do was to sell the property at once. Dumping this property—primarily multifamily housing, hotels, office buildings—onto the property market caused a fall in their prices.

Such a retroactive change in tax rules could of course produce no gain in the efficiency of investment, since the property already existed. All of the gain in investment efficiency could have been achieved by eliminating the use of passive losses on new investments undertaken after the enactment of the tax reform legislation. The passive losses were eliminated retroactively to raise revenue, and particularly to raise revenue from the high-income taxpayers who would have the largest tax rate reductions (even though they benefited less from the tax change than high-income taxpayers who had not previously used tax shelters). The Treasury and the Congress were eager to characterize the tax reform as giving relatively greater tax cuts to those with moderate and low incomes and "closing loopholes for the rich." Although the debate about the Tax Reform Act of 1986 focused a great deal on the consequences of the legislation for individuals classified by income class, no attempt was made to take into account the capital losses that would result from this retroactive change in the tax treatment of existing real estate investments.[5]

[5] That was, of course, only one example of the improper distributional analysis that received so much attention. By ignoring the effect of the increase in the corporate tax rate, supporters of the Tax Act were able to show that a supposedly revenue-neutral reform would reduce taxes in every income bracket. Feldstein (1988) shows that imputing that tax increase to the owners of capital implied a substantial tax increase for upper-income taxpayers. Another of the great bits of chicanery in the distributional analysis of the 1986 Tax Reform Act was taking "feedback" effects of the higher capital gains tax rates into account in calculating total revenue consequences but ignoring them in calculating the distribution of tax changes by income class.

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Discussion

*Richard A. Musgrave**

Throughout the history of income taxation, tax law has favored real estate, and the playing field for investment has been tilted in its favor. This bias was increased by the 1981 tax legislation. Then, in 1986, the level of tax preference was reduced considerably, perhaps to the level that existed before 1981, but certainly not down to an even playing field.

Assessing the Tax Effect

Conventional economic analysis would tell us that the 1981 legislation should have encouraged construction activity and pushed up real estate prices, and that the 1986 legislation should have done the opposite. James Poterba concludes that this view is "arguably" accurate, and that the 1981 legislation contributed to the rise in construction of multifamily housing. That is a rather careful way of phrasing it, and I can understand his caution. Isolating the effect of the tax factor and assessing the weight of its contribution are difficult.

First, many different forces were at work during the 1980s, including declining real wages, rising real interest rates, and changes in the structure of financial markets and institutions. Many factors could be offered as explanations of the changes that occurred in real estate markets, without involving taxes. Second, to determine the true influence of the tax factor, one must attempt to specify the counter-factual. In other words, to determine the effects of the Economic Recovery Tax Act

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of 1981, one has to consider what might have been passed in its place. If nothing had been passed—if no tax reduction had been enacted in 1981—would the 1980s have been a boom period? Is it possible that a more balanced macroeconomic mix of tighter budgets and easier money would have done the job? Or do we owe the good times of the eighties, at least in part, to unintended Keynesian policy at the beginning of the decade?

The same should be asked of the Tax Reform Act of 1986. Without the 1986 legislation, how much bigger would the boom and bust have been, and where would we be now? It is important to build these counterfactual assumptions into any analysis of the effects of legislation.

From a structural point of view, the Tax Reform Act of 1986 brought considerable gains in efficiency. Poterba acknowledges these gains, but his paper is more concerned with the short-term effects of the legislation. I would point out, however, that gains were made not only in efficiency, but also in equity.

While recognizing these gains, Poterba questions whether, in sum, the 1986 legislation was wise. He speaks of "tax shelter fever," and not "beating" people when they are down. No one wants to do the latter, but I would suggest that it is an error to think that one can have tax reforms such as the 1986 legislation at will, nicely timed to avoid any upheaval. The opportunity comes rarely, perhaps once in a few decades, when major economic reform can be undertaken. And 1986 just happened to be that time.

Circumstances Leading up to the Legislation

The tax reform movement which fueled the 1986 reform really extends back to the work of Henry C. Simons in the 1940s. Over the decades from the 1940s to the 1980s, my generation of tax analysts pleaded for improvement of the income tax, to make it fairer by "leveling the playing field." The mid 1980s seemed to offer that possibility. At the end of the Carter Administration, the Treasury produced *Blueprints for Basic Tax Reform.* This was followed in the mid 1980s by two more Treasury reports advocating tax reform, the second more cautious than the first. Political support for reform grew in the Treasury, the Congress, and the White House.

Although the legislation that was passed fell short of the original vision, it accomplished a great deal—much more than most thought was conceivable or practical. The legislation brought to fruition decades of thinking about broadening the tax base. Everyone involved was so pleased that such reform could be pushed through the political establishment that the short-run effects on housing markets were not consid-

ered. The goal was to establish a level playing field and then for the next 500 years have a perfect income tax.

These events hold a lesson for tax policy. Basic tax reforms cannot always be enacted at the time when they are most convenient. Short-run effects will not always be favorable. This is true not only for tax reform. Another example is the North American Free Trade Agreement. The immediate dislocations created by free trade with Mexico will fall on those people whose wages are now down. Nevertheless, the agreement offers long-term benefits, and the appropriate response to such dislocations is to find measures to deal with the short-run inequities.

Fixing the Problems in Real Estate Markets

The current difficulties in real estate markets and financial institutions will not be remedied by a return to providing tax shelter opportunities; these would only lay the basis for a new boom and bust movement. Any remedies must maintain the more level playing field that now exists. Structural adjustments are occurring within the industry, and they are needed.

Of course, when one considers possible improvements, eliminating the deductibility of mortgage interest comes to mind. But this provision of the tax code remains almost untouchable, especially considering the current debate over family values. Nor should it be assumed that preferential treatment of housing could be avoided under an expenditure tax. The opposite may be the case.

Conclusion: Capital Formation versus Consumer Goods

To conclude, a word on the general relationship between the construction industry and capital formation. In the national income accounts, capital formation is defined as economic activity that produces something durable, something tangible. There are two difficulties with this. First, it takes in only physical assets and ignores the importance of human capital. Second, a genuine focus on economic growth requires that one distinguish between the various types of so-called capital goods. Housing is a durable good, but it is a durable consumer good. Savings directed into housing are diverted from plant and equipment. And of course it is plant and equipment that increase productivity, support innovation, and generate growth. Housing expenditures have no more effect upon the long-run growth of productivity than expenditures on short-run consumption.

If tax shelter opportunities were to be reestablished, they should be directed towards generating investment that will increase productivity. In that context, housing does not rate very highly. Affordable housing is different, not because it involves capital formation, but because it represents an in-kind transfer to low-income people. In sum, policy-makers should not attempt to resolve the productivity problem by reopening tax shelters.