

A Taxing Question for the Fed

The Fed has long emphasized uncertainty in assessing the economic effects of tax cuts. Both history and theory might help explain why

BY HELEN FESSENDEN

On Dec. 13, 2017, the Federal Open Market Committee, or FOMC, concluded its policy meeting by raising the fed funds rate for the fifth time since the Great Recession, citing a strengthening labor market and “solid” economic activity. The day was also the occasion of the final press conference of outgoing Fed Chair Janet Yellen, which immediately followed the meeting.

The initial round of questions from reporters, however, focused on fiscal policy — specifically, President Donald Trump’s tax bill, which was about to clear Congress. (See “Policy Update,” page 21.) By cutting individual and corporate taxes by \$1.5 trillion over 10 years, its backers argued, it would encourage greater investment, ultimately spurring productivity and boosting economic growth. Yet when asked how the legislation would affect the Fed’s outlook on output, inflation, and monetary policy, Yellen struck an agnostic tone.

“Much uncertainty remains about the macroeconomic effects of the specific measures that ultimately may be implemented,” she said, referencing the economic projections that the committee issues on a quarterly basis. “Changes in tax policy [are] only one of a number of factors, including incoming data that has, to some extent, altered the outlook for growth and inflation.”

Other Fed officials issued similar caveats in the following months. The FOMC’s January 2018 minutes, for example, noted that “several participants expressed considerable uncertainty about the degree to which changes to corporate taxes would support business investment and capacity expansion.” And in his first press conference as Fed chairman, Jerome Powell said that while the bill had “elements that should encourage investment, which should help productivity [and] encourage labor force participation,” the committee also didn’t “know how big those effects are going to be.”

This episode isn’t an exception. For long-standing reasons, the Fed has generally been guarded in assessing the degree and timing of tax cut effects. Former Fed Chairman Ben Bernanke explained this approach in a blog post last year. For one, he wrote, the Fed tends to be a cautious institution in the face of uncertainty. In particular, the details of tax changes are often unclear until passage and sometimes well thereafter. The Fed also faces the daunting task of incorporating all relevant variables into its forecasts — including factors that might mitigate the impact of tax policy — while steering clear

of making public statements on political matters.

As Bernanke also noted, however, the Fed’s caution reflects what economists know about the likely effects of tax changes. Most tax cuts since 1981 have been temporary, phased in, later offset, or passed at times when any stimulus was facing economic headwinds — and theory suggests all these factors affect the magnitude and timing of the resulting stimulus.

The Long and Short of It

Economic theory holds that people seek to smooth out consumption over time based on their expectations of income and wealth for their entire lifetime — what economists call the “permanent income hypothesis.” If you get a one-time bonus, for example, theory would imply that your boost in consumption today will be less than the full amount of the bonus because you’ll want to save at least some of it for future consumption. On the other hand, if you have an increase in your salary and you believe it’s permanent, you’ll spend a larger share of the increase. The ideas behind the permanent income hypothesis are one reason why economists have long argued that if fiscal policymakers truly want to boost investment, consumption, and output, permanent tax cuts are far more effective than temporary ones.

A related idea, called “Ricardian equivalence,” suggests that to the extent people believe tax cuts today will be financed by tax hikes in the future, they will save an equivalent amount of the tax cut in preparation. This behavior could dampen any intended stimulative effect, but whether this actually happens has been long debated — in part because tax cuts, in practice, tend not to be offset in the long run.

History does, indeed, offer examples of permanent income changes. During the postwar decades, Americans got a series of long-standing boosts. One was permanent tax cuts that Congress passed fairly frequently from the 1940s through the 1970s, in part as a way to adjust tax brackets, which weren’t indexed for inflation. (This “bracket creep” meant that without such adjustments, inflation eroded the real value of incomes, leaving taxpayers stuck with de facto higher marginal rates.) Another route was the steady increase in Social Security benefits, a positive income shock for recipients. In a 2016 study of the program over decades, University of California, Berkeley economists Christina and David Romer found that household consumption

responded much more strongly to permanent benefit increases than it did to temporary ones, lending some support to the permanent income hypothesis.

