

Differential Oligopoly Games with Capacity Accumulation

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Abstract

This paper offers an assessment of the current *status* of our knowledge in the field of differential oligopoly games where firms have to invest to accumulate capital for production. Interestingly, this strand of literature is largely indebted to the two dominant models of economic growth, namely, those of Ramsey (1928) and Solow-Swan (both 1956). The first takes a corn-corn approach in general equilibrium, whereby the only cost of investing in capacity is given by consumption or sales postponement; the second assumes explicit costs but is carried out under partial equilibrium. Both have triggered large and productive strands of literature where the dynamic behaviour of firms is analysed in detail, from Fershtman and Muller (1984), Reynolds (1987) and Driskill and McCafferty (1989) to Cellini and Lambertini (1998) and Jun and Vives (2004). However, notwithstanding the linear-quadratic form characterising at least the Solow approach, very little has been done on feedback equilibria. The survey also tackles this point and offers an alternative solution to the feedback game that might possibly open the way to desirable applications in several directions.