

PROPOSAL: CREDIT CONSTRAINTS AND THE DURABILITY OF MACHINE INVESTMENT

Justin Murfin, Assistant Professor of Finance, Yale School of Management (SOM)
(justin.murfin@yale.edu)

The link between credit access and investment is a central area of interest for financial economists. While a number of recent papers have attempted to document the link between bank loan supply and the level of firm investment, we propose that, in addition to the level of investment, credit frictions may impact the type of investment that firms make.

Specifically, we are interested in the relationship between credit access and the durability of investment. Consider, for example, a borrower with restricted access to credit, who can purchase a machine costing \$100 but which will break down or require maintenance within the year. Alternatively, she can purchase a machine costing \$200, which will last several years, maintenance free. On one hand, the first machine will be cheaper and thus require less financing during a period of tight credit. On the other hand, the second machine may provide better collateral to a concerned lender. We are interested in documenting the trade-offs that firms face when they think about financial constraints and the durability of their investment jointly.

To help answer these questions, we will be looking at large data sets tracking the sale and financing of heavy machinery (bulldozer, skid-steers, dump trucks, cranes, lift trucks, etc) going back to 1990. Over the course of the summer, the RA will clean and match these data by make and model, and when possible, serial number, in order to estimate models of machine-specific durability. To test hypotheses about credit access and durability of investment, we will also explore subsidized lending programs offered for heavy machinery purchases by the Small Business Administration (the SBA). This will involve understanding and documenting SBA program eligibility requirements and changes to those eligibility requirements over time.

Successful applicants will have good programming skills (and preferably a familiarity with STATA), be detail-oriented and resourceful. A child-like enthusiasm for bulldozers and excavators is a bonus.