Co-creators in innovation ecosystems. Part I: The case of creative industries

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Abstract. The continuous evolution and development of technology became the main driver for new industries emergence. The use of Internet of Things and Open Innovation technologies brought a new perspective regarding business models development, inter-industry collaboration, and value co-creation process. This point of view emphasizes the relevance and necessity for identification and analysis of business ecosystems concept. The transition from supply chain to value network, from business ecosystem to innovation one emphasized the importance of customer as value creator and the efficient use of other stakeholders’ capabilities. From this point of view, in order to create a competitive advantage, economic actors developed their own co-creation instruments including co-creation platforms. Based on literature review there will be highlighted the most relevant key aspects regarding the creation of an innovation ecosystem, distribution of innovation across the entire business landscape, the processes which facilitate the use of open innovation techniques and technologies, and the particularities of crowdsourcing within innovation ecosystems. The foreseen result is to explore the creation of an innovation ecosystem based on the experience of Crowdspring projects within an emerging creative industry, to identify major actors and the established relations, and to illustrate the use of crowdsourcing as the main open innovation technique.

1. Introduction

Nowadays, the emergence of new industries is closely linked to technological development and progress. The use of Internet of Things (IoT) and open innovation strategies became the main concern for companies worldwide. The need for collaboration between companies/actors from different industries started to be an important key development point for business ecosystem emergence. Emerging ecosystems, especially innovation-based ecosystems, are highly characterized by collaborative processes and techniques which provide the technological base for innovation creation and distribution [1]. The main attention is concentrated on the development of new instruments - such as digital platforms, co-creation processes and the end users as co-creators [1], [2]. In order to illustrate the relevant features of end users as co-creators, there will be provided an analysis of innovation ecosystems, there will be identified the key processes and features which led to platform development and there will be illustrated the use of crowdsourcing as an engagement method for new product development.
2. Business Ecosystems (BE) versus Innovation Ecosystems (IE): transition and key features

The arising promise of business ecosystems is to enhance collaboration and cooperation between business players from different levels or even networks across emergent industries. Moore suggested that in order to gain benefits from the business ecosystem, there should not exist industry borders [3]. The collaboration between actors from different industries can be increased through their engagement into BE’s activities, such as co-creation processes [4].

2.1. What is a business ecosystem?

Since Moore proposed in 1993 the concept of business ecosystem as instrument for understanding competition dynamics, it became well known and widely used. The concept was redefined in time as the main interest were concentrated on network analysis rather than a community one. From this point of view BE was at first defined as a community of interrelated actors [5], and perceived after as a network [6], [7] or coalition of collaborating agents [8]. According to Battistella, Collucci, De Toni and Nonino the concept analysis should perceive structural and behavioral key aspects [9]. This approach is useful especially if the analysis is targeting the impact of established relations’ dynamics [9]. The collaboration between actors from different industries, as well as co-opetition, enhances the use of dynamic and ordinary capabilities in the co-creation process [10], ensures the potential for value creation which enables the arising of competitive behaviors [11] and establishes common ground for co-evolution engagement [12], [13]. The use of business or value networks in business ecosystem analysis should be linked to the ecology and complexity theories, from the perspectives of network dynamics, strategies and behaviors of actors within an ecosystem [13]. The major benefits of establishing a new business ecosystem or entering an existing one are expressed through opportunities creation [14], [15]. From this point of view recent trends in business ecosystem field are closely linked to the platform creation and development. Following this approach, there should be pointed that a product/service represents a common effort of the ecosystem’s members, where the process of resources sharing gained an increasing recognition [15]. The need for technological embeddedness, the alignment of actors’ resources and processes [16] and arising of new business models represent and describe the most important transition from business ecosystems to innovation ecosystems.

2.2. What is an innovation ecosystem?

As innovation became the main focus for product and/or services development process, it also was transposed into the field of ecosystems analysis as the key goal. From this point of view, the concept of innovation ecosystems emerged. Adner defined an innovation ecosystem as a result of the changes from external environment where innovation is the main goal and it can be provided by the actors from business ecosystems [18]. The key feature of these ecosystems is represented by the combination of innovation provided from the external organizational environment, the location of innovation as well as the arising challenges [7]. The positioning of the actors is essential for IE as it is important to understand who represents the source of innovation within common ecosystem’s processes [18]. From this point of view the main source of innovation in an ecosystem is represented by confronted challenges with continuously changing actors [19], as it is presented in figure 1. According to the scientific literature an innovation ecosystem can be developed based on the association between high technology and organizational capabilities [20]. This linkage is the most comprehensive and attractive for participants from outside the ecosystem.

