

THE LIFE CYCLE OF A COMPETITIVE INDUSTRY

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ABSTRACT

Firm numbers first rise, and then fall as the typical industry evolves. This nonmonotonicity in the number of producers is explained in this paper using a competitive model in which innovation opportunities induce firms to enter, but in which a firm's failure to implement an important new technology causes it to exit.

The model is estimated with data from the U.S. Automobile Tire Industry, a particularly dramatic example of the nonmonotonicity in firm numbers: A big shakeout took place during the 1920's. The number of automobiles sold in the U.S. does not appear to explain this shakeout. Instead, the data point to the invention of the Banbury mixer in 1916 as the event that caused the big exit wave. There were, of course, other major inventions in the tire industry, but none seems to have raised the optimal scale of its adopters by enough to cause further shakeouts.

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