Managing co-creation in innovative business models: the case of sharing economy

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Abstract

Purpose of the paper: *The purpose of the paper is to analyze how co-creation is managed within the innovative business models of sharing economy platforms.*

Methodology*: Case studies analysis has been performed on three sharing economy platforms. Platforms have been selected according to the extent to which innovation driven by co-creative processes was evincible in the value proposition, in the profit formula or in the key processes and resources. The cases have been analyzed through the D.A.R.T. model that defines the four places of co-creation (dialogue, access, risk, transparency).*

Findings*: The analysis shows that there is a link between the type of innovation and the dimension of co-creation. In particular: Dialogue is relevant when co-creation refers to the innovation of the value proposition; Access is more stressed when co-creation drives the innovation in the key resources and processes; Risk comes to be underlined in the platform where co-creation involves the definition of the profit formula. Transparency is a common element across all of the analyzed cases.*

Research limits: *Shortcomings concern the selection of the theoretical framework, the exclusion of platforms other than C2C and the focus on secondary data.*

Practical implications: *The analysis allows to understand the dimensions of co-creation that emerge as being particularly relevant in sharing economy platforms where the innovation of the business model is based on the involvement of customers.*

Originality of the paper: *This work provides a joint analysis of BMI and co-creation as emerging in sharing economy platforms, proposing an integrated interpretation of these phenomena.*

Key words: sharing economy; co-creation; business model innovation; D.A.R.T. model; sharing economy platform

1. Introduction

The business model is the story that explains how an organization works (Magretta, 2002). Despite its nature of an essentially contested concept, where a single and shared understanding has not been reached yet, it is common across most of the definitions that the business model describes the way an organization creates, captures and delivers value. The interest towards this topic has grown a lot in the last decades. A specific area of inquiry explores business models as sources of new value creation and potential competitive advantage (Afuah 2004; Chesbrough 2010; Chesbrough and Rosenbloom, 2002; Trimi and Berbegal-Mirabent, 2012).

From this perspective, the notion of business model is closely linked to that of co-creation, where the process of creating value is shifted outside organizational boundaries and goes to include the various actors within the networked market. Markets are no longer only the places where demand and supply meet, rather they are becoming even more those spaces where firms deploy and integrate operant and operand resources to co-create value (Nenonen and Storbacka, 2010). Being able to manage co-creative processes means to adapt business elements, through a more or less radical rethinking of the business model. This connection has been well pinpointed by Zott and Amit (2008), stating that business models can represent a broader conceptualization of value co-creation as for their being externally oriented.

Co-creation can have a profound impact on how business models are designed (and re-designed). Indeed, to fully exploit its benefits it becomes essential for firms to innovate the business model involving capable players outside the firm (Prahalad and Ramaswamy, 2000; 2004).

An interesting phenomenon where business model innovation goes along with the involvement of customers in creating value is that of sharing economy companies. Despite this is not a new topic, there has been an impressive surge of interest towards these new business models that are disrupting traditional economy (Weber, 2014; Cohen and Kietzmann, 2014; Dyal-Chand, 2015; Olson and Kemp, 2015). The adoption of principles, systems and drivers marked by the sharing philosophy, has indeed the potential to reshape business models and create valuable opportunities for companies (WEF, 2013). Also, in sharing economy the collaborative production is a key component (Probst *et al.*, 2015), at the point that the company itself is almost disregarded, shifting the focus on the peer-to-peer dimension.

The purpose of this paper is to provide a joint analysis of business model innovation (BMI) and co-creation within the context of sharing economy. In so doing, it aims to answer a specific research question: *How co-creation is managed within sharing economy (innovative) business models?*

The principle of this question is based on Storbacka *et al.* (2012), stating that different business model configurations ends up in a different type of co-creation envisaged, and that the business model concept is essential in revealing how co-creation occurs. This principle has been applied in the analysis of sharing economy platforms.

The remainder of the paper is as follows: the first section presents the concept of sharing economy, analyzing its connection with BMI and co-creation; in the second section the adopted method is described, explaining the steps of the developed analysis; section three illustrates the main findings; finally, section four presents some conclusive considerations as well as originality, limitations and future research avenues.

