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Empirical evidence on the aggregate effects of anticipated and unanticipated US tax policy shocks

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This paper estimates the dynamic macroeconomic effects of changes in tax policy in the United States for the post-World War II period. We take into account the timing of tax changes by introducing a distinction between anticipated and unanticipated changes in taxes. According to economic theory, decisions taken by economic agents are based on their current information about variables relevant for the problem in hand. Unforeseen changes in taxes affect behaviour when the tax changes are actually implemented, while anticipated changes in taxes may affect the economy ahead of their introduction. The idea that anticipated policy shocks impact on the economy prior to their implementation has been explored extensively in the literature on fiscal policy. Yet, there is little, if any, directly observed evidence that anticipation effects are empirically relevant. This paper provides such evidence for the US economy. Moreover, by explicitly taking the timing of tax changes into account, we are better able to estimate the impact of implemented tax changes than pre-existing studies.

Our analysis uses an extensive dataset of US tax laws adopted since World War II compiled by David Romer and Christina Romer. We focus upon those tax changes that Romer and Romer (2008a) classify as exogenous because they were introduced either for ideological reasons or because they were motivated by “inherited deficit concerns”. We define for each Tax Act the announcement date and the implementation date of the tax liability changes. The announcement date is assumed to correspond to the date on which the policy intervention became law, while the implementation date is defined as the date by which the tax liability changes were to be implemented according to the bills. When these dates are no more than 90 days apart, we classify the corresponding tax liability change as an unanticipated tax shock, while anticipated tax shocks are those changes in taxes for which the two dates differ by more than 90 days. The use of this timing convention provides a methodological innovation to the problem of estimating anticipation effects in the macroeconomic literature on fiscal policy.

Our key findings are: (1) An unanticipated tax cut gives rise to significant increases in output, consumption, and investment which peak around two and a half years after the introduction of the tax cut. The strongest response relates to investment, which increases by approximately 10 percent at its peak after a 1 percent tax cut. Hours worked also increase but only gradually over time. Real wages rise persistently; (2) An anticipated tax cut is associated with pre-implementation drops in output and investment, while consumption remains roughly constant during the pre-implementation period. Once the tax change is implemented, it is associated with a stimulating effect on the economy. There is also a significant pre-implementation drop in hours worked, while real wages rise during the pre-implementation period; (3) Unanticipated and anticipated tax shocks have contributed significantly to the US business cycle. The tax shocks account for around 20-25 percent of the volatility of US output at business cycle frequencies.

Reference:

Romer, Christina D., and David H. Romer, 2008, “A Narrative Analysis of Postwar Tax Changes”, manuscript, University of California, Berkeley.

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