Innovation ecosystems tend to be more specific, structured as cluster type [19], [21], to evolve around a common knowledge base in relation to the organizational capabilities, a part of Triple Helix or a specific platform, and is represented by non-economic features such as digitalization, open innovation instruments and techniques, and social media [22], [23], [24].

2.3. From business ecosystem to innovation ecosystem

Although these concepts are apparently similar, both present important key features which differentiated them in terms of boundaries, goals and value. As business ecosystems concentrate on
creating value to the customer [22], innovation ecosystems are specialized in creating technological value through social involvement [25].

![Diagram](image)

**Figure 1.** Source of innovation in ecosystem [19], [20], [21].

Based on their appearance and key features, it seems more relevant to concentrate the attention on specific developed ecosystems rather than on more general such as business ecosystem. Valkokari pointed the relevance of BE’s as an integrative part of innovation ecosystems, along with knowledge base [23] and technology or science systems [26]. Jackson suggested the relevance of innovation ecosystems for policy makers by linking the concept to national innovation systems [22]. The transition from business ecosystems to innovation ones was facilitated by a series of integrative factors, as presented in table 1.

**Table 1.** Factors and key features for innovation ecosystem formation through transition from business ecosystem [5], [23], [26], [27].

| Key aspects      | Business Ecosystem                  | Innovation Ecosystem               |
|------------------|-------------------------------------|------------------------------------|
| Location         | Already established industries      | Emerging industries                |
| Boundaries       | Transcends industries boundaries    | Clustered type                      |
| Main goal        | Products and / or services          | Creating innovation                |
| Focus            | Value creation activities, value capture and value co-creation | Innovation activities; value co-creation |
| Social involvement | Creating value for customers        | Creation of scientific knowledge, technology |

**3. Innovation ecosystems within emerging creative industries: open innovation techniques**

The most important key features of innovation ecosystems can be perceived and analysed within an emerging industry in terms of evolution and innovation creation [1], [28]. The rise of platforms and platform-based ecosystems can be seen as a transition phase from classic business ecosystems to innovation ones. The actors within this structure became specialized as they are facing emerging industries uncertainties and complexity [29]. Due to the need for minimizing the negative influences of those factors, actors should perceive strategies which are based on exploration of opportunities as complementary activities to the development and adoption of new technological discoveries [30]. From this point of view in this study the creative industries (CIs) were chosen as analysis unit. The most relevant key feature in this type of emerging industry is represented by the main resources. Creative industries are mainly defined by their generated creative potential and technological progress.
The enhancement of creative potential into the development of new products [31] and cultural capabilities [32] represent the main target in emerging creative industries. The common point of innovation ecosystems and CIs is presented by the innovation usability and the actors’ ability to exploit creative resources [32]. Sensing both the creative potential and the business opportunity is more valuable to be considered as innovation source [33]. Similar to innovation ecosystems, these industries are based on processes of value co-creation, innovation development and digitalization which require the use of creative social involvement [1], [31]. According to the European Commission, innovation is closely linked to the design component of creative industries [34], which means the combination between creative potential and “wider processes” [34] and an innovation ecosystem should comprise designers as co-creators of innovation [35].

Crowdsourcing and digitalization represent the key features which enables creative potential enhancement. The need for digital instruments embeddedness into organizational processes is facilitated by actors’ desire to create innovative products in terms of design, to engage creative potential and exploit it through ideas generation [36]. From this point of view open innovation is used in order to provide specific instruments for social engagement. The importance of crowdsourcing in innovation ecosystems within creative industries provides valuable insights in terms of specific activities, which comprise contests or collaborative communities as process for co-creators’ engagement [37]. Both activities respond to the common goal which is value co-creation through creative projects and where is promoted the use of creative tasks, open collaboration, ideas generation and sharing, and solving process of specific problems [1], [38].

