## — RESEARCH SPOTLIGHT Playing the Waiting Game

BY CHARLES GERENA

ommentators and lawmakers have blamed policy uncertainty for creating a "waiting game" that has made the recession deeper and the recovery slower than it might have been. Business owners may put off investing in a new facility or hiring more salespeople if they don't know how changes in tax policy, government spending, or regulation will affect their plans. If enough business decisions are delayed, the overall economy suffers.

In a recent paper, Scott Baker and Nicholas Bloom of Stanford University and Steven Davis of the University of Chicago construct their own measure of uncertainty, test how well it corresponds to past changes in the business cycle, and assess its ability to predict future swings. They

find that a big jump in their index of policy-related economic uncertainty is associated with significant declines in output, investment, and employment.

Previous studies have investigated potential connections between policy uncertainty and economic outcomes. In a 1991

paper, Dani Rodrik of Harvard University found that firms tend to delay new investments until policy uncertainties are resolved. A 1999 paper by Kevin Hassett at the American Enterprise Institute and Gilbert Metcalf of Tufts University found that uncertainty over the implementation of investment tax credits affects the timing of when businesses invest — they may wait if they think a new tax credit is on the horizon or rush to invest if they anticipate a credit will be taken away.

While these studies identified a relationship between uncertainty and the economy, others have not. For example, a 2011 paper by Edward Knotek and Shujaat Khan of the Federal Reserve Bank of Kansas City demonstrated that not every past spike in uncertainty corresponded to a recession. (See "Around the Fed," *Region Focus*, Third Quarter 2011.)

Part of the challenge for researchers is determining cause and effect. The same factors can influence both policy uncertainty and the state of the economy at the same time. Similarly, policy uncertainty may contribute to a recession, or merely be a leading indicator of a downturn.

If policy uncertainty does contribute to overall economic uncertainty, what is the strength of that relationship? Factors beyond the control of policymakers can cause apprehension about the economy, such as the rate of technological change and the future path of commodity prices.

The index of policy-related economic uncertainty created by Baker, Bloom, and Davis has three components. The first measures the frequency of references to the economy, uncertainty, and policy in articles published in 10 major newspapers.

The second component captures the number of federal tax code provisions set to expire in the near future. This can generate uncertainty because lawmakers often don't reach a decision on whether to renew them until the last minute.

The third component uses the Federal Reserve Bank of Philadelphia's Survey of Professional Forecasters to measure the amount of disagreement on the future course of consumer price inflation and federal, state, and local government purchases. These macroeconomic variables were selected because they are directly influenced by monetary policy and fiscal policy actions.

"Measuring Economic Policy Uncertainty." Scott R. Baker, Nicholas Bloom, and Steven J. Davis. Manuscript, Stanford University and the University of Chicago, February 2012. "The resulting index ... looks sensible, with spikes around consequential presidential elections and major political shocks like the Gulf Wars and 9/11," the researchers comment. The Lehman bankruptcy, the eurozone crisis, and the U.S. debt-ceiling dispute pushed the

index to record highs.

To determine which policies exert the most influence on uncertainty, Baker, Bloom, and Davis analyze a narrower collection of news articles than those used for the news component of their index, applying search terms like "inflation." While national security loomed large as a source of uncertainty after the 9/11 terrorist attacks, "extraordinary levels of policy uncertainty in 2010 and 2011 are dominated instead by concerns related to monetary policy and taxes," note the researchers.

To assess how closely aggregate economic activity moves in response to changes in their uncertainty index, the researchers consider several models using monthly data from 1985 to 2011. They find that when policy uncertainty increases as it did over the last six years, private investment falls, bottoming out at a 16 percent decline within nine months of the spike. In addition, industrial production shrinks as much as 4 percent after 16 months and as many as 2.3 million jobs may be lost in the aggregate within two years.

These findings demonstrate only an association between high levels of policy uncertainty and weaker economic conditions. Still, they "reinforce concerns that policy-related uncertainty played a role in the slow growth and fitful recovery of recent years," suggest Baker, Bloom, and Davis. **RF** 

The paper discussed in this article can be found at: http://www.policyuncertainty.com/uploads/BakerBloom Davis\_Feb3.pdf