

Research Department  
Federal Reserve  
Bank of  
San Francisco

May 8, 1981

## Kemp-Roth and Saving

In his triumphal appearance before Congress last week, President Reagan strongly reiterated his support for the Kemp-Roth Bill, which would reduce Federal personal-income tax rates by ten percent in each of the next three years. Thus, it's worthwhile reviewing what the Administration hopes to achieve through this controversial measure.

Under Kemp-Roth (according to this view), workers would work more hours at a more intense pace, because they would receive a higher after-tax return for working. More persons would enter the labor force, because jobs would have higher after-tax rewards. Unemployment would be lower, because businesses would find more profit in hiring and training unemployed workers. Government spending to help the disadvantaged would contract, because the more prosperous economy would reduce the need for such spending. Business would invest more in job-generating capital, because of lower effective business-tax rates. Entrepreneurs would work harder, innovate more, and take greater risks, because such activities would mean higher after-tax returns. The rich would shift their wealth from unproductive tax shelters to productive uses. Finally, savers would save more, because they would receive a higher after-tax return to saving.

Many Congressmen, businessmen and economists have rejected the Administration's claims, however. They do not believe that workers would work much more, that the labor force would expand or unemployment contract substantially, that the need for government spending would fall much, that the morale of entrepreneurs would improve much, that the rich would desert their tax shelters, or that savers would save much more. Indeed, one Congressman termed these claims "hallucinatory," while another Congressman asserted that he could not find a shred of evidence to support any of these claims.

Instead of analyzing all of these arguments in detail, we would do well to concentrate on the most controversial argument—that Kemp-Roth would raise saving. Keynesian theory, which has dominated the discussion and formulation of macroeconomic policy throughout most of the past generation, posits that consumption is closely related to disposable (after-tax) income, so that households spend a fraction of any additional disposable income they receive on consumption goods. Therefore, according to this theory, cutting personal income-tax rates raises disposable income and hence raises consumption. Private saving also rises because households only consume a fraction of this increase in disposable income, but government saving (minus the government deficit) falls by the full amount of the tax cut. Consequently, total national saving must fall unless the tax cut generates a massive boom—which conceptually could bring in enormous amounts of new tax revenue, reduce unemployment compensation and other income-sensitive transfer payments, and expand private saving. However, in a pure Keynesian model, it is theoretically impossible for the boom to be so massive.

A few numbers might clarify this argument. Suppose that Kemp-Roth reduces taxes by \$40 billion, and that households consume 90 cents of each additional dollar of disposable income they receive. At the current level of national income, government saving would drop \$40 billion, private saving would rise only \$4 billion ( $40 \times (1-.9)$ ), and national saving thus would drop by \$36 billion. Therefore, in the absence of a major increase in national income, Kemp-Roth would lower saving.

In addition to raising disposable income, however, Kemp-Roth would raise the real after-tax return to saving. The Administration argues that the latter effect, which tends to lower consumption, overshadows the former

Research Department  
Federal Reserve  
Bank of  
San Francisco

Opinions expressed in this newsletter do not necessarily reflect the views of the management of the Federal Reserve Bank of San Francisco, nor of the Board of Governors of the Federal Reserve System.

---

effect, which tends to raise consumption. A higher real after-tax return to saving would lower consumption because it makes all of the things for which households save—their retirements, rainy days, and their children's educations—more attractive relative to current consumption.

Consider the case of a rich household that wishes to save for its retirement 30 years hence. If this household is in the 70-percent tax bracket and makes a nominal before-tax return of 15 percent, its nominal after-tax return is 4.5 percent ( $15 \times (1-.7)$ ). If it expects inflation to continue at the rate of 10 percent a year, its real after-tax return is -5.5 percent ( $4.5 - 10$ ). Kemp-Roth would lower this household's marginal tax rate to 50 percent, thus raising its real after-tax return to -2.5 percent. Without Kemp-Roth, assets lose 5.5 percent of their value each year, so that sacrificing one unit of consumption now yields  $.18 (= (1-.055)^{30})$  units of retirement consumption 30 years from now. But with Kemp-Roth, that sacrifice yields  $.47 (= (1-.025)^{30})$  units of retirement consumption. This effect would be smaller, though still appreciable, for all but those households in the lowest tax brackets. Since Kemp-Roth would so markedly improve the trade-off between current consumption and the future goals that saving accomplishes, saving should rise sharply.

Which provides a better answer—the Administration view or the Keynesian view of consumption and saving behavior? To answer that question, we should look at what happened after the last major reduction in Federal personal-tax rates, the 1964-65 Kennedy tax cut. Since Kemp-Roth would take almost exactly the same form, the exercise should prove instructive.

An estimated consumption-income relationship (Keynes' "consumption function") based on pre-1964 data should fit the data very tightly and, more importantly, should predict what happened to consumption and saving after the tax cut. The relationship does indeed fit well in the 1954-63 period (see

chart). The solid line shows the actual evolution of consumption between 1954 and 1967. The dotted line from 1954 to 1963 shows the path of consumption implied by the fitted consumption function, given the actual path of disposable income. As the reader can see, the dotted line is right on top of the solid line during the 1954-63 period—a period with no change in the Federal personal-income tax code.

The Kennedy tax cut passed in February 1964. One can clearly see that no sudden surge in consumption occurred in 1964 or thereafter. Indeed, it would be impossible to pick out the year when the tax cut occurred just from looking at the consumption series.

The dotted line labeled A shows how consumption would have evolved if the 1954-63 consumption function had continued to hold in the 1964-67 period. Here we can see that the previous consumption function no longer tracks actual consumption after the tax cut. Households consumed much less and saved much more than Keynesian theory would have predicted. The difference is probably due to the higher after-tax return to saving produced by the tax cut.

