Shocks, Time-to-Train, and optimal government spending.

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Abstract

Recessions typically bring about expansions in government expenditures. More important, when a strong sector-specific negative shock coincides with the onset of the recession, it is commonly argued that a government “stimulus” may be beneficial. The logical argument is as follows: resources are costly to reallocate; thus, negative sector-specific shocks may result in underused production capacity. If the government directs additional expenditures to these negatively affected sectors, production capacity will not be wasted and the welfare costs of the transition after the shock may be lowered. In this study, we consider these intuitive arguments under the discipline of general equilibrium theory. Our focus is quantitative, and aims at estimating the optimal size of government stimuli. Our analysis is based on a multi sector model where it is costly to move capital and labor across sectors. Capital is sector specific and irreversible. A worker who moves for the first time to a new sector requires being trained by an otherwise productive worker of the target sector before becoming productive. The government can nevertheless react immediately and buy output from negatively affected sectors so that no productive capacity is wasted after a shock. In our model, all government purchases add to the stock of government capital, and ultimately improve the productivity of private inputs. These features of the model overestimate the benefits of the “stimulus.” We calibrate the model so as to match key indicators of U.S. economy. The costs of labor reallocation are calibrated to match basic features of the U.S. labor market. Our results suggest the optimal size of a government stimulus is substantially smaller than what is commonly observed.

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