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THE PARADOX OF AMBIDEXTERITY: BALANCING THE BENEFITS AND PERILS OF EXPLORATION, EXPLOITATION AND LEARNING FROM FAILURE (SUMMARY)

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≈ SUMMARY ≈

**THE PARADOX OF AMBIDEXTERITY: BALANCING THE BENEFITS AND PERILS
OF EXPLORATION, EXPLOITATION AND LEARNING FROM FAILURE**

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Principal Topic

Two competing views exist on the most effective strategy for improving the successful exploration of new knowledge, while mitigating the associated high levels of uncertainty and failure. One view advocates pursuing an ambidextrous strategy, defined as the simultaneous pursuit of both exploration and exploitation. However, another view suggests that, instead of pursuing exploitation to reduce the risks of exploration, innovators should embrace the uncertainty associated with exploration. It is argued that, while exploration may lead to failure in the short-term, failures improve the likelihood of generating innovation breakthroughs in the long-term. This notion is promoted in the often-cited mantra: “fail fast, fail often”. However, while the benefits of learning from failure are lauded, empirical evidence to support this claim is sparse. This paper contributes to a more nuanced understanding of the relationship between ambidexterity and learning from failure.

Method

Our sample is based on patents in the biomedical device industry drawn from the NBER database. The sample consists of 13,464 patents granted to 3390 assignees. For each assignee, we also collect five years of patenting history for generating measures related to prior failure experience and prior success experience. We estimate the impact of exploration, exploitation, prior failure experience and prior success experience, and the associated interaction effects, on the likelihood of generating a breakthrough.

Results and Implications

Our results provide insights on the relationship between ambidexterity and learning from failure. First, we demonstrate that exploration increases the likelihood of generating a breakthrough, while the opposite is true for exploitation. Second, we find a negative interaction effect between exploration and exploitation, highlighting the challenge of pursuing ambidexterity. We do not find a direct benefit of learning from prior failure experience. However, we demonstrate that prior failure experience and exploitation are jointly necessary, but not independently sufficient, for learning from failure to occur. Although we find that learning from failure occurs with exploitation, we also demonstrate that prior failure experience may lead to an “exploration failure trap”. Our results illustrate that an effective ambidextrous strategy necessitates a delicate balancing act between exploration, exploitation, and learning from failure.

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