The dotted line labeled B shows how consumption would have evolved, had there been no tax cut in 1964. It is obtained by predicting what disposable income would have been without the tax cut, and then using the fitted consumption function to calculate what consumption would have been if disposable income had followed that predicted path. This shows that the tax cut actually *lowered* consumption. Since households saved more than 100 percent of the tax cut, national saving would have risen even if national income had not risen. But no one disputes that the Kennedy tax cut raised national income. Therefore, the tax cut raised national saving by a substantial amount.

Our evidence implies that Keynesian consumption functions are not stable when tax rates change—specifically that the

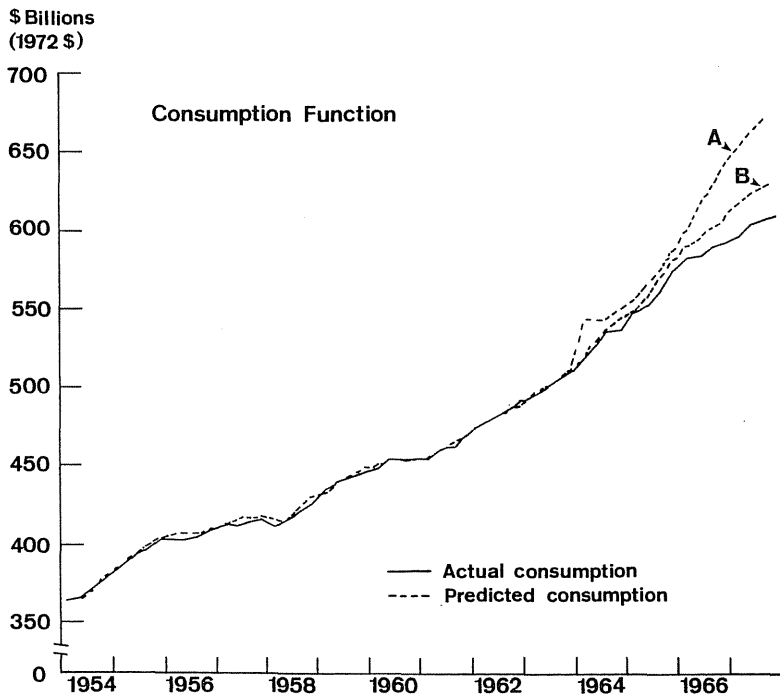
Kennedy tax cut lowered consumption and raised saving. Kemp-Roth, which would essentially replicate this tax cut, therefore should also lower consumption and raise saving. Of course, this kind of prediction may be somewhat risky to make, because the U.S. economy has changed a great deal since 1964, and may therefore respond differently to Kemp-Roth than to the Kennedy tax cut. For example, many of the Administration's critics have argued that households would not save the tax cut because the inflation rate is now about ten times higher than it was in 1964. Even though this high inflation rate does depress the real after-tax return to saving and hence the *level* of saving, a reduction in personal income tax rates affects the tradeoff between current and future consumption in roughly the same way when inflation is high

as when it is low. For this reason, the *change* in saving that Kemp-Roth would produce is likely to be in the same direction and comparable in magnitude to that produced by the Kennedy tax cut.

The author concludes that, despite all the changes in the economy since 1964, the best available evidence supports the Administration's position that Kemp-Roth would raise saving. The critics who assert that there is not a shred of evidence to support this claim just have not looked for it.

**Paul Evans**

(The author, Assistant Professor of Economics at Stanford University, is the Visiting Scholar this semester at the Federal Reserve Bank of San Francisco.)



FIRST CLASS

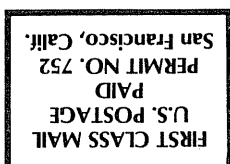
Alaska • Nevada • Oregon • Utah • Washington  
 Idaho • California • Hawaii

San Francisco

Bank of

Federal Reserve

Research Department



**BANKING DATA—TWELFTH FEDERAL RESERVE DISTRICT**

(Dollar amounts in millions)

Selected Assets and Liabilities	Amount Outstanding	Change from	Change from	
			Dollar	Percent
<b>Large Commercial Banks</b>	4/22/81	4/15/81		
Loans (gross, adjusted) and investments*	147,091	325	7,932	5.7
Loans (gross, adjusted) — total#	124,749	280	7,425	6.3
Commercial and industrial	36,736	108	2,077	6.0
Real estate	51,781	107	5,406	11.7
Loans to individuals	22,822	35	- 1,719	- 7.0
Securities loans	1,526	171	801	110.5
U.S. Treasury securities*	6,596	- 15	31	0.5
Other securities*	15,746	60	480	3.1
Demand deposits — total#	41,924	-3,757	- 1,624	- 3.7
Demand deposits — adjusted	29,928	-1,680	- 2,553	- 7.9
Savings deposits — total	30,994	- 474	4,604	17.4
Time deposits — total#	76,385	984	12,089	18.8
Individuals, part. & corp.	67,520	888	12,123	21.9
(Large negotiable CD's)	29,657	771	6,858	30.1
<b>Weekly Averages of Daily Figures</b>	Week ended 4/22/81	Week ended 4/15/81	Comparable year-ago period	
<b>Member Bank Reserve Position</b>				
Excess Reserves (+)/Deficiency (-)	n.a.	n.a.		82
Borrowings	228.0	40.0		148
Net free reserves (+)/Net borrowed(-)	n.a.	n.a.		- 66

\* Excludes trading account securities.

# Includes items not shown separately.

Editorial comments may be addressed to the editor (William Burke) or to the author . . . Free copies of this and other Federal Reserve publications can be obtained by calling or writing the Public Information Section, Federal Reserve Bank of San Francisco, P.O. Box 7702, San Francisco 94120. Phone (415) 544-2184.