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PRESS RELEASE

Macroeconomic fluctuations and firm entry: theory and evidence

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The number of producers in an economy is forever changing, as new firms are established and old ones leave the market. While this phenomenon is typically associated with the growth process, we observe considerable entry and exit of firms even at business cycle frequencies. This paper analyses how firm entry is affected by shocks to aggregate demand, supply, interest rates and entry costs. It is in two parts. First, we build a dynamic stochastic general equilibrium model with a variable number of producers. Second, we estimate the reactions of firm entry to macroeconomic shocks and compare them to the predictions of the model.

There are several reasons why firm entry is of interest to policymakers. First, if each firm produces a distinct good, entry can be regarded as a measure of new goods varieties. There is plenty of evidence that consumers value variety; they are better off if they have access to a more diverse consumption basket. This matters for the accurate measurement of price indexes. Second, output can fluctuate along the intensive margin (as output per established firm varies) or along the extensive margin (as the number of firms varies). For the purpose of output stabilisation, it is important to distinguish between these two margins of adjustment. Finally, the number of producers might influence the degree of competition in an economy. In particular, as more firms enter, products may become more substitutable. This reduces the markups charged by monopolistic firms.

Many of the current business cycle models, while very elaborate along other dimensions, assume a fixed number of firms. The present model instead allows for entry and exit. More specifically, a new firm will be established if expected future profits exceed today's startup costs. Each period, a fixed fraction of all producing firms becomes obsolete and exits. The model generates predictions of how firm entry reacts to macroeconomic shocks. While building on similar research regarding the firm dynamics, our model has a richer menu of shocks. The main contribution of this paper is that we then identify such shocks empirically, using post-war US data.

The estimation results confirm that output adjustments along the extensive margin are present and significant. In particular, when entry costs or interest rates are temporarily reduced, agents respond by financing new firm startups. Also, increases in workers' productivity or labour supply have a positive effect on future profits and thereby encourage entry. These results are consistent with our theory. Furthermore, the data suggest that increases in aggregate demand have a positive impact upon entry. Our model predicts on the one hand, that a rise in government spending leads to a reduction in the number of entrants. On the other hand, if consumption demand increases in the private sector, this will instead boost entry.