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RESEARCH ARTICLE

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Complex business models: Pacorini at the edge of chaos*

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Abstract

Sustainable and long-lasting companies necessarily position themselves at the edge of chaos and evolve their business models in order to maintain a mix of efficiency and creativity. Organizations dealing with complexity necessarily position themselves at the edge of chaos, always swaying between order and disorder. Two opposite cycles ("sharing cycle" oriented toward efficiency and "creative cycle" oriented toward innovation) should be balanced dynamically and along time by organizations that want to evolve. We investigated business model evolution after external discontinuities, showing that sustainable and long-lasting companies try to find an equilibrium between order and disorder, predictability and unpredictability, standardization, and innovation.

1 | INTRODUCTION

Business models tend to be naturally stable and hard to change (Doz & Kosonen, 2010). In fact, "Light creates shadows. A bright lamp aimed at one thing hides many others." In this regard, Maurice Allais (1988) denounces "the tyranny of dominant ideas." Just as the majority of people only listen to information that confirms their thoughts, organizations will only take into account what is in line with their corporate culture and with familiar, sometimes even trite, issues. This can induce many forms of silence (Morel, 2006) call it "organizational silence." It limits the expression of "deviant" ideas (i.e., ideas which diverge from the dominant design), and hides not only disagreements, but also weak signals and warnings.

The stability of business models is further increased by the search for efficiency, particularly in periods of rapid growth, where the reliable and efficient scaling up of operations becomes critical (Doz & Kosonen, 2008). Such stability is required for efficiency: in traditional management practice, success is based on routine repetition of tasks and the phenomenon of convergence-to-fit (the growing adaptation to a particular situation) contributes to increasing the stability. But such stability is also likely to result in a growing rigidity, which inevitably limits a firm's strategic agility and thus its ability to renew and reform itself.

In order to innovate, we must think outside the box, rejecting the accepted paradigm. This view is endorsed by great epistemologists like Kuhn and Popper. For Thomas Kuhn, science does not gradually move forward toward the truth, but is instead prone to periodic revolutions: the so-called "paradigm shifts." Paradigm shifts originate from anomalies in "normal science," in other words, from events that fail to confirm the paradigm. If the contradiction is particularly persistent or evident, the anomaly can become strong enough to question established beliefs and techniques within the paradigm, thus opening a crisis. As a result of this crisis, different paradigms are then created. It is important to note that these new paradigms do not arise from the previous theory, but from the rejection of the well-established beliefs of the dominant paradigm. While for Kuhn these "revolutions" are extremely rare, Popper argues that science should be in a state of continuous transformation. In the field of epistemology, "permanent revolution" is Popper's motto: every scientist should always strive to undermine accepted notions, trying to disprove them and then improve them, in asymptotic approximation to the truth. For Popper, a critical attitude is at the heart of any scientific endeavor.

Similarly, business model renewals in organizations cannot derive from efficiency acts, but from creative ones. We interpret and explain this view with complexity theory. A consequence of our findings is that the sustainability of an organization depends on its ability to balance the two cycles and, during time, to anticipate and react to the consequences of evolution in any given component. Our contribution in this article concerns business model evolution viewed as a fine-tuning process involving two balancing acts: (1) "static balance": sharing cycle and creation one, that is, balance between efficiency and on-going improvement and innovation; (2) "dynamic balance": evolution, by anticipating and identifying contextual changes and changing during time, balancing intended and emergent changes, searching for evolution.

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