CROWDFUNDING AS VALUE CO-CREATION MODEL: THEORETICAL CONSTRUCTS AND EMPIRICAL EVIDENCE

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Abstract

Crowdfunding describes a collaborative online process that enables the creation of new ventures (Ordanini et al., 2011) through the financial and non-financial support of a large number of individuals (backers). Furthermore, in the crowdfunding process, actors collaborate intensively, by exchanging several type or resources with the expectation of non-mutually exclusive benefits. Due to these features, the current study explores CF as a specific VCC model. In particular, a first objective is to advance the extant research in the crowdfunding field by adopting the VCC perspective. Consistent with Ranjan and Read (2016) VCC framework, we adopt two theoretical dimensions, such as co-production and value-in-use axioms. Secondly, the study empirical addresses the CF as a VCC model through the development and validation of backers VCC behavioural scale. Based on a large sample (3.592) of backers who financially supported a new venture in the gaming sector, our findings confirm the two mentioned theoretical dimensions as explicative of VCC in the CF context. The implications of the current study are both theoretical and practical, by shedding new light in the comprehension of CF as means for funding and value co-creation.

Keywords: Value Co-Creation, Crowdfunding, Co-production, Value-in-use.

1.Introduction

Over time, relative to a traditional view of the market as a target, a new vision emerged in prior literature that identifies the market much more as a forum (Prahalad and Ramaswamy, 2004a) which is distinguished by increasing interaction among parties. Concurrently, the evolving needs of new types of consumers – defined by Toffler (1980) as prosumers – required organizations to consider a deeper involvement of such actors in their processes of value creation. Nowadays customers, and stakeholders in general, are more active, informed and networked, showing a critical sensibility respect to the offerings by firms (Prahalad and Ramaswamy, 2004a). These profound changes in the model of value creation depend on the development of new information and communication

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technologies. New market paradigms emerged thanks to the interaction among people and organizations during different steps of a more complex value creation processes.

The global diffusion of Internet has contributed to enable interaction and dialogue across communities of people that share opinions and information. This phenomenon allows interest groups no longer be dependent uniquely from firm's information flow in the evaluation of utility expected from the consumption and use of goods or services. The greater awareness of the importance that interactions among people has assumed in the value creation process, induced firms to rethink their approach to the market (Prahalad and Ramaswamy, 2004a). The objective is the opportunity to capitalize resources coming from the new form of collaborative economy that goes under the wide umbrella of value co-creation (VCC). VCC is a multifaceted concept that encompasses models and processes through which a firm may co-generate value thanks to the interaction with other market actors (Prahalad and Ramaswamy, 2000, 2004a-c; Vargo and Lusch, 2008; Galvagno and Dalli, 2014). This growing tendency of new forms of cooperation among different actors has recently included financial media and services. The so-called fintech industry is the clearest example of this emerging scenario on financial markets. More specifically, fintech consists of a rising ecosystem including existing firms, new ventures and business providing financial services relying on digital technology (Bank of Italy, 2017). A recent survey by Pwc (2017) on the sharing economy services among European users reveals that almost 11% of the respondents use fintech services. Overall investment in fintech globally at mid-year 2018 surpasses the total amount at 2017, with 57,9 billion dollars raised by fintech start-up on Venture Capital (VC) and Private Equity (PE) markets (KPMG, 2018). Relative to the different segments constituting the fintech industry, Crowdfunding (CF) represents the largest portion (about 80%) of the market (University of Cambridge, 2018).

Based on Internet, CF describes a collaborative process, which allows the creation and development of new ventures (Ordanini et al., 2011) through the financial support of many individuals (backers). In the current study, we propose CF as an innovative form of VCC model where the actors involved operate to achieve individual or collective non-mutually exclusive benefits due to the synergistic exchange of different types of resources.

The CF mechanism modifies frontiers among buyers, sellers and investors. This collective process of funding extends the role of both funders and consumers, identifying actors with this potential double role, namely the backers. In particular, a backer of a CF campaign has the peculiarity to prefer the financing for production rather just paying for the purchase or consuming, thus becoming a new hybrid market actor acting as co-producer and co-founder of new market offerings (Ordanini et al. 2011; Agrawal and Rahman, 2015).

From the entrepreneurial side, a crowdfunding campaign represents the virtual forum for resources exchanges with backers. Indeed, CF may be a VCC model that fosters, beyond the financial contribution of supporters, other opportunities of resources exchange, ranging from suggestions for the offering of goods and services to the test of these new market proposals.