Wait and See

To be sure, in the real world, people don't have perfect knowledge of their lifetime earnings. But the evidence suggests that households and firms do react in anticipation of future events. In the case of tax cuts, they might respond when a politician or party running on a tax cut platform has secured an electoral win. Tax cuts can also be anticipated before they take effect if policymakers phase them in over multiple years. Research suggests that this delay between when expectations are set and when tax cuts are implemented influences their economic impact.

Economists Karel Mertens of the Dallas Fed and Morten Ravn of University College London tested this idea in a study analyzing all U.S. tax cuts and hikes from 1947 through 2003 to see whether expected and unexpected changes had different outcomes. They found that unexpected tax cuts (implemented within 90 days of passage) did boost hours worked, consumption, investment, and output, taking about two and a half years to peak. But if these changes were expected (beyond the 90-day window), then investment, hours worked, and output often fell before the cuts kicked in — and picked up only after the cuts took effect — while consumption saw a smaller, briefer drop. Expected cuts still had a net stimulus effect, but it was more muted than when tax cuts came as a surprise. More broadly, the authors concluded, these “anticipation effects” could explain one-fifth to one-quarter of business-cycle volatility in this entire period.

So how might delayed implementation of a tax cut on labor income cause a temporary drag on growth? Theory suggests that if you expect a tax cut in the future, you'll feel richer and “buy” more leisure and consumption in the present — what economists call an “income effect.” As you take in more leisure, you also work fewer hours and, all else equal, output falls. In standard models, firms respond to this reduced supply of labor by offering higher wages; these higher wages, in turn, draw some people back toward work, potentially dampening or even completely offsetting the income effect. Then, once the tax cut on labor income kicks in, working becomes even more relatively lucrative, so you're inclined to choose even more work over leisure. Under standard assumptions, these “substitution effects” are generally stronger than the income effect once the tax cut is implemented, prompting people to work more on balance, which boosts output.

The effects of an anticipated tax cut that relates to capital can be even more complex since they depend on factors such as depreciation and firms' decisions on investment over time. In fact, given that the returns to capital are accrued over long periods of time, investment may even rise right away, before the tax cut is implemented. In the



broad empirical sample that Mertens and Ravn analyzed, however, investment (like hours worked) fell ahead of anticipated tax cuts but then responded positively once they were in effect; if the cuts are unexpected, investment rose right away, peaking at 10 percentage points for every 1 percentage point drop in tax rates.

In particular, Mertens and Ravn saw the 1981 cuts under President Reagan as a strong test case. They were significant in size — slicing the top marginal rate from 70 to 50 percent, and the lowest from 14 to 11 percent — and were phased in over five stages from 1981 through 1984 while indexing all rates for inflation starting in 1985. In 1981-1982, as consumers and firms waited for most cuts to kick in, Mertens and Ravn found that the drag caused by “anticipation effects” had an even greater recessionary pull than did the Fed's tight monetary policy at the time. Conversely, once the cuts were fully enacted from 1983 on, they helped spur the recovery.

The FOMC, for its part, paid close attention to the phased-in structure of the tax cuts, but its chief concern at the time was taming historically high inflation. While many members feared the combination of higher defense spending and lower taxes would yield higher deficits and, over time, pose greater inflationary risk, the FOMC didn't adjust its strategy — controlling the price level by controlling money-supply growth — in a significant way. Rather, it assessed the tax cuts primarily as a question of how their phase-in would affect money supply. In the committee's June 1982 meeting, for example, then-Chairman Paul Volcker noted the upcoming \$30 billion in cuts as one factor that could lead to a seasonal “bulge” in money supply; the Fed could “tolerate” this if needed, he added, “if that makes people happier.”

