The evolution of the Canadian mining industry: The role of regulatory punctuation

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Abstract

In this study, we analyze the evolution of Canada's mining industry from 1929 to 2006, focusing on the determinants of the number of firms in the industry and why this number changed over that period. Most empirical studies of industry evolution have focused on manufacturing industries that share similar structural characteristics. Perhaps because of this, extant models of industry evolution tend to ignore industry-specific and national-specific factors that can cause atypical trajectories, that is, heterogeneous industry evolution. Initial inspection of the Canadian mining industry shows that it is atypical in that it exhibits “negative skew” over time in the number of firms rather than the typical “positive skew.” We review two dominant theoretical approaches to industry evolution: the density-dependence theory and variants of industrial organization economics. We also consider possible sources of industry evolution heterogeneity, focusing particularly on “regulatory punctuation.” Using Canadian mining data, we find that the traditional models do not fully explain the changes in population size in Canada's mining industry. As a result, we introduce a number of hybrid models. The results from these hybrid models suggest that Canadian-specific regulatory punctuations, particularly the introduction of significant new taxes, environmental legislation, and incentives have shaped the trajectory of mining firm participation.

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