

The Change in Corporate Production Function: Theory and Evidence

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Abstract

The assumption of a concave production function is a key foundation in the economics literature. However, using the Bayesian Markov Chain Monte Carlo (MCMC) changepoint estimation, we document that the corporate production function has changed to a sigmoidal (convex-concave) one since the 1980s, and the convexity component has become increasingly important over time. This long-run trend occurs for the majority of the industries. Finally, we build a dynamic framework to study the implications of such change in production function on markup, net earnings, and asset prices, and provide empirical evidence.

JEL codes: D22; E52; G12; G30; L20; O33

Keywords: production function estimation; economies of scale; market power; negative earnings; cross-sectional stock return

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