
Abstract

This dissertation deals with topics related to R&D investment in endogenous sunk costs markets. In particular, in Chapter 1 (which is co-authored by Krešimir Žigić), we build a theoretical model, where knowledge spillovers are introduced into Sutton's concept of endogenous sunk costs (investment in quality). We show that with spillovers increasing and the effectiveness of investment in raising quality decreasing, the lower bound on concentration for an industry decreases and ultimately collapses to zero when spillovers are large enough and/or effectiveness of investment is low enough. We also show that for an intermediate range of spillovers firms do invest in R&D although the market structure becomes fragmented as market size grows (there is no lower bound to concentration). In the second part, we allow firms to protect their investment against spillovers and focus on the symmetric equilibria, where all firms either protect their investment or do not protect it at all. We show that higher spillovers and/or lower effectiveness of investment may induce firms to protect themselves against spillovers, leading to higher investment in quality, and to more concentrated market structure. Thus, Sutton's result on the concentration bound is preserved.

We differentiate between ex post and ex ante knowledge spillovers. While the latter include only exogenous characteristics of the market environment, the former also account for possible protective actions undertaken by firms. In Chapter 2 we carry out empirical testing of the role of knowledge spillovers in an endogenous sunk costs model environment. First, we show that markets in which firms undertake intensive R&D expenditures are not likely to become fragmented, *ceteris paribus*, as the size of the market increases. On the contrary, for firms which do not undertake intensive R&D expenditures: the market is more likely to become fragmented as its size increases, and the effect of market size is even stronger if knowledge spillovers are high. We find that ex post knowledge spillovers have adverse impact on R&D incentives. On the other hand, firms with high ex ante knowledge spillovers are more likely to use private protective measures, possibly restoring incentives to invest in R&D.

Chapter 3 empirically investigates how the level of delegation of authority is related to the performance of an organization. Decentralized, horizontal organizational structure takes advantage of more efficient decision making, mainly due to more efficient use of "soft" information. The cost of such decentralization is the loss of control and the need to properly incentivise agents who are legitimately given the authority to make decisions. This is the trade-off organization faces when deciding on the level of authority delega-

tion. The effect of authority delegation is studied using empirical data from the banking sector. Different specifications were used to estimate the effect of authority delegation on performance characteristics. Estimates demonstrate that more authority delegated has a positive effect on quantitative measures of bank performance; however, it decreases the quality of decisions taken. Results demonstrate that there is a trade-off between quantitative and qualitative performance characteristics. While a local bank branch is able to increase loan generation when more authority is delegated to it, there is also some evidence of loan quality deterioration.