However, although the general idea of CF as a collaborative model that leverages social capital networks is largely intuitive and recognized by prior studies (e.g. Giudici et al., 2013; Colombo et al., 2015; Buttice et al., 2017), in literature there is still a lack of conceptualization and empirical investigations of CF from the perspective of VCC. Therefore, the current study aims to fill the aforementioned gap, both at a theoretical and empirical level. In particular, CF can be read as a many-to-many VCC process (Gummesson, 2006), that relies on the interaction of a multiplicity of stakeholders, which may have different and simultaneous roles and aims (Vargo and Lusch, 2008; Frow et al., 2010a, b; Russo-Spena and Mele, 2012; Verleye, 2015).

First, to depict the CF as specific form of value co-creation, this study adopts the conceptual model proposed by Ranjan and Read (2016). The framework identifies two main dimensions through which VCC takes place, namely: the co-production (CP) and the value-in-use (ViU) dimensions. Each dimension includes several sub-dimensions. Whereas the concept of CP embraces all forms of resources exchange between firms and market actors, the ViU is the value deriving from the experience and interaction among people and the firm proposal (Ranjan and Read, 2016). By applying these conceptual constructs to the CF context, value derives from actors' interaction within, across and through networks (Vargo and Lusch, 2008). Thus, we argue that CF represents a VCC process as it represents both an integration of different resources by several actors, and a new form of consuming-investment experience. The focal point at the end of a complex VCC process, in the CF context, is the generation of new initiatives for or not-for-profit (Belleflamme et al., 2014; Mollick, 2014).

Second, the current study empirical addresses if the CF can be read as a VCC model. Consistent with the framework of Ranjan and Read (2016), we apply a backer co-creation behavioural scale that which reflects CP and ViU dimensions. In particular, the scale has been tested through a sample of 3.592 backers that financially supported a CF campaign proposed by Kickstarter, the largest reward-based crowdfunding platform in the world.

Therefore, in the next section, we provide a theoretical background and the research propositions of the study. After outlining the methodology in Section 3, we present the empirical results. Section 5 then provide a discussion of the results, which leads in to the conclusions of this study and a further research agenda.

2. Theoretical Background

The purpose of the current study is to analyse if and how CF can be understood as a VCC model. More specifically, we aim at analysing topics, such as emerging fintech[3] models and co-creation processes which prior literature has addressed mainly in a separated way. Thus, in the following sections, firstly we report a brief literature review on VCC framework. Secondly, we combine the theoretical dimensions of VCC framework with CF as a specific segment of fintech. In this way, we trace the theoretical background of the research propositions to test in the empirical section of the current study.

Indeed, from on hand, the CF phenomenon is a new fintech model to accrue and exchange financial and social resources across networks. On the other hand, the VCC conceptual construct provides additional insights for the comprehension of mechanisms and processes that allow a win-win situation for the different actors involved during a CF campaign.

2.1 Value Co-Creation (VCC) framework

The role played by the various actors on the markets is changing very rapidly due to the possibilities offered by the new information and communication technologies (Block et al., 2018). Current technological progress allows market entities to participate in broader and more diverse forms of VCC, which are completely redefining logics and sources of firm competitive advantage (Prahalad and Ramaswamy, 2004b). In the frame of this study, we consider VCC as a concept that encompasses all forms of active collaboration among firms and stakeholders, generating enlarged value through their interaction (Prahalad and Ramaswamy, 2000, 2004a-c; Vargo and Lusch, 2004, 2008, 2016).

Historically, VCC conceptualization finds in marketing literature one of the most promising stream for researchers involved in the investigation of how companies engage in an open process with customers for new product development (Riggs & Von Hippel, 1994; Von Hippel & Katz, 2002) and service delivery (Grönroos, 2000). Thus, a wide debate has been rooted in the foundational studies on the service-dominant (S-D) logic[4] (Vargo and Lusch, 2004, 2008, 2016; Grönroos, 2008). One of the core tenets of the S-D logic is the co-creation of value, where the actors involved are co-creators of value, relative to the organization that offers a value proposition (Vargo & Lusch, 2008). Together, different market actors co-create value.

Indeed, originated in the service literature (Grönroos, 2008; 2011; Vargo and Lusch, 2004, 2008, 2016), the S-D logic offers the opportunity to enlarge the application of VCC concept to several

[3] By fintech, or financial technologies, we mean the provision of financial services and/or financial products through the most advanced information and communication technologies (ICT).

