

SUMMARY OF ARTICLE: [HTTPS://DX.DOI.ORG/10.12795/REA.2022.I43.07](https://dx.doi.org/10.12795/REA.2022.I43.07)

## The importance of dynamic capabilities in the reformulation of an innovative competitive advantage. Case study of Cordoba technology companies

María Amalia Trillo-Holgado

[maru.trillo@uco.es](mailto:maru.trillo@uco.es)  0000-0002-1626-8066

Carolina León-Urban

[d22leurc@uco.es](mailto:d22leurc@uco.es)  0000-0002-3862-6784

Rocío López-Caballero

[d22locar@uco.es](mailto:d22locar@uco.es)  0000-0003-2701-9951

*Universidad de Córdoba (Área de Organización de Empresas). Edificio Gregor Mendel (C5), 3ª planta.  
Campus de Rabanales. Ctra. Madrid-Cádiz, Km. 369. 14071 Córdoba, España*

### KEYWORDS

Competitive advantage  
Dynamic capabilities  
Innovation  
Case study

The Theory of Resources and Capabilities is not able to explain how companies renew their competences to adapt to the changing environment and maintain their competitive advantages. For this reason, in recent decades, a new perspective has been developed in the literature on strategic management, which has been given the name of Dynamic Capabilities (Teece, 2007). This perspective arises to improve the explanatory capacity of the Theory of Resources and Capabilities with respect to the sustainable nature of competitive advantage in rapidly changing environments. It considers the evolving nature of the firm's resources and capabilities in relation to changes in the environment in which the firm operates (Wang & Ahmed, 2007). Firms that have achieved success in such competitive environments are those that have demonstrated responsiveness in the moment, and rapid and flexible product innovation (Teece et al., 1997).

The study of the phenomenon of dynamic capabilities has been approached from various theoretical perspectives or approaches. Most prominent are the innovation approach, the capability building approach and the contingent approach. This implies that as the perspective from which the study phenomenon is analysed changes, the conclusions reached in each analysis are different. However, all perspectives have in common the relationship with the need to rethink competitive advantage in order to address the market, as explained below.

From a contingent approach, dynamic capabilities are defined as capabilities that make it possible to respond to changes in the environment (Zajac et al. 2000). The innovation approach refers to the firm's ability to develop new solutions (Teece & Pisano, 1994). And, in the capability building theory, capabilities are conceived as those that enable the modification of the firm's current competencies or organisational routines (Oliver & Holzinger, 2008).



Although the three currents respond to different schemes, they cannot be considered mutually exclusive. In this sense, both the innovation stream or approach and the contingent perspective seem to define dynamic capabilities in terms of their outcomes or effects, innovation and state of adaptation, respectively. However, although the definitions that make up each approach differ in the way they are stated, two common aspects can be identified: the ability of the firm to remain adapted to rapidly changing environments. Both aspects highlight the need to take into account not only the external (environment) and internal (resources and capabilities) factors of the organisation, but also the evolution of both factors over time and the way in which firms adjust between them. This is done through the “strategic fit” between internal and contextual factors (Zajac et al., 2000; Rindova & Kotha, 2001) to try to explain the achievement of a sustainable competitive advantage by firms operating in dynamic environments with unpredictable change.

Teece et al. (1997) stated that “dynamic capabilities reflect the organisational ability to achieve new and innovative forms of competitive advantage”. The development and use of dynamic capabilities influences the level and scope of a firm’s innovation, enabling it to remain adaptive to a changing environment. Successful firms in the marketplace are those that can demonstrate the ability to respond in a timely manner and innovate products quickly and flexibly, along with the managerial capacity to effectively coordinate and redeploy internal and external competencies. Therefore, this paper will focus on the innovation approach to articulate the relationship between the development and use of organisations’ dynamic capabilities and their efforts to innovate, which has a major impact on the strategic management of the firm, as Teece (2014) points out, given that the firm that fails to innovate is doomed to exit the market.

The definition of dynamic capabilities proposed in this research is as follows: a company’s ability to renew and update its competencies in response to changes in the environment in which it operates, enabling it to develop new processes, products or services in order to maintain or expand its competitive advantages.

