

Deep dive:

Absorptive capacity

An important strategic point concerns the question of where, when and how organizations make use of external knowledge to grow. It's easy to make the assumption that because there is a rich environment full of potential sources of innovation that every organization will find and make use of these. The reality is, of course, that they differ widely in their ability to make use of such trigger signals – and the measure of this ability to find and use new knowledge has been termed 'absorptive capacity' (AC).

The concept was first introduced by Cohen and Levinthal (1990) who described it as *'the ability of a firm to recognize the value of new, external information, assimilate it, and apply it to commercial ends'* and saw it as *'largely a function of the firm's level of prior related knowledge'*. It is an important construct because it shifts our attention to how well firms are equipped to search out, select and implement knowledge.

Cohen and Levinthal's original work was based on exploring (via mathematical modelling) the idea that firms might incur substantial long-run costs for learning a new 'stock' of information and that R&D needed to be viewed as an investment in today's and tomorrow's technology. In later work they broadened and refined the model and definition of absorptive capacity to include more than just the R&D function and also explored the role of technological opportunity and appropriability in determining the firm's incentive to build absorptive capacity.

Further research by Zahra and George (2002) suggested that several different processes were involved – rather than a simple absorption of new knowledge there were discrete activities linked to search, acquisition, assimilation and exploitation. They also introduced the idea of 'potential' and 'realised' AC which helps explain why firms are sometimes unable to leverage and exploit external information.

The key message from research on AC is that it is a complex construct; acquiring and using new knowledge involves multiple and different activities around search, acquisition, assimilation and implementation. Connectivity between these is important – the ability to search and acquire (potential AC in Zahra and George's model) may not lead to innovation. To complete the process further capabilities around assimilation and exploitation (realised AC) are also needed. Importantly AC is associated with various kinds of search and subsequent activities, not just large firm formal product-linked R&D; mechanisms whereby organizations explore and develop their *process* innovation, for example are also relevant.

Absorptive capacity is clearly not evenly distributed across a population. For various reasons firms may find difficulties in growing through acquiring and using new knowledge. Some may simply be unaware of the need to change never mind having

the capability to manage such change. Such firms – a classic problem of SME growth for example – differ from those which recognize in some strategic way the need to change, to acquire and use new knowledge but lack the capability to target their search or to assimilate and make effective use of new knowledge once identified. Others may be clear what they need but lack capability in finding and acquiring it. And others may have well-developed routines for dealing with all of these issues and represent resources on which less experienced firms might draw – as is the case with some major supply chains focused around a core central player.

Further references:

- Cohen, W. and D. Levinthal (1990). "Absorptive capacity: A new perspective on learning and innovation." *Administrative Science Quarterly* **35**(1): 128-152.
- Zahra, S. A. and G. George (2002.). "Absorptive capacity: A review, reconceptualization and extension." *Academy of Management Review*, **27**:: 185-194.