[4] The service-dominant (S-D) logic, as introduced by Vargo and Lusch (2004, p. 9), is "a mindset, a lens through which to look at social and economic exchange phenomena so they can potentially be seen more clearly."

collaborative processes. In this way, we can go beyond the relational dimension between firms and customers, thus involving different stakeholder groups. From this enlarged perspective, VCC may be considered a dialectical process which involves interactions and resources sharing between a firm and its stakeholders, that are engaged in a dialogue to jointly define reciprocal beneficial solutions (Vargo and Lusch, 2008; Prahalad and Ramaswamy, 2004a, 2004b; Galvagno and Dalli, 2014; Agrawal et al., 2015; Vargo and Lusch, 2016).

The concept of VCC has an intrinsic nuanced and complex nature. This feature led the search for core conceptual elements that should help to better define VCC and its functioning (Ranjan and Read, 2016; Galvagno & Dalli, 2014). Accordingly, given the aim of the current study, we refer to the conceptual VCC dimensions proposed by Ranjan and Read (2016) in order to highlight the theoretical constructs that could provide additional insights in the CF domain.

In particular, from a literature review of 149 papers, Ranjan and Read (2016) identified two core concepts that define VCC processes, namely: Co-Production (CP) and the Value-in-use (ViU).

While the concept of CP describes activities and resources exchanged by actors to co-create a new market proposal, the concept of ViU goes beyond the co-production, establishing that value is generated by the interaction between people and a firm' offering. The exchange includes time, unique experience, stories, perception and relational effect (Ranjan and Read, 2016). This is coupled with the value that people associate to the participation at a co-creation experience (Figure 1).

2.1.1 CP domain

The fundamental premise of the VCC process is the cooperation among market actors. This is an essential condition, otherwise value is not co-created (Cova et al., 2011). A VCC process is intrinsically a proactive dialogue among parts that firstly exchange own resources. During this process, each part performs various activities related to one or more stage of production or consumption (Galvagno and Dalli, 2014; Cova, 2011; Prahalad and Ramaswamy, 2014b; Frow et al, 2015; Frow and Payne, 2013).

CP was originally identified with the involvement of the consumer in the firm definition and production of a core offering[5] (Luscho and Vargo, 2004, Etgar, 2008). However, over time, the CP construct has evolved toward a broader conceptualization embracing an innovative approach which is based on collaborative processes among firms and various stakeholder groups. The aim is to reciprocally produce a interactional value (Vargo and Lusch, 2008).

[5] Vargo and Lusch (2004; 2008; 2016) defined ten Original foundational premises (FP) of S-D Logic. The original sixth FP stated, “The customer is always a co-producer”. The FP was rewording in “The customer is always a co-creator of value” (Vargo and Lusch, 2008).

Beyond resources integration, CP involves dimensions related to the behavioral activism of stakeholder participating in the VCC processes, through dialogue and information sharing (Ranjan and Read, 2016). The fourth foundational premise describing the S-D logic, consider "operant" resources[6] (e.g. skills and knowledge) as fundamentals inputs of exchange between VCC actors.

In their theoretical model, Ranjan and Read (2016) define knowledge sharing as a first sub-dimension related to the CP domain. Knowledge sharing allows parties engaged in the VCC process to share ideas, creativity and expertise that facilitate the convergence of needs (Ranjan and Read, 2016). CP describes both a strategic decision to share the control on some stages of value creation processes, and the degree to which stakeholders are ready to fulfil their role as co-creators, sharing a sense of ownership in the process of value creation. A second sub-dimension of CP defined by Ranjan and Read (2016, p 293) is called "equity". The latter encompasses all activities and psychological factors associated with the desire of a stakeholder to sharing responsibilities with a firm during the value co-creation process (Payne et al., 2008; Payne et al., 2009; Ranjan and Read, 2016). Finally, the third sub-dimension related to the CP domain is represented properly by interaction, which Grönroos (2011) defined as reciprocal actions through which the parties can influence each other. Interactions allows the generation of suggestions and opinions about the firm proposals that can result in a better outcome for actors involved within the process (Ballantyne and Varey, 2006). Thus, all the three mentioned sub-dimensions (knowledge, equity and interaction) may constitute the conceptual architecture that supports the CP dimension of the VCC process.

