

The dynamic capabilities framework implementation in innovation and creative ecosystems

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Abstract. The arising concern for the inter-industry collaborations was concretised through the continuous development of new collaborative structures as it is the case of business ecosystems emergence. The use of open innovation in existing ecosystems became an essential trigger for the emergence, defining and development of dynamic capabilities. Consequently, these capabilities were used as the most relevant resources in value networks evolution as they defined and created new ways for opportunities exploration and exploitation especially within existing ecosystems. From this point of view the current research seeks to identify and define what are dynamic capabilities, to present the existing framework of capabilities analysis and to understand how it is used in practice within existing ecosystems. Also, this research seeks to uncover how collaborative efforts and the use of innovative technologies influence organisational growth.

1. Introduction

Business ecosystems emergence and development was triggered by the need to establish a comprehensive framework where collaborative relations were perceived as mechanisms for actors' co-evolution [1]. From this point of view, in order to ensure collaborative processes implementation each ecosystem's participant should design own business model so that it could provide and support the creation of required capabilities for ecosystems orchestration [2].

The arising technological challenges along with the increasing attention for continuous innovation and value creation represent weighting factors in business model innovation processes. As companies strive to adopt new technologies and to engage customers into critical internal processes, new innovation capabilities are acquired. Teece suggested the relevance of dynamic capabilities as a binding linkage between a strategic and entrepreneurial approach to the use of internal resources and firm's capability to establish collaborations with various external partners [3]. This approach requires a continuous analysis of arising opportunities in terms of their exploration and exploitation [3]. In terms of business ecosystem perspective, the development of dynamic capabilities first of all depends on internal innovation of each engaged actor (e.g. universities, complementors, financial agencies, etc.) [4]. Subsequent, based on the key aspects presented, there will be highlighted the dynamic capabilities framework and its relevance for ecosystems 'development within different industries.

2. The dynamic capabilities framework: an innovation ecosystem perspective

For the first time the dynamic capabilities concept was closely linked to the Resource Based View theory. However, according to the Wang and Ahmed this approach seems to be static and do not reflect

entirely the nature of dynamic capabilities. The main identified gap suggested that RBV reflects only the firm's perspective on the necessary internal resources [5]. In terms of business environments dynamics this approach is no longer valid. It seems neglected the fact that dynamic capabilities should reflect not only organizational resources perspective but also strategic view by implementing specific processes (e.g. to establish new partnerships) or product development [6]. Also, they can be perceived as an important strategic tool as this concept emphasizes the relevance of organizational attributes in dynamic business environments [7]. From this point of view dynamic capabilities emphasize the relevance of organizational routines which are seen also as organizational capabilities [8]. According to Salvato and Vassolo the engagement of the human resource and continuous dialogue building contribute to the creation of the internal knowledge base necessary for opportunities exploration and exploitation [8]. More than that Bingham et al suggest that learning process can be achieved through learning processes of the past experiences [9].

According to Teece the emergence of innovation ecosystems rises also the concern for new type of resources and dynamic capabilities development in order to ensure the companies adaptability to the new market's requirements [4]. Thus, it is more about how to build collaboratively new capabilities for innovation rather than owning them. From this point of view, the building process of dynamic capabilities requires three main stages: sensing, seizing and transformation [4], presented in figure 1.

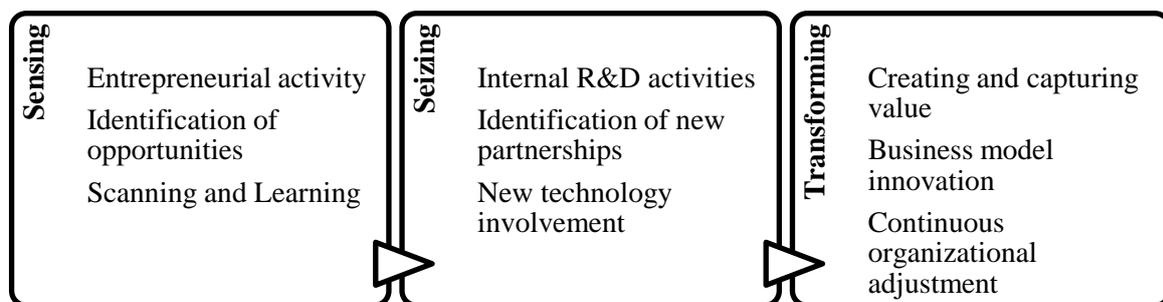


Figure 1. The dynamic capabilities framework according to Teece [4].

