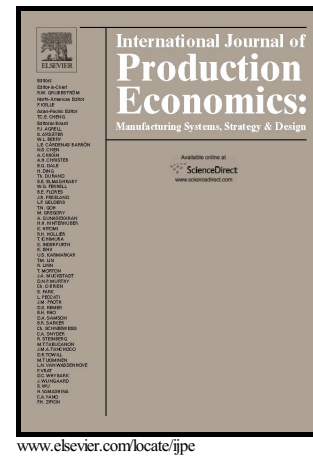


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An Ising-based dynamic model to study the effect of social interactions on firm absorptive capacity

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Abstract

We present a dynamic model of firm absorptive capacity, which is consistent with a process-oriented conceptualization and based on the teaching-learning approach, to investigate the effect of social interactions among the firm members on the firm absorptive capacity. In particular, two main learning processes are considered: the explorative and the transformative learning. To develop the model, the Ising approach, which is a very well established framework to study the dynamics of social interactions, is employed. Furthermore, a simulation analysis is carried out to investigate the effect of two patterns and four levels of social interactions on the firm absorptive capacity. Results show that block-diagonal patterns, where interactions occur inside groups and not between groups (such as in modular organizations), lead to higher absorptive capacity, compared to hierarchical patterns (e.g., those exhibited by centralized organizations). We also show that the relationship between the level of social interactions and the firm absorptive capacity follows an inverted-U shape in the block-diagonal patterns, while the absorptive capacity decreases as the level of interactions

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