2. Sharing economy at the crossroads between BMI and co-creation

2.1 To own or not to own? Defining sharing economy

Sharing economy had substantially reshaped the traditional way of doing business. The concept is not new at all, rather, as stated by Belk (2007) the sharing phenomenon is "*as old as humankind*" (p. 1595). However, it is an innovative paradigm compared to traditional firms that is drawing a lot of attention nowadays, dividing the opinions between followers and opponents. Regardless of the socio-economic issues that are emerging concerning this topic, it surely represents an interesting area of inquiry in the field of management. Its surge became noteworthy around the recession of 2008-2009, when people started economizing and feeling the need to find new job solutions (Olson and Kemp, 2015). Academic definitions of this topic are still few (Daunorienė *et al.*, 2015) and quite contradictory in terms of inclusivity and variety in scope (Allen and Berg, 2014). The principles of the phenomenon are the focus on the utilization instead of ownership, the temporary accessibility and redistribution of goods or less tangible assets such as money, space, or time (Kathan *et al.*, 2016). Sharing economy is based on a different idea of consumption that is generally conveyed through new information and communication technologies (Cohen and Kietzmann, 2014). The Internet and most of all the Web 2.0 has fostered the development of many new ways of sharing, as well as facilitating older forms on a larger scale (Belk, 2014). Technology is indeed, along with the innovation, an essential element of sharing economy, as it allows to develop and carry out business ideas in a quick and easy way (Posen, 2015).

2.2 The business models of sharing economy companies

Sharing economy has for sure the potential to be a disruptive innovation. An interesting aspect is highlighted by Olson and Kemp (2015), describing sharing economy as being flexible in adapting to the consumers' needs. Consistently, a large branch of research within this topic is focused on the identification of the business models adopted by sharing economy and on the ways in which they have been innovated to suit the features of these particular businesses.

Sharing economy implies indeed an innovation of the rationale behind the ways companies create, deliver and capture value, and in this sense, it falls within the overall phenomenon of business model innovation (BMI). Innovating the business model means to go beyond the traditional areas of innovation, such as product, service or technology, and single-function strategy. The reasons for doing this can be different. Meyer (2007) and Teece (2010) stress the opportunity to gain competitive advantage if the model is sufficiently differentiated and hard to replicate. Park (2011) pinpoints the benefit of finding revenues streams that are different from existing paradigms. An interesting point is that of Cavalcante *et al.* (2011), arguing about the possibility to have different degrees of BMI, consistently with the flexibility of business models that allows to add new processes without modifying the core processes of the business. Scholars and practitioners have also tried to define and describe the process of innovating business models. Chesbrough (2010) underlines the adaptation process of BMI, and its trial-and-error procedure that requires several adjustments even once the new business model has been adopted. Johnson *et al.* (2008) analyze the identification of the right moment to innovate the business model, following a three-steps analysis (identify the success drivers of the current business model; look for signs that indicate the need to change; decide on whether the effort to change is likely to pay-off).

Sharing economy companies have thus been investigated to analyze business models, and identify their innovativeness (Lindgardt *et al.*, 2013; Kosintceva, 2016). Matzler *et al.* (2015), for example, describe the innovative business models adopted by sharing economy as strategic because customers pay to *Access* assets that they cannot own or manage for themselves. In their view, this allows firms to rethink their revenue streams, developing a new business model that attract more customers. In the same way, Olson and Kemp (2015) describe sharing the economy's business model referring to the revenue model alone, describing the ways through which firms make money in their business. Cohen and Kietzmann (2014) adopt the Boons and Lüdeke-Freund (2013) classification of business models for sustainability to analyze examples of sharing economy in the mobility sector. Their criteria for classification is made by four elements: value proposition, supply chain, customer interface and financial model. Botsman and Roger (2011) analyze the systems underpinning the collaborative consumption, identifying three main forms: Product service systems (PSS) (privately owned products are shared or rented peer-to-peer); Redistribution markets (pre-owned goods are redistributed from where they are not needed to where they are needed); Collaborative lifestyles (people with similar interests come together and share less tangible assets such as time, space, skills). Focusing on the value proposition Kosintceva (2016)'s analysis ends up with three typologies of sharing economy business models (marketplace, access-based and on-demand service), identified according to the role of the platform in connecting the users and the type of sharing supported. A further interesting example comes from Lago and Sieber (2016), who analyze how three of the typical elements of traditional business models (market access, resource allocation and governance and control) are shaped in sharing economy.

