Survival Duration of Plants---Evidence from U.S. Petroleum Refining Industry

This paper presents a duration analysis on the survival of U.S. petroleum refining plants for the 1981-1986 period, when the industry as a whole declines in response to decontrols of crude oil markets . The purpose is to examine the duration dependence and determinants of post-deregulation plant lifetimes. The Weibull model with the correction for unobserved individual heterogeneity provides a better fit to the data. Both small plants receiving larger entitlement subsidies and simple plants equipped with fewer technologies have lower survival duration. An inverse U-shaped effect of multiplant coordination on life duration is found. Longer lifetimes of acquired plants suggest the effect of takeovers in facilitating plant restructuring and survival.