

# Impatient or Desperate?

## Structural Evidence on Financing Constraints from a Natural Experiment

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### **Abstract**

I build a dynamic discrete choice model to explore the effect of heterogeneities in liquidity constraints on R&D investment across value-maximising, innovative firms. Firms are offered special tax incentives for R&D, giving loss-makers a choice between taking cash from the government immediately or carrying the loss forward to set off against future profits. Claiming the cash immediately as incurred in the loss period comes at a cost; the rate at which the government pays cash to loss-making firms is significantly lower than a future deduction. I combine this structural set up with a natural experiment from the UK, which changed the deduction and cash credit rates for different groups of firms at different times. The exogenous variation across firms and over time in deduction rates and the availability of the cash option identifies the effects of policy changes on cash flow, and consequently, outcomes of interest such as R&D investment and output.