Williamson explored the dynamic capabilities framework in terms of creating innovation. According to the author the use of open innovation, social media and the creation of dedicated platforms contribute to the experience building by acquiring necessary knowledge in a dynamic way [10]. The major arising implications are linked to the dynamic response from the market, adaptability to the continuously changing customers' preferences, product modularity, the use of waterfall type of processes and the creation of virtual services [10]. Therefore, the dynamic capabilities framework emphasizes the relevance of building and adopting flexible and dynamic type of processes rather than static ones. Hence, the companies from innovation ecosystems should be able to adapt to the continuously evolving market requirements.

3. Applying the dynamic capabilities framework in innovation ecosystem versus creative one

The concepts of innovation and creative ecosystems by definition suggests the engagement of different type of stakeholders into co-creation processes. However, the main difference lies in the type of resources used in order to acquire necessary knowledge, the product development processes and innovation capabilities built by actors. Innovation ecosystems, from the dynamic capabilities' perspective, can be perceived as a dynamic structure which combines knowledge base derived from external partners with various experiences, abilities and capacities [11, 12] and usually can be observed in the case of keystone actors [13]. In the case of creative ecosystems along with continuous innovation, the building of necessary knowledge base is perceived as a creative process which especially implies the engagement of the creative community [14]. In this type of ecosystems, the building of innovative capabilities is grounded to the symbiotic relations and dynamic interactions among different type of stakeholders [14]. In order to illustrate how dynamic capabilities framework can be applied in innovation and creative

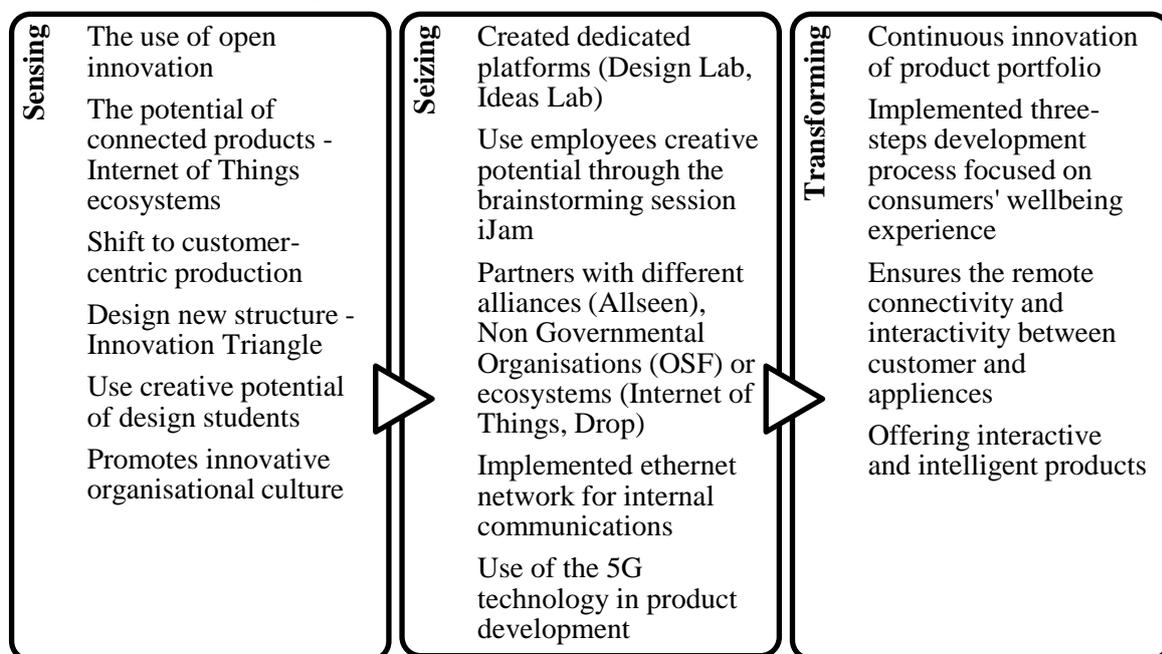
ecosystems there will be taken into consideration two cases: Electrolux innovation ecosystem and 99designs creative ecosystem.

3.1. The dynamic capabilities framework in Electrolux innovation ecosystem

In order to understand how dynamic capabilities are built within an innovation ecosystem there was selected the case of Electrolux, as the company itself is well known for a remarkable history of created innovations. Founded in 1919, Electrolux has known multiple transitions especially in terms of innovation implementation in product development [15]. According to their philosophy, innovation represents the main driver of organizational growth and success [15].

