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### ACCEPTED MANUSCRIPT

A dynamic model of quality competition with endogenous prices\*

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#### Abstract

We develop a dynamic model of price and quality competition in order to analyse the effects of competition on quality provision and to which extent an unregulated market is able to provide a socially optimal quality level. Our model combines a differential-game approach with a Hotelling spatial competition framework, and our analysis applies in particular to industries such as long-term care, health care, child care and education. If providers (nursing homes, hospitals, schools, nurseries) use closed-loop decision rules, which imply strategic interaction over time, we show that, although increased competition leads to higher quality in the steady state, quality provision is nevertheless lower than under open-loop rules, and also suboptimally low from a welfare perspective. Thus, our analysis identifies dynamic strategic interaction between competing providers as a potential source of inefficiency in quality provision.

Keywords: Differential-games; Competition; Quality.

JEL: H42; I11; L13.

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