

Introduction

In a high-velocity environment, e. g. as we deal with during a pandemic, companies need specific capabilities that enable them to adapt to change – they need dynamic capabilities (DC).

Dynamic capabilities view (Teece et al., 1997; Eisenhardt & Martin, 2000) is one of the most influential schools in contemporary management theory. These capabilities are a kind of abstract, more advanced capabilities, which allow to sense and seize opportunities and anticipate threats (Teece, 2007).

Researchers agree that DC have a hierarchical structure. At the top of this hierarchy, there are higher-order dynamic capabilities (HDC). They are change-focused capabilities to be more flexible (Winter, 2003). They are especially important in a high-velocity business environment. The current crisis gives the unique opportunity to explore these capabilities.

This study aims to analyze different concepts of HDC and develop a theoretical framework for future empirical research.

Keywords: dynamic capabilities, hierarchy of dynamic capabilities, higher-order dynamic capabilities, dynamic learning capabilities.

Methods

The systematic literature review method was planned. An attempt was made to search databases using keywords. It turned out that not only the number of records received was small, but also the vast majority of articles found were not sufficiently related to the topic in question. Moreover, due to the inconsistent nomenclature, there was a risk of omitting important publications when using such a method. As a result, it was decided that this study would be a literature review using the snowballing approach.

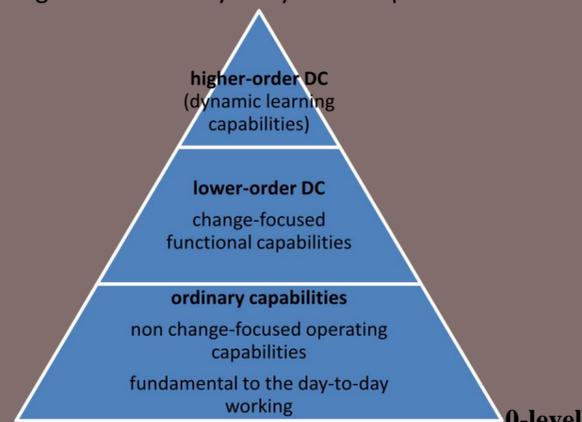
Several important articles on the DC hierarchy were identified (e. g. Hine et al., 2014; Verreyne et al., 2016). Based on these publications, the precursors of the dynamic capabilities hierarchy: Collis (1994) and Winter (2003) were determined. The selected papers on the DC hierarchy formed the basis for further study. The reference list of each paper and the citations to the paper were searched.

Snowballing as a search strategy can be a good alternative to database searching. A hybrid approach where different approaches to find the relevant papers complement each other can be recommended. So the systematic literature review is planned as the next stage of a bigger scientific project.

Results and Findings

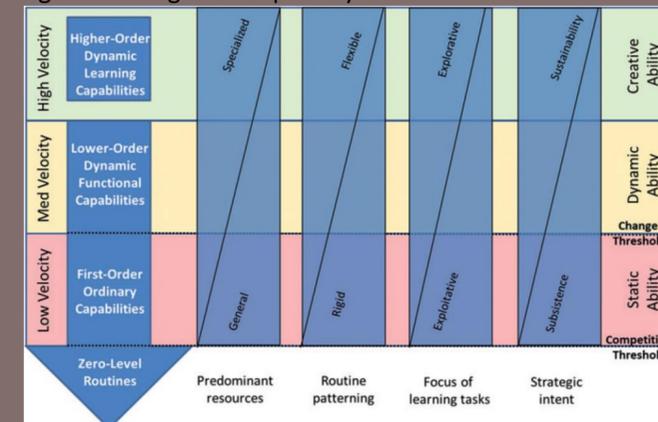
Dynamic capabilities have a **hierarchical structure**. Higher-order dynamic capabilities (called also dynamic learning capabilities) are at the highest level of this hierarchy (Figure 1).

Figure 1. Hierarchy of dynamic capabilities



Source: Own elaboration based on Hine et al. (2014), Verreyne et al. (2016)

Figure 2. Integrated capability framework



Source: Hine et al. (2014, p. 1308)

They are characterized by four interdependent internal dimensions: appropriate predominant resources, flexible routine patterning, explorative focus on learning tasks and sustainability of strategic intent, and one external dimension - the high velocity of environment, as shown in the integrated capability framework (Hine et al., 2014, p. 1308) – Figure 2.

The existing definitions of these capabilities are very abstract, e.g.:

- capabilities closely related to dynamic improvements, comprises the more metaphysical strategic insights, better capabilities (than lower) to “learning to learn” (Collis, 1994, p. 144-145),
- capabilities to be more flexible (Winter, 2003),
- capabilities focused on creativity and experimentation to create new capabilities and change the way current capabilities are used (Hine et al., 2014, p. 1314-1315).

So far the number of publications on HDC is small, and most of them discuss dynamic capabilities on the very general, abstract level. Scholars often highlight that research on HDC is lacking. Specifically, the academic knowledge is weak about specific processes and actions implemented by organizations. Continuing conceptual studies, the hierarchy of dynamic capabilities, and the concept of higher-order dynamic capabilities should be explored empirically concerning the real existing business practices.

The type of capabilities which a firm deploys depends on the velocity of the business environment (Verreyne et al., 2016). HDC are important in high-velocity markets. That's why the empirical studies on HDC to date have usually focused on rapidly changing technological sectors, on big innovative companies. The researchers' attention was focused mainly on the proactive mode of HDC. The dynamic capabilities to generate market changes were studied, rather than HDC to respond to changes in the environment. However, the core idea of the dynamic capability perspective is the ability to adapt to changes in the market environment. Therefore, more attention should be paid to HDC reactive mode - adaptation to a changing environment. There is a lack of such research.

Currently, we are dealing with a crisis in the world economy on an unprecedented scale. This gives the unique opportunity to explore higher-order dynamic capabilities in an extremely difficult business environment. The current crisis is affecting all companies to a greater or lesser extent, so massive scale observation is possible. HDC are currently used in many areas of the economy, as the pandemic generates threats for many companies but also opportunities for others.

Discussion

Higher-order dynamic capabilities are undoubtedly an interesting topic for both scientists and practitioners. They are all the more important in the current pandemic situation.

The **theoretical implications** of the work are: analyzing the existing concepts of higher-order dynamic capabilities and proposing a less abstract definition of this concept. They are change-focused creative abilities to reconfiguration, renewal, and re-creation of resources and creation of radically innovative or new routines, the organization's ability to go beyond the current strategic orientation, to look at resources creatively, to use them unconventionally. The less abstract definition will allow for empirically exploring these capabilities in the future.

The study has also **practical implications**. It will allow managers to understand the concept of HDC in relation to their business activities.

This work has some **limitations**, mainly the research is the exploration of the topic. As it is the initial stage of a big research project, it builds a base for future studies.

Directions of future research: There is a clear shortage of empirical research on HDC, especially regarding specific processes and activities implemented by companies.

Key References

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