Bust to Boom

The Bush tax cuts of 2001 and 2003 — the most sweeping since 1981 — are another well-studied case. Many of these were also phased in rather than implemented immediately. As such, they yielded similar patterns to the cuts of the 1980s.

The details differed, however. One big change was that the Bush tax cuts were set to expire across the board in

January 2011. (The Reagan cuts were permanent, although Congress raised certain types of taxes in the 1980s and 1990s, partially offsetting them.) The reason for the expiration date was that Senate budget rules had changed to require a 60-vote supermajority to pass any permanent legislation that added to the deficit over a decade. Lacking those 60 votes — and bearing a \$1.35 trillion price tag over 10 years — the 2001 cuts were required to lapse. Deficit concerns also meant that the tax cuts were phased in (initially, over five years) to lessen the cost.

Two years later, the Bush administration secured its second tax cut victory. It accelerated the 2001 bill's phased-in tax cuts, moving implementation up from 2004-2006 to 2003, and added new provisions cutting capital gains and dividend taxes; these cuts further added to the deficit, so under budget rules, they were also set to lapse. But in contrast to the expected passage of the 1981 and 2001 tax cuts, the 2003 measure was something of a surprise: The Senate vote was so close that Vice President Dick Cheney had to break the tie, and consumers and firms didn't know their future tax cuts would kick in so quickly until the bill passed.

The phased-in component of the Bush tax cuts yielded results comparable to the 1980s, research suggests. In a 2006 study, University of Michigan economists Christopher House and Matthew Shapiro tested the cuts' "anticipation effects" with a simulated model based on the economy's parameters at the time. From 2001 to 2003, people cut back on hours worked and firms scaled back investment. This was quickly reversed when the 2003 bill sped up the timetable. The full onset of these changes, the authors concluded, contributed to about half of the rebound in economic growth that year, with hours worked and investment suddenly jumping. (They also point to the possibility that the dampening effects on the economy of reduced labor supply in 2001-2003 could have overwhelmed any positive boost that the phased-in cuts for investment might have produced early on.) In their empirical study, Mertens and Ravn make a comparable finding on the pace of the economic pickup in the mid-2000s.

How did the FOMC approach these changes as it deliberated? The published record from 2003 shows that many on the committee remained cautious even as the economy was picking up pace in the summer and fall. The minutes from that time, for example, cited the stimulative role of the accelerated tax cuts in the near term. But some members also noted that some of that could dissipate in coming years, as most provisions were set to expire due to the sunset feature; much discussion focused on whether the recovery would be strong enough to endure. In a speech in January 2004, for example, then-Governor Bernanke noted the possible dissipation of the effects of the tax cuts as one possible risk in the year ahead that "could adversely affect household spending." (In fact, GDP growth did start slowing down in the summer of 2004, amid dropping consumption.)

Cuts during Crisis

Tax policy doesn't occur in a vacuum. The tax cuts of 2008-2009 — passed in the face of recession, rising unemployment, and high household indebtedness — are a good example. Although those measures were meant to encourage spending, some economists contend the high degree of economic distress shifted households away from consumption and toward saving or paying down debt — which, in turn, lessened the intended boost.

One measure in the 2009 stimulus legislation was the "Making Work Pay" tax cut, a small tax cut for low- and middle-income earners. Rather than a one-off payment, it was implemented over two years through reduced withholding in paychecks, producing a slight bump in take-home pay. It was paired with a 2 percent payroll tax cut for two years (taken from Social Security withholding), which was ultimately extended through 2012.

How well did it work? In a 2012 study, economist Claudia Sahm of the Federal Reserve Board, joined by Matthew Shapiro and Joel Slemrod of the University of Michigan, found that only 13 percent of households surveyed said they would mostly spend the Making Work Pay tax cut. By contrast, in the previous year, about 25 percent of households said they would mostly spend money from another stimulus measure, a one-time rebate check that was enacted early that year. While this finding might lend support to the idea that incremental income boosts are less effective than one-time bumps, the authors also suggested that households in 2009 might have been more reluctant to consume due to broader economic pessimism and even higher indebtedness. A 2015 Federal Reserve Board study found a similar balance sheet effect with the payroll tax cut: Households saved most of that cut and then actually reduced spending once it expired so that they could continue diverting income to savings.

