Shocks, Time-to-train, and Optimal Government Spending

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The full paper is available in BRI-308 and will be distributed at the seminar presentation.

As no abstract has been provided, here are the first two paragraphs from the introduction…

1 Introduction

How should the government respond to a shock to the demand for the output of one sector? In this paper we study that question in a setting in which it is costly to reallocate resources across sectors in the short run and the government can use the output of that industry to provide a productive public good. A standard intuition is that the drop in private demand in the presence of costly reallocation presents an “opportunity” for the government since increasing the provision of the publicly provided good entails a low opportunity cost. This argument fails to take into account general equilibrium effects. In particular, it fails to account for the possibility that for the government provided good to increase output in a significant way the private sector may need to increase its supply of inputs. In the model that we study there is a tension between these two forces and, contrary to what we consider the standard intuition, the more difficult it is for resources to be reallocated the more restrained the response of the government.

To understand the mechanisms through which optimal government policy influences the allocation of resources we construct a three sector growth model with two final goods, consumption and housing, and a sector producing structures which can be used either for private residential construction or government infrastructure projects. As a natural first step we study the optimal allocation in this economy that would be attained if the government had access to lump sum taxes. We study three related economies that are distinguished by the costs of reallocating resources. In the reference economy both labor and capital can be costlessly and instantaneously moved across sectors. Our intermediate economy is one in which we take seriously the non-negativity constraint on investment and capital specificity. Thus, capital in place in one sector cannot be allocated to a different sector but labor can move freely. Finally, our third economy displays the most frictions: capital is sector specific and workers that move to another sector have to be retrained, which is an activity that uses labor in the receiving sector.