

Enacting Dynamic Capabilities In Distributed Organisational Environments

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Summary

I will in this paper introduce and develop a perspective of dynamic capabilities building on the emergent enactive approach in the cognitive sciences. Dynamic capabilities represent in this perspective a process of enabling distributed knowledge structures and “chunked” networks of loose procedures and understandings helping organisations to develop more efficient practices not easily imitable. This view represent a deviation from the present dominant representationalism paradigm in strategy research viewing dynamic capabilities as a set of specific and identifiable processes (e.g. Teece, Pisano and Shuen 1997, Eisenhardt and Martin 2000). The empirical basis for the elaborations and conceptualisations made is from a longitudinal and still ongoing study of three greenfield start-up projects of a global light metal producer.

Abstract

For many manufacturing companies competitive advantage is a continuous process of performance improvements and search for better practices and development of new capabilities. This includes a search for more efficient process technologies, new or improved products and procedures in the manufacturing process but also development of dynamic capabilities (Teece, Pisano and Shuen 1997) to respond and adapt to changes and new trends in the sector. For a globalised manufacturing company the latter includes establishing new plants and shutting down non-performing units. The frequency and importance of establishing new plants indicate that this is developed practices and routines well aligned with the concept of dynamic capabilities. However, how can it be that experiences indicate that establishing new plants are more encumbered with risk and uncertainty than predictability even if the resource base, practices and capabilities involved are in accordance with the companies “best-practice”-systems?

Zollo and Winter (2002) define a dynamic capability as “(...) a learned and stable pattern of collective activity through which the organization systematically generates and modifies its operating routines in pursuit of improved effectiveness.”. Winter (2003) starts out by introducing a hierarchy of capabilities defining the ‘zero level’ capabilities

as the organisational short-term survival practice and in line with Collis (1994) views dynamic capabilities as higher order organisational capabilities governing the rate of change of the operating routines. According to Eisenhardt and Martin (2000) the value of dynamic capabilities lie in the underlying resource configuration they create and not in the capabilities themselves, and they establish that dynamic capabilities are neither vague or tautological and argue that “(...) dynamic capabilities are a set of specific and identifiable processes such as product development, strategic decision making, and alliancing.” This is well aligned with what Tsoukas and Knudsen (2002) describe as the dominant representativism approach in the field of strategic management where concepts are given the status as an object, i.e. something that can be isolated, captured, and codified. Thinking is basically a representational activity and actions are within this approach based on reliable prior knowledge (Tsoukas and Knudsen op.cit.). According to Varela et al. (1999:147 in Tsoukas and Knudsen op.cit.) a representationalist approach tacitly assumes that the world is pre-given and that ‘the world can be divided into regions of discrete elements and tasks’.

The enactive approach (Varela, Thompson and Rosch 1992, Weick 1995) emphasises knowing as *action*. From this point of view thinking is *doing* and a social practice exist because it incorporates a set of background distinctions giving it meaning and which make it possible to undertake the appropriate action constituting the social practice (Tsoukas and Knudsen op. cit.) underlying a dynamic capability. Meaning and social practice are thus mutually constituted, and it follows that social activity rather than the cognizing subject is the foundation of intelligibility (Tsoukas and Knudsen op.cit.). Connectionism represents in the cognitive sciences an alternative theory of thought to the folk psychology sentence-model logic of seeing activities as a serial process of analysis by a single processor (Bloch 1991). Knowledge is from this perspective accessed through a number of processing units which work in parallel and feed in information simultaneously. It suggests, too, that the information received from these multiple parallel processors is analysed simultaneously through already existing networks connecting the processors. In an organisational context connectionism suggest that “memory” is distributed in network of actors and artifacts and is “stored” and activated through the connections between the nodes. For standard and recurring situations these networks develop over time into knowledge structures (Nisbett and Ross 1980) and “chunked” networks of loose procedures (i.e. capabilities) and understandings enabling organisations to develop more efficient practices not easily imitable. This enabling process represents a higher level capability (Collis 1994) which within the enactive approach can be labeled as a dynamic capability. However, in contrast to the traditional dynamic capability view (e.g. Teece, Pisano and Shuen 1997, Eisenhardt and Martin 2000) which see a dynamic capability as something that can be isolated and captured the enactive approach suggest that it is an emergence of distributed and historically evolved collective patterns and knowledge structures from concrete work contexts.

The empirical basis for the conceptualisations made are from a still ongoing study of three greenfield projects under the auspices of a large international light metal producer with production facilities worldwide. The study has been conducted as a case study where

the case is the corporate's decisions about establishing new greenfield-projects both in Europe and Asia and the unit of analysis is the individual start-up projects.

References

- Bloch, M. (1991). Language, Anthropology and Cognitive Science. *MAN*, New Series, Vol. 26, No. 2:183-198
- Collis, D.J. (1994). Research note: How valuable are organizational capabilities?, *Strategic Management Journal*, 15 (Winter special issue): 143-152
- Eisenhardt, K.M. and Martin, J.A. (2000) Dynamic Capabilities: What are they? *Strategic Management Journal* 21 (Special issue): 1105-1121
- Nisbett, R. and Ross, L. (1980). *Human Inference: Strategies and Shortcomings of Social Judgement*. Englewood Cliffs, NJ: Prentice-Hall
- Teece, D. J. og Pisano, G. et al. (1997). "Dynamic Capabilities and Strategic Management". *Strategic Management Journal*, **18**: 509-533
- Tsoukas, H. and Knudsen, C. (2002). The Conduct of Strategy Research. In Pettigrew, A., Thomas, H og Whittington, R. (red.), *Handbook of Strategy and Management*. London: Sage
- Varela, F.J., Thompson, E. and Rosch, E. (1992). *The Embodied Mind*. Cambridge, MA: MIT Press
- Wick, K.E. (1995). *Sensemaking in Organizations*. Thousand Oaks: Sage
- Winter, S.G. (2000). The satisficing principle in capability learning, *Strategic Management Journal*, 21 (Special issue): 981-996
- Zollo, M. and Winter, S.G. (2002). Deliberate learning and the evolution of dynamic capabilities, *Organization Science*, 13: 339-351