The Electrolux innovation ecosystem comprises a variety of collaborative relations with internal and external stakeholders: employees, suppliers, open source organization OSF, Google, start-ups, etc. [16]. By promoting and implementing the open innovation and co-creation processes the main concern of the company, as a part of an innovation ecosystem, is to build innovative dynamic capabilities. In table 1 is presented an analysis of the dynamic capabilities created by Electrolux based on Teece framework.

Table 1. The dynamic capabilities framework: the case of Electrolux Innovation Ecosystem [17-22]

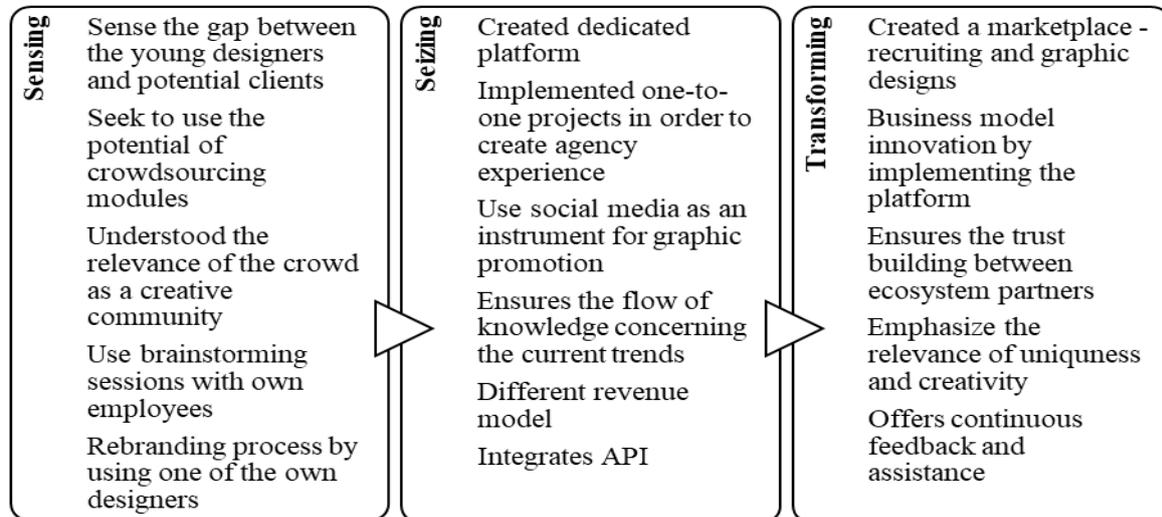


3.2. The dynamic capabilities framework in 99designs creative ecosystem

Established in 2008, 99designs represents an important key player within graphic design creative ecosystem [14]. According to the company beliefs 99designs seeks to promote creative potential of the young designers and there should not exist barriers between innovative ideas and their dissemination [14]. Concentrated entirely in virtual environment the creative ecosystem of 99designs offers an interactive meeting point for customers and potential designers, limited timeline for contest development and is capable to reach a large pool of stakeholders [14].

In terms of participating actors, 99designs is mainly concentrated on their suppliers (potential clients), graphic customers and graphic designers [14].

Table 2 The dynamic capabilities framework: the case of 99designs Creative Ecosystem [14,23, 24]



4. Findings and Conclusions

The dynamic capabilities seem to be the most relevant tools in opportunities seeking for companies. Based on Teece's framework applied in different ecosystems there can be found that each stage of the dynamic capabilities' development seeks to present different aspects especially from the innovation point of view. Sensing stage is relevant for companies in order to understand the dynamic changes in different markets. Companies are rather concentrated on acquiring new knowledge from the external environment or other relevant actors than on own resources and capabilities. It is relevant at this stage to explore the arising opportunities in ecosystems in terms of the technology development or other technological challenges. This type of knowledge represents an important trigger for organizational growth and transformation (e.g. rebranding process or new organizational structures development). Seizing stage represents the first step in building own capabilities. At this stage companies come forward with new technological solutions (e.g. platform development for co-creation or crowdsourcing). In innovation ecosystem this stage is concretized by adopting new communication technologies or 5G technology implementation in product development. However, in creative one, the case of 99designs, company adopted a creative approach by using social media and virtual environment only. The transformation stage comprises the results of companies' efforts in order to create own dynamic capabilities. It is more about how to ensure continuous value creation to the customers, to be able to respond to their needs and to create an interactive environment. However, as it can be observed in the first case it targets especially the value created by product innovation. In the case of 99designs there can be traced a remarkable attention for community involvement and value created by creative crowds. Consequently, the dynamic capabilities framework offers a variety of valuable insights on how companies are evolving in platform-based ecosystems and provides interesting findings in terms of innovation dynamic capabilities developed by different actors.

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