4. Case Study: co-creators’ ecosystem in Crowdspring

In order to illustrate the innovation distribution and crowdsourcing in emerging creative innovation ecosystems, there should be provided a detailed analysis of how co-creators are engaged into co-creation process as a crowd. From this point of view in the first part of this research the main focus will be concentrated mainly on illustration of the creation of the innovation ecosystem based on provided example by analysing Crowdspring competition marketplace.

4.1. Crowdspring overview

Crowdspring represents one of the leading crowdsourcing based actor, whose main value is to promote creativity and responsibility. Their main concern is to develop and to promote creative designs protected by intellectual property policies. Crowdspring was born in 2008 as result of the observation that freelancers’ designs could represent a potential threat to those created by professional designers [39]. The co-founders of the company identified the need for innovation, community involvement and creativity. Ross Kimbarovsky and Mike Samson possessed the necessary knowledge, experience, resources and relations in order to create an outstanding outcome. However, the main threat for them was represented by the lack of knowledge about creative communities – the designers. Nowadays it numbers over 206 thousand of designers from whom over 52 thousand of clients (entrepreneurs, small business, agencies, start-ups and non–profit organizations) benefited in terms of innovative and creative designs [40].

4.2. Crowdspring innovation ecosystem

First of all, it should be pointed that an innovation ecosystem should be developed and evolve around new innovation. At this rate Crowdspring acts as intermediary between clients Business – to – Business (B2B) and designers’ community. The common goal of Crowdspring innovation ecosystem is to create a platform which could link the designers’ community with other relevant stakeholders. According to Hossain and Heidermann Lasser there can be distinguished several types of platforms: problem-solving, ideation, co-creation, online marketplace, public crowdsourcing, collective intelligence and micro task and freelancers [41]. Crowdspring is concentrated on ideation activities where of the major importance are innovation requirements such as: the type of design and innovative designs at reduced cost [42]. Battistella and Nonino identified motivational drivers for crowds’
engagement in terms of participation in Crowdspring knowledge sharing processes developed within company’s platform [42] based on explorative approach. As innovation creation and development are the key features for platform development within an innovation ecosystem in analysing the Crowdspring innovation ecosystem there will be taken into consideration the following aspects which are related to platform development and use, the engagement of designers’ community and the ecosystem’s structure from actors’ point of view as it is presented in figure 2:

- The motivation for actors’ participation
- Gained potential benefits
- The main process for product development.

![Figure 2. Crowdspring Innovation Ecosystem in terms of motivation and specific activities [39], [40].](image)

The Crowdspring innovation ecosystem comprises participants from designers’ community who can be highly creative designers. According to the company’s vision their main goal is to create a friendly environment where of the major importance are the relations between their clients and designer. However, they address to the clients from B2B: small businesses, start-ups, agencies [40] and individual designers. The main source of innovation is represented by their clients (from the requirements point of view, their desire to gain innovative design) and the creatives (enhance individual creativity, establish virtual collaboration, construct own reputation). The result of this type of collaboration is the creative design which responds to the clients’ needs and contributes to designers’ portfolio (construct designers image). In terms of motivation, Crowdspring’s ecosystem provides especially for community of designers the opportunity to engage individual creativity into product development through specially designed contests and learning from the best by providing necessary resources [42]. As for clients, the ecosystem ensures their participation in each step of
design development and professional and legal assistance through established standards (standard of conduct for clients and creatives) and specific policies (user agreement policies, privacy policy and copyright policy) [43].

5. Conclusions
According to the scientific literature the main driver for building competitive advantage, from companies’ point of view, is to create new products and/or services through collaboration. Business ecosystems respond to their needs in terms of relations which are established between actors (collaboration and co-opetition). However, in order to develop highly innovative products and/or services companies are engaging into innovation ecosystems. This type of ecosystems is formed around a potential source of innovation, which usually is provided by the actors who compose the innovation ecosystem. From this point of view within IE are used open innovation techniques which respond to the need of technology involvement into product and/or services development process. Based on the case study approach on Crowdspring, there can be identified that innovation ecosystem can be formed around specially designed platform which facilitates the development process as well as link actors within different industries. The analysis of emergent creative industries provides useful insights and highlights the following aspects:

- engagement of creative communities into product design,
- ensures the compliance to the general requirements,
- the clients gain the decision power (to accept or to reject the design),
- build designers’ reputation and portfolio and
- the motivation of creatives through rewards,
- ensures the necessary resources and individual creativity.

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