**Aureo Presentation – Prod Fcn with Expectations Data**

* Literature:
  + Dynamic panel IV: blundell and bond (2000), chamberlain (1982)
  + Proxys: OP, LP, **ACF**
  + Recent literature: gandhi, Navarro, and rivers (2020)
* Dynamic panel runs into issues of not much changes in capital over time so cant difference
* Surveys on firm expectation on inputs and outputs: Management and Expectations Survey, MOPS
  + Bank of England collects decision making survey of firms
* Y = f() + omega\_{it} + e\_{it}
  + Omega = idiosyncratic productivity (seen by firm)
  + e = epsilon (shock) + nu (measurement error)
* suppose omega\_{it} is Markov
  + omega\_{it} = g(omega\_{it-1}) + xi\_{it}
* OP/LP/ACF leverage input demand (firm decision) in either investment or materials
* Goal of this paper: generate proxy for omega using **beliefs** instead of firm decisions
  + Omega\_{it} = psi(expected output next period – integral of prod fcn over distribution of labour next period
  + Assume expectation of e and xi (conditional on information set) is zero
* Can run OLS as long as we have expected output and expected labour next period!
* Hicks-neutrality of technology is an important assumption