For its part, the FOMC broadly supported the 2009 stimulus and noted its impact in subsequent meetings as positive for consumer spending. But members also warned about its short-term duration and its small size relative to the fiscal contraction at the state level and the broader housing collapse. More generally, the Fed, as well as many economists and policymakers, worried about what would happen once those measures, combined with the much larger Bush tax cuts, were set to expire in 2010-2011, just as the economy was starting its fragile recovery. A wholesale tax cut expiration, many warned, would severely hurt consumption, especially since monetary policy, constrained by near-zero interest rates, had less scope for stimulating the economy.

On these grounds, Congress extended the Bush tax cuts and the payroll tax cut through Jan. 1, 2013. That extension didn't resolve the political deadlock, however, and it was only through the December 2012 "fiscal cliff" deal that the impasse was resolved. (The compromise made most cuts permanent while ending those for the wealthy.) It was a high-stakes episode for the Fed as well. At the December

2012 FOMC meeting, for example, San Francisco Fed President John Williams pointed to both the economic and confidence risks under such a scenario of high fiscal policy uncertainty. “There’s a danger that households and businesses could lose confidence in the ability of our elected leaders to govern,” he warned. It also prompted a rare rebuke by Bernanke in February 2013, as he called upon Congress to do more in reviving the economy through consistent, sustainable fiscal policy aimed at healing the labor market rather than leaning on the Fed for stimulus through monetary accommodation. “Monetary policy ... cannot carry the entire burden,” he told senators.

Today, fiscal policy debates remain as heated as ever. But they often gloss over the fact that tax changes can bring uncertain and complex effects. As research has shown, rational behavior by consumers and firms doesn’t necessarily result in the immediate boost that some might expect. How tax cuts are timed and expected, whether the tax applies to labor or firms, and where the broader economy stands are all variables that have made each past tax change a unique experiment unto itself. These realities of fiscal policy can help explain the Fed’s preference for caveats and caution when it comes to forecasting fiscal policy’s impact on the macroeconomy. EF

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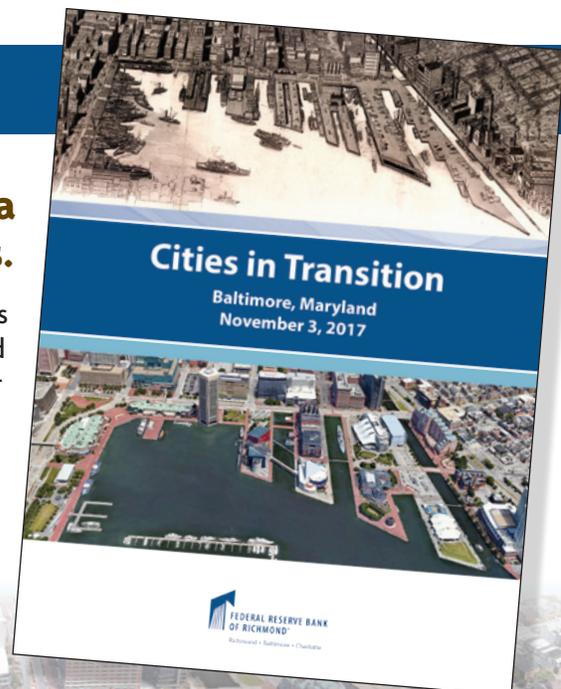
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The Richmond Fed recently hosted a conference on the dynamics of cities.

Six leading researchers presented work on a variety of topics in urban and regional economics, including the decline and redevelopment of cities as well as gentrification and other issues facing urban neighborhoods.

A compendium, published by the Richmond Fed, includes a summary of the conference as well as interviews with the presenters.



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