Table 1 sums up these examples of classifications.

Interestingly, all these classifications adopt criteria that are referable to one or more of the building blocks of the business models as identified by scholars in that specific research domain. Existing literature about business models shows a wide interest towards the definition of the main elements that compose it, as it comes to be a scheme to deconstruct companies' strategies. The Business Model Canvas from Osterwalder and Pigneur (2010) is of course the most spread and used. However, there are several other efforts aimed at meeting the same purpose. To sum them up it is possible to identify the elements that recur the most as building blocks. Firstly, value proposition appears to be often seen as the core element of business models that have to explain how the value is generated and provided to company's customers (Linder and Cantrell, 2000; Chesbrough and Rosenbloom 2002; Johnson *et al.*, 2008; Osterwalder and Pigneur, 2010). Some scholars put the attention towards the earnings logic underpinning the business survival. From this perspective, business models should define how the firm could draw profits from its operation (Meyer, 2007). Furthermore, many business model definitions include the resources and processes through which firms can run their activities (Johnson *et al.*, 2008; Demil and Lecocq, 2010).

Tab. 1: Sharing economy business models, examples from literature

Author(s), Year	Criteria for classification	Sharing economy business models
Botsman and Roger, 2011	Systems under collaborative consumption	PSS Redistribution Market Collaborative lifestyle
Cohen and Kietzmann, 2014	[Mobility market] Value proposition, supply chain, customer interface, and financial model	Sponsorship-Based Bikesharing Flexible Carpooling B2C Carsharing
Olson and Kemp, 2015	[Accommodation and lodging industry] Revenue model	Merchant Commission Fee Guest Booking Fee Subscription
Lago and Sieber, 2016	Market Access, resource allocation, governance and control	Market expanders Market substitutes Full collaborative innovators Shared services
Kosintceva, 2016	Value proposition	Marketplace Access-based On-demand service

Source: our elaboration

2.3 Sharing with whom? The key role of co-creation

The innovativeness of sharing economy business models goes along with the high level of customers' involvement, as in these new business models, the collaborative production is a key feature (Probst *et al.*, 2015). Matzler *et al.* (2015) talk about sharing economy as the opportunity for firms to support those customers that want to sell unused goods, taking advantage from their resources and capabilities. Most definitions are indeed centered on the shift from owning to renting, with consumers as the source of value creation and firms providing the digital platforms where people can meet, share and exchange (Cusumano, 2015). In fact, while the Internet and technologies play a pivotal role in enabling the development of sharing economy, it still requires the participation and engagement of users to be successful (Hertler and Tasso, 2015). A study from PwC (2015) stressed the role of customers in sharing economy and on the relations that stem from the platforms. Users' interaction is not limited to that with the company, rather their interaction within the network is significant in determining the success of the platform itself. This makes the concept of trust particularly important, as well as all those ways through which users can express their feedbacks, giving opinion and rating other users (Romero and Molina, 2011). Concerning the sharing economy platforms, Amit and Zott (2001) pinpoint the link between network size and value created, stating that the larger the network gets, the more valuable it becomes for its users.

