

## **Exploration modes and its impact on industry profitability**

The differentiated effects of internal and external ways to access market knowledge

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### **Abstract**

In the behavioural and evolutionary perspectives it is usually supposed that firms' performance depends significantly on their exploration activities, because they enlarge firms' knowledge base. The analysis has been here focused on accessing external knowledge, that is acquiring and managing others' experience, and on developing internal knowledge, that is accumulating and using the own direct experience. The effects of these two exploration modes on profitability at industry and segment level with honest and dishonest agents has been investigated through an agent-based model of industry, whose firms, in order to achieve competitive advantages, look for the best suppliers. Firms are characterized by bounded rationality in terms of absorptive capacity and organizational memory. By testing six groups of hypotheses it is shown that direct experience has the main positive impact, especially in contexts of opportunist behaviours. It also improves performance in terms of the speed to reach the maximum profitability, but conditionally to the presence of high degree of access and management of indirect experience, and at the price of high instability of the collective outcomes. Even more interestingly, it clearly emerges that, even if submitted to almost the same rules and size, the industry segments of final producers and first tiers perform quite differently. Moreover, the two exploration modes and opportunism impact very differently on each industry segment. Consequently, their effects on single firms' or collective profitability cannot be understood if it is not specified the specific segment where such firms are located. Moreover, the outcome at industry level strictly depends on industry structure and on the competitive pressure among suppliers and on the ratio of transactions occurring between each supplier-buyer pair.

**Key-words:** absorptive capacity, bounded rationality, cognitive map, direct experience, exploration modes, industry profitability, knowledge transfer, opportunism, organizational memory, reputation.

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