

CIFREM SEMINARS

On some statistical regularities in the evolution of industries: evidence, interpretation, and open questions

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Fundamental drivers of the evolution of contemporary economies are the activities of search, discovery and economic exploitation of new products, new production processes, new organizational arrangements within and amongst business firms. What are their marks in terms of statistical properties that such processes display? Three basic questions in particular are addressed in this work. First, are there distinct characteristics of the microentities (in primis, business firms) and their distributions which systematically persist over time? Second, how do such characteristics within the population of competing firms affect their relative evolutionary success over time? And in particular what are the ultimate outcomes in terms of growth and profitability performances? Third, amongst the foregoing statistical properties and relations between them, which ones are invariant across industries, and, conversely, which ones depend on the technological and market characteristics of particular sectors? In order to address these questions we proceed in a sort of "inductive" manner. I start by examining some basic features of the distributions of firms sizes, growth rates and profitability. Next, I consider some evidence on the underlying inter-firm heterogeneity - particularly with regard to technological innovativeness and productivity - and their relationships with corporate performances. Finally, the work recalls the basic elements of an evolutionary interpretation of the evidence. Together with important points of corroboration of such a view - including those regarding a profound heterogeneity of firms at all levels of observation -, one also facing standing challenges - in primis, concerning the purported role of markets as effective selection devices..