

TECHNOLOGY LOCKS, CREATIVE DESTRUCTION, AND NON- CONVERGENCE IN PRODUCTIVITY LEVELS

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Abstract:

Plant-level data from US textile industries indicate: (1) significant cross-sectional dispersion in plant-level productivity within narrowly defined industries; (2) that highly productive plants grow faster and are less likely to exit; (3) dispersion in productivity is larger in industries with more rapid productivity growth; (4) older plants are bigger; and (5) plant births and closures are common to all four digit textile industries. This paper presents an extended vintage model to explain these facts. The model assumes that a plant incurs a fixed cost of adopting the current best practice and convex costs of adjusting its capital stock. Additionally, the model provides alternative explanations for the phenomena of investment spikes and S-shaped diffusion.

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