The strategic resources most commonly related to innovation capability are (Leonard and Sensiper 1998; Oke et al. 2009): human capital, leadership, culture, and structures and systems.

Regarding the dynamic capabilities needed for innovation, according to the literature analysing knowledge management are (Grant, 1996; Zahra & George, 2002; Lavie, 2006): knowledge creation, knowledge absorption, knowledge integration and knowledge reconfiguration. This relates to general organisational learning capabilities on which the literature is less focused, as stated by Ipek (2019).

Moreover, as Zahra (2021) points out, researchers have hardly studied the fundamental question of how entrepreneurial firms manage their resources for competitive advantage.

On the other hand, the factors that cause dynamism in the environment, scattered in the literature, have been classified into three main blocks: supply factors (raw materials, technology, new competitors), demand factors (consumers) and factors related to the macroeconomic environment (government policy and economic turbulence).

Market dynamics require organisations to develop new capabilities and use them to develop innovative products, services and processes to gain competitive advantage. If the innovation is a process innovation (introduction of a significant change in the production technology of a good or service), a competitive advantage of cost leadership will be achieved, and if it is a product or service innovation (introduction of new or significantly improved products or services), a competitive advantage of product or service differentiation will be achieved.

Methodologically, a model is constructed through which certain variables and indicators are identified to help managers explain how those resources and capabilities that intervene to a greater extent in the development of new processes, products or services are related to the reconfiguration of the company’s competitive advantage.

The model is composed of four elements: strategic resources, dynamic capabilities, innovation and competitive advantage. Innovation is considered to be both process and product or service innovation, whether incremental or radical. Feedback is established between the dynamic capabilities of the company, described above, and its competitive advantage (cost leadership or differentiation), contributing to the evolution of the company in its environment.



To corroborate the usefulness of the model, an exemplary case study is carried out within the technology sector based on a public and a private company.

So, It is provided a strategic tool to the manage the dynamic capabilities that are part of the process of developing an innovative competitive advantage in the company. Both constructs feedback on each other and enable the evolution of the entity. In addition, it is highlighted different ways of acting in practice, both in the public and private sector.

In the companies studied, it has become clear how their competitive advantage is reconfigured according to their dynamic capabilities, a process that can be extrapolated, in general terms, to other companies in different sectors or countries.

In the knowledge capture stage, the importance of collaborative behaviour stands out. The integration of this knowledge takes place through training and regular meetings. The organisational culture is a basic support for the company's strategy, where the strengthening of the collaborative spirit is necessary for the development of innovations. That reaffirms the scientific literature on the subject, which explains how business strategy, together with dynamic capabilities, determines a sustainable competitive advantage in a global environment. On the other hand, it also confirms the fact that specific innovation activities support dynamic capabilities and their interrelationships in terms of complementary or substitutive effects. Moreover, in both public and private companies, the culture of the organisation has been strengthened by the innovations. And, in both companies there are ways to measure the level of customer satisfaction.

In terms of knowledge absorption, investment in R&D&I is particularly relevant, which in the case of public companies could be more profit-driven than in the case of private companies.

Periodic knowledge integration meetings might be more frequent in the case of the innovative private company.

In the case of knowledge reconfiguration, concrete mechanisms for the search of market opportunities are highlighted.

The implementation and evolution of dynamic capabilities is carried out by deploying the company's resources but, in the cases analysed, the importance given to people is essential.

In the case of private companies, customer orientation is freer from political issues and bureaucratic procedures.

In short, the innovations developed by both companies have contributed to the reconfiguration of their competitive advantages. The service innovation of the public company has strengthened the integral, innovative and exclusive nature of its services provided to public bodies, and the process innovation has made it possible to increase the quality of these services due to the acquisition of servers that have increased the storage capacity of its clients' data. On the other hand, in private enterprise, both its service innovation and process innovation have improved the quality of its services, both in terms of reliability because customers have the guarantee of a back-up line for data transmission, and in terms of functionalities due to the characteristics of its services adapted to the needs of its customers.

For future research, it is proposed to extend the study to a broad sample of companies and, as noted in the introduction to this work, to quantify the reaction time of one type of company and another. It would also be interesting to determine the percentage of R&D&I dedicated to each process and type of company.