The stress on how to involve customers in co-creating value also pertains to the wider concept of BMI, where the rationale is to create something new that could maximize the value for stakeholders (Meyer, 2007). BMI closely depends on external actors, from which the firm can take interesting insights and with which it has to ensure fit and consistency. Business models are seen as useful frameworks through which the contribution of customers to value co-creation can be understood and valorized (Nenonen and Storbacka, 2010; Storbacka *et al.*, 2012). Demil and Lecocq (2010) defines business model as a transformational tool aimed at tackling innovation and change, either for the organization as a whole or for the business model itself. An interesting contribution comes from Nenonen and Storbacka (2010), starting from the identification of a serious gap in the literature concerning value co-creation. What they identify is that there was no explanation regarded the kind of resources each actor can bring to the value co-creation process, nor regarded the interface through which they can participate. In this sense, they deeply analyze BMI, identifying those elements business models have to be made of, in order to ensure the best internal and external fit and the maximization of value co-creation.

3. Method

The purpose of the paper is to analyze how co-creation is managed within the business models of sharing economy companies. To this end, the research has been based on the multiple-case (holistic) model (Yin, 2003), which is useful when the research domain is broad and complex and the context is important (Yin, 1990). The analysis has been performed on three sharing economy platforms, selected according to where the co-creation was evincible in the building blocks of their business models.

The overview of the relevant literature, presented above, allows outlining the framework of the research, where insights from the fields of research of BMI, sharing economy and co-creation were drawn and put together. The analysis of studies where business model's components were identified, was useful to select a first theoretical framework from business model research. The choice was to adopt that of Johnson *et al.* (2008), where the business model is seen as made of three building blocks: the value proposition, the profit formula and the key resources and practices. This choice has been made because in the authors' view, it provides the main areas in which existing classifications of sharing economy business models can be summed up (Table 2).

Tab. 2: Merging Johnson et al., (2008) framework and classification of sharing economy business models

Sharing economy BM / Johnson *et al.* (2008) BM components	Botsman and Roger, 2011	Cohen and Kietzmann, 2014	Matzler *et al.*, 2015	Olson and Kemp, 2015	Lago and Sieber, 2016	Kosintceva, 2016
Value proposition	Systems under collaborative consumption	Value proposition Customer interface			Market Access,	Value proposition
Key resources and processes		Supply chain			Resource allocation Governance and control	
Profit formula		Financial model	Revenue streams	Revenue model		

Source: our elaboration

This framework has been the base of the cases selection process. The source of this process has been the work of Collaboriamo (2015), an Italian network whose aim is to promote the development of sharing economy platforms. The attention on platforms in this paper is also consistent with the existing literature that defines them as being privileged sources of value co-creation (Amitt and Zott, 2001; Romero and Molina, 2011; PwC, 2015). Collaborative platforms allow people to get in touch and share resources, skills, goods and services. They have been defined as the heart of sharing economy (Collaboriamo, 2015), and thus they have been considered as the most suited option for developing the analysis. Focusing on sharing economy platforms, since 2014, Collaboriamo develops a survey to map the characteristics of these services in Italy. In the survey of 2015 (that is the last available), Collaboriamo included 55 platforms, analyzing their industries, business model, legal form and size, and providing in Annex 1 a list of their names and websites. These 55 platforms and the information about them have been used to create the first sample of this research.

Platforms have been analyzed in a two-step process. A first step aims to identify, for each of the 55 platforms, which one of the three blocks of the business models were innovated through the co-creation. This is to say, whether innovation driven by co-creative processes was evincible in the value proposition (target, customer, offering), in the profit formula (revenue model, cost structure, margin model) or in the key processes and resources (people, equipment, channels, partnership, metrics).

Literature review on co-creation shed light on the several facets this concept can have as it can happen between different actors such as companies, consumers, employees or other involved organizations (e.g. Prahalad and Ramaswamy, 2002 and 2004; Christiansen *et al.* 2010). In this research the focus has been on the interactions between the company and its end-consumers.

It goes without saying that in several cases innovation does not concern only a specific area, rather a blend of two or all of them. Thus, the work of the researchers was to identify the area in which it emerges the most, allowing platforms to fall within more than one category if needed.

This step resulted in the identification of three main groups: a first group where co-creation emerges as a key element in the definition of the value proposition (n = 30; 54.5%); a second where it plays a key role in the definition of the profit formula (n = 13; 24%) and a third one when it is evidenced particularly as having an influence on key resources and processes (n = 17; 31.5%)[1].

In the second step, a case from each category was then selected as representative of that specific cluster. In this step, the selection of platforms was criterion based, or purposive (Mason, 2002; Patton, 2002). According to this approach the units are chosen because they have particular features or characteristics which will enable detailed exploration and understanding of the central themes. In particular, the aim was to have a stratified purposive sample (Patton, 2002), to select groups that display some variation but still have commonalities that allow for their comparison. The selected cases are all sharing economy platforms, where co-creation emerges in different areas of the business model and where different relational systems are evincible among the platform and the different typologies of users.

Each of the three cases was then deeply analyzed, to understand how the co-creation was managed. The D.A.R.T. model, a value co-creation framework developed by Prahalad and Ramaswamy (2004), has driven this step. Through this model, the authors identified the four pillars of co-creation that are necessary for firms that aim to create and benefit from customers involvement. These four elements are defined as the places for value creation, or interaction points at which value can be co-created (Prahalad and Ramaswamy, 2004): *Dialogue* - communication between parties, *Access* - providing information to make better decision, Risk - explaining who bears the risks, and *Transparency* - about company and facts. The D.A.R.T. model has already been applied to sharing economy companies to understand the way users are involved in value creation (Hertler and Tasso, 2015). The particularity of its application within the context of sharing economy lies in the fact that the places for value co-creation can be analyzed not only to companies and users, but also among users themselves. In this regard, Hertler and Tasso (2015) specify how not all of the elements occur between every party, while usually it happens that Dialogue and Access are mostly developed in the relation among users, while Risk and Transparency refer to the company-user relation.

These core elements of co-creation have been analyzed in the selected cases, adopting and adapting the scales defined and validated by Albinsson *et al.*, (2016), to measure the dimensions proposed in the D.A.R.T. model. These scales provide 23 items that have been used to perform a desk analysis on secondary data, gathered through websites and any other available document. A score was given for each of the item according to the intensity through which it was evincible in the analyzed cases (ranging from *not evincible to highly evincible*).

The analysis has been carried out by two researchers. Protocol development and inter-code reliability procedures were used to ensure the reliability and validity of the results.

[1] These numbers take into consideration that some platforms have been double counted as falling within more than one single category of the analysis.

4. Findings and discussion

4.1 The analyzed platforms

The three platforms analyzed with the D.A.R.T. model, have been selected according to the block of the business models they have innovated through the co-creation. The first case is *Movieday*, an example where end-customers involvement has been exploited to innovate the value proposition. *Movieday* is a web platform that allows people to organize movies projections in the Italian cinemas. It is part of the culture industry that has been developed very recently, while it was completely missing in 2014 (Collaboriamo, 2015). Cultural platforms are quite different among each other, however they all try to create communities of people who have common interests, such as reading, theatre or arts. *Movieday* has been selected as representative of its category as the value proposition for customers is radically innovated compared to the traditional fruition of movies in the cinemas. Through this platform, users can act as organizers and create personalized events selecting the movie, the cinema and the date, collecting attendances and share a unique experience with the other participants. This is a new way of enjoying cinema as users can propose to the community movies that are not in the current programming. It is innovative for participants too, as they can find interesting movies to see. This is also a good opportunity for independent producers to promote their movies in an innovative and low-cost way.

The second case is that of a platform called *Curioseety*, selected as example where co-creation has shaped the innovation in the profit formula. This platform connects travelers with professional local guides around Italy, who offer their experience and competencies to provide innovative experience in their cities. This is a classic example of connecting platforms, with the purpose of creating a virtual marketplace where offers and prices are determined by users (the guide in this case), and where users themselves are in charge of managing their commercial relations. *Curioseety* is included in the tourism industry that is highly developed and diversified within the sharing economy sector in Italy (15% of the platforms). Tourism platforms are mostly made by reception services, where people rent their own houses, but also rooms or beds, for short periods, and house-exchange services. In this sector are also included platforms such as *Curioseety* that enable the contact between local people and tourists.

Curioseety has been selected as a case where the profit formula has been innovated through the co-creation, as the guides define the prices for their offers (two prices for each offer as they can be booked from individuals or groups) from which the platform takes the 10%. Thus, platform revenues depend upon the prices set by the guides, their attractiveness from travelers view and their ability to successfully carry out the offers. This is a way to define the earning logic that is different from that of traditional companies, as the platforms' incomes rely for most on the choice made by its users.

The last case is *Make It App*, a mobile platform where users can jointly create apps with no initial investment and share the revenues once the project is completed. *Make It App* is a collaborative network that promotes new forms of employment, fostering skills sharing and crowd consulting. It is based on the principle of crowdsourcing, where everyone can share what is able to do. Two principles are at the core of this app, the first one concerns the hardship of finding a job in these days, while the second the technological progress and all the opportunities it offers. In this sense *Make It App* provides people with the means to ride these trends. This platform has been selected as representative of the innovation driven by co-creation in the area of key resources and processes, as users are involved as designers, developers, project managers and experts, for the development of the product. Users with interesting ideas for the development of an app work as project leaders, selecting the members they want to work with and managing the overall working team.

The platform provides teams with a virtual work environment, packed with support tools and an App Angel that assist the overall project. Completed apps are sold in the store and the platform is in charge of promotion and marketing, taking 30% of the revenues.

Tab. 3: The selected cases

Nr.	Case	Category	Website
1	Movieday	Value proposition	Movieday.it
2	Curioseety	Profit formula	Curioseety.com
3	Make It App	Key resources and processes	makeitapp.eu

Source: our elaboration

4.2 Insights from the application of the D.A.R.T. model

The four components of the D.A.R.T. model (dialogue, access, risk, transparency) have been investigated within the selected cases to gauge how they are implemented and managed. What seems to emerge is that some elements appear as being more relevant in specific typologies of sharing economy platforms.

The dialogue component refers to the interactivity, engagement and propensity to act. It is defined as more than listening to customers, rather it implies shared learning and communication to maintain a loyal community. The scales adopted to drive the analysis focus on the possibility for customers to give inputs to the firms concerning the experience of products and services and also to express their opinion in the post-fruition phase. Surprisingly, this element does not appear as being particularly emergent in the analyzed platforms. According to Hertler and Tasso (2015) the dialogue component, as well as the access one, in sharing economy can develop both in the platform-users relation and among users themselves. In the observed cases, this component seems to be ensured among customers, that have several channels to communicate among each other, while it does not appear as particularly developed in their interaction with the platform. A partial exception is *Movieday*, where co-creation takes a role in innovating the value proposition. In this case a greater relevance is given to the dialogue between the platform and the users. Different categories of users are identified and, for each of them, there are specific areas of the website, with different channels and approaches used to promote the communication. The focus on dialogue is also on the relation between the user who organizes the movie projection and the potential users that might be interested in attending the event. In this regard, organizers are provided by several tips to communicate with the potential audience, in order to establish and maintain the dialogue with them. This might be because of the nature of the platform, whose aim is to create events and, most of all, create communities. In this sense the relational aspect become essential and the aspect of dialogue needs to be effectively addressed and managed firstly by the platform and consequently by the organizers.

The access component concerns the opportunity given to users to access information and tools. The scales identified by Albinson *et al.* (2016) measure access in terms of the opportunity given to the customers to choose how to interact with the product/service. This component appears as being particularly developed in *MakeIt App*, where co-creation drives innovation in the key resources and processes of the business model. In this case, users are involved in co-creating the product, and great relevance is given to providing them with forms of support that could be useful to make the team work more efficiently. Roles that users can take are well explained, underlining all the types of contribution that people can bring. The website has a Tool area, where several instruments are provided to users that want to participate in the creation of the app. Also, another area is that of Documentation, where users can find guidelines and documents referred to the rules for participation. This specific attention to the access might be linked to the involvement of customers in the processes of product creation, meeting the need of ensuring that knowledge and tools are homogeneous among participants and that all the steps and procedures are clear, so that their performance can be as effective as possible. Spaces are foreseen for contacting platform's managers and other users and receiving assistance concerning the technical procedures to be implemented.

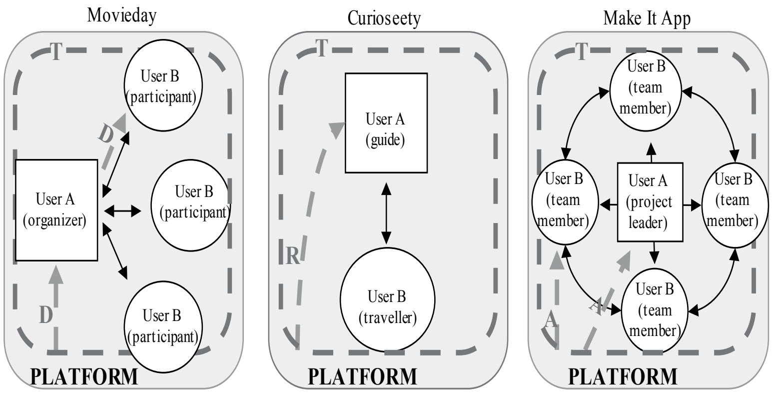
The access component is slightly different in the other two platforms, where, consistently with Herlter and Tasso (2015), it is evincible only in the relation among users. In these cases, indeed, the platform goes a step backwards, giving room to the users' interaction. Also, it is of course less marked than in the *MakeIt App* case. In both the cases promoters (the guides in *Curioseety* and the organizers in *Movieday*) provide customers with information about the initiatives they carry out, so there is a share of information that is however limited to events' details. In these cases, customers have a lower degree of autonomy in defining their own way to take part in the offer.

The third component is that of the risk, referring both to the involvement of customers in shouldering the responsibility for potential risks, and to the extent to which they are informed about it. In fact, customers are involved as active co-creators and this raises the issue of defining their proper role in risk assessment and management, and most of all it requires them to be fully aware about the probability of being harmed. In the adopted scales, risk is measured as the extent to which customers are provided with complete information about risks (and benefits) that could emerge from the products or services and the extent to which the company is clear and factual about any negative (and positive) effect associated with products or services. The aim should be to make customers able to take informed decision about the fruition. As for the analyzed cases, what emerged for the risk component is a general good coverage of this aspect, where customers are always provided with several information about how to react to any undesired effect. Attention is paid in clarify roles and responsibilities, most of all when platforms have to deal with the intellectual property of used material, such as movies in *Movieday* and ideas/projects in *MakeIt App*. However, a particularity emerges in the case of *Curioseety*, where prices are set from the guides. In this case the risk is almost totally entrusted to the organizer, that is responsible for any cancellation, delay or problems with the payment. This is probably because in this case the platform works as a marketplace and mostly as a virtual space provider, but the overall relational aspect is left to the users. This allows the platform delegating a great part of risk management to the guides, ensuring itself a set amount of income also when the initiatives are not carried out.

The concept of risk in sharing economy is closely linked to that of trust, a key precondition for the success of these platforms. In fact, many interactions among users are carried out without insurance policy or legal contract. In these kinds of businesses, an effective mechanism to create reputation is that of creating a strong personal reputation, documenting the actors' history of transactions, also using qualitative and quantitative ratings from other users (Ert *et al.*, 2016). Wagner *et al.*, (2015), reporting about a global survey on sharing initiatives, say that creating trust is a great challenge for most of the respondents (70%), and that supporting the personal contact among users is the preferred way to reduce risk issues. Trust and personal reputation have been investigated in the specific context of tourism and travel, as in this sector users' interactions are so important to the point of talking about personal branding strategies (Ert *et al.*, 2016; Tussyadiah, 2016).