2.1.2 ViU domain

Actors are encouraged in taking part in a VCC activities due to the possibility to gain benefits (Vargo & Lusch, 2004; Holbrook, 2005; Verleye, 2015; Agrawal et al., 2015) which value is "always uniquely and phenomenologically determined by the beneficiary" (Greer, Lusch and Vargo, 2016, p.3). Consequently, how actors experience activities in VCC processes is crucial to their perception of value (Bitner, 1992; Nambisan, and Baron, 2009, Verleye, 2015).

ViU domain embraces sub-dimensions principally related to stakeholder experience, which may be mostly independent from firm intervention (Ranjan and Read, 2016). This dimension pertains to the experiential factors associated with the stakeholder interaction relative to a firm proposal and their personal assessment (Edvardsoon et al., 2011; Vargo and Lusch, 2008; Sandström et al., 2008;

6 The SDL logic fourth foundational premise (FP4) stated that knowledge, and more in general operant resources, are the fundamental source of actors' strategic benefits (Vargo and Lusch, 2004; 2008). Operant resources are those that act upon other resources to create benefit, such as competences, and are typically related to the human sphere (e.g., the skills and knowledge of individual), organizational, informational (e.g., knowledge about market segments, competitors, and technology), and relational resources (e.g., relationships with competitors, suppliers, and customers). Operand resources are those resources, which must be acted on to be beneficial. Thus, they are typically physical (Constantin and Lusch, 1994; Hunt, 2004; Vargo and Lusch, 2004).

Ballantyne and Varey, 2008). Ranjan and Read (2016) identified three sub-dimensions which explain the ViU domain, such as experience, personalization and relationship. Experience encompasses all benefits actually gained by stakeholders participating to co-creation. These benefits are classifiable in hedonic, cognitive, social, personal and economic (Verleye, 2015; Sandström et al., 2008). A topical concept related to ViU is that a user has the opportunity to maximize the personalization of his experience in terms of benefits, both pragmatic (and economic) and personal (Verleye, 2015). Following Ranjan and Read (2016), the personalization introduces the second sub-dimension explaining the ViU concept, understood as the degree to which benefits, value or fun from the process depend on user and usage condition (Ranjan and Read, 2016). Being co-creators heterogeneous in terms of roles and engagement, personalization can be described as the ability of a firm to serve needs of each actors, accordingly to their expectations. Several studies on co-creation consider pragmatic and economic benefits, respectively describing a better satisfaction of needs, and the compensation consistent with the effort required (Edgar, 2008; Füller, 2010; Verleye, 2015). Finally, relationship is the third sub-dimension explaining the ViU. This sub-dimension captures social and relational benefits connected with the stakeholder capabilities to create value by interacting and cooperating with each other (Ranjan and Read, 2016). Collaborative interactions among actors is itself a source of value (Archpru Akaka and Chandler, 2011), as relationships reinforces social values such as reciprocity (Chandler and Vargo, 2011).

2.2 The Reward-based CF as a VCC model

CF is a new phenomenon inspired by the logic of microfinance and crowdsourcing (Belleflamme et al., 2014). The interest of academics, professionals and policy makers is widely justified by the global growth rates performed by CF as a success model of fintech. Indeed, nowadays almost 75% of alternative financial models is represented by CF solutions for firms or private (University of Cambridge, 2018)[7]. Belleflamme, Lambert and Schwienbacher (2014, pp.4) defined CF as "an open call, essentially through the Internet, for the provision of financial resources either in form of donation or in exchange for some form of reward and/or voting rights in order to support initiatives for specific purposes".

Originally employed mainly for creative and social causes, CF has rapidly evolved in several operative modalities able to serve different stakeholders' expectations (e.g. networks, donors,

[7] In terms of regional investment, despite Europe is the smallest region, it has grown 79% annually on average between 2013 and 2017. Asia-Pacific, largest region by volume, reached an annual growth rate of 145%, largely driven by the Chinese market. Finally, America CF market registered a 4-year average growth rate of 89% (University of Cambridge, 2018).

consumers, stockholders, partners), as well as, several types of entrepreneurial initiatives (e.g. new ventures, social enterprises, no-profit organization, civic communities). Due to a non-monolithic dimension, following Kirby and Worner (2014), CF can be classified in two main categories, namely community CF and financial CF. The former consists of online fundraising that does not include speculative expectations for the supporters. Whereas, the financial CF models are characterized by the investors' expectation of a strictly financial return.

Among the other models (e.g. equity CF and lending CF) the current study focuses on reward