

Complexity in systems thinking and dynamic capabilities framework

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Purpose – The Covid-19 pandemic increased the level of complexity of the environment in which businesses today operate and compete. In all industries, firms are facing the need to adopt new strategies to deal with emerging challenges, many changes, and increased degrees of uncertainty. This work aims to offer a contribution to the study of complexity through a conceptual comparison and integration of the Dynamic Capabilities framework and Systems Thinking.

Design/Methodology/approach – After identifying and analysing the main contributions provided by the Dynamic Capabilities framework and the Systems Thinking to the study of complexity, this paper highlights the links between the two research fields, showing how, on some specific aspects, they can be integrated and complement each other.

Findings – The study identifies several links and possible integrations between the research strands of Dynamic Capabilities and Systems Thinking, with particular reference to the Viable Systems Approach (VSA). Among them, both theories agree on the importance of the knowledge process, which in Dynamic Capabilities occurs through *sensing* capabilities (abduction), while in VSA is described through three inference modes (abduction, deduction, induction). According to VSA, when the observed phenomenon is not referable to any of the interpretative schemes possessed, the decision-maker must develop new capabilities, which could be traced back to the *seizing* capabilities. Moreover, VSA describes better the *transforming* capabilities, which refers to an ability to recombine and to reconfigure assets and organizational structures, introducing different interventions: adjustments, transformations, restructuring, and reconversions.

Research implications – In a period characterised by increasing levels of complexity and uncertainty, this work suggests to scholars to adopt new visions and deepen the study of complexity by integrating and comparing existing theories.

Originality/value – Although some previous works have shown certain common features between Dynamic Capabilities framework and Systems Theories, the links between them have not yet been studied in depth. This work represents a first step in this direction.

Keywords Dynamic Capabilities, Systems Thinking, Viable Systems Approach, Complexity

Paper type – Conceptual paper