Finally, transparency is the last component of the model. This aspect poses on the fact that co-creation sets aside the traditional asymmetry of information firms usually benefit from. In this sense, when customers are highly involved, information about products, technologies, business systems as well as prices, costs and profit margins have to be clear and easily accessible. Albinson *et al.* (2016) identify measures for transparency that concern the extent to which customers are provided with all this information that might be useful in enhancing their experience of products and services to improve the final outcomes, and also all the information concerning the associated costs and pricing. From the analysis of the selected cases, this aspect emerges as being very well developed across all of the platforms. This is because in sharing companies the concept of trust has a pivotal role and thus is taken very seriously (Kosinceva, 2016). transparency related to costs and prices is always ensured in the analyzed platforms: FAQs sections provide information about how prices are set, and if and what percentage of revenues goes to the platform. Concerning this element, platforms seem to manage transparency in the same way, with no specificities according to the area of co-creation. A specific aspect linked to transparency is that of peer-evaluations, that meet the need of ensuring users' reliability. This happens in all the cases, where people can express the level of satisfaction towards an experience and thus towards the user who organizes it. This is a way through which the platform can guarantee that involved customers are reliable and efficient and can offer good performance.

Fig. 1: Output of the application of D.A.R.T. model to the selected cases



Source: our elaboration

5. Conclusion, originality and shortcomings

The purpose of the paper was to offer a joint analysis of BMI and co-creation within the context of sharing economy, focusing on how co-creation is managed in the innovative business models of these companies. To meet this purpose inputs have been drawn from the three fields of research. Johnson *et al.*, (2008)'s framework for identifying business model components have been adopted. This was because literature review on sharing economy business models reveals that existing classifications can be mostly referred to Johnson's three elements: value proposition, profit formula and key resources and processes. Also, the sample of the analysis is made by sharing economy platforms, looking for case studies that can be particularly suited to describe innovation in these three areas. Finally, each of the cases have been analyzed through the D.A.R.T. model of co-creation (Prahalad and Ramaswamy, 2004) using the scale developed by Albinson *et al.*, 2016 to drive the desk analysis.

What emerged is that there seems to be a connection between the four places of the co-creation identified by the D.A.R.T. model and the typology of innovation driven by co-creation. The dialogue element appears as being less prominent in the selected cases, however it is more pronounced where co-creation comes to innovate the value proposition. The access element mostly emerges when customers are involved in the creation of the products as key resources and drivers of the processes, and it concerns both the platform-users relation and that among different users. Yet, when co-creation concerns value creation and profit formula it comes to be less focused on access. As for the risk elements it emerges as being particularly stressed when customers have the opportunity to define their own offer in the platform and thus to take part in the definition of the profit formula. It sounds as being a compensatory measure, as customers have to face the greater part of the risk, while the platform finds a way to ensure itself a certain amount of revenue anyway. Finally, transparency is a common element among platforms, regardless of the different categories they belong to.

The originality of this work lies in its attempt to jointly analyze three phenomena that have been recently much-talked about, providing a perspective of analysis where their common aspects are valorized and an integrated interpretation about the literature of each of the research domains.

Some shortcomings can be identified in the paper. Firstly, the choice to adopt a framework that is focused on the building blocks of business model, rather than one of the existing classifications of the typologies of BMIs. This has been done because studies of sharing economy business models adopt one or more building blocks as their main criteria, and this has been seen as a way to ensure coherence in merging these two streams of research. Also, all of the cases are C2C, as it was one of the selecting criteria of the Collaboriamo dataset. This was coherent with the intended focus of the research, however the analysis of different types of platforms (B2C, B2B, C2B) might be interesting to see if this had a further impact on the D.A.R.T. elements. The main limitation is that of relying on a desk research performed on secondary data to answer the proposed research question. The authors are aware that the analysis might benefit from the integration of these results with those from direct interviews, but also from the analysis of the performance these companies have to investigate the effect of co-creative practices. Indeed, this work is a preliminary analysis that can be seen as a first step in proposing the integrated reading of BMI, sharing economy and co-creation. From here, future research avenues are opened. Firstly, strengthening this output and validate the emerged research propositions. Second, to go in depth with the analysis, turning to the managers of the platforms to understand strategies and critical success factors in the process of involving customers in innovating business models. On the other hand, a focus on the customers themselves, to gauge their perspective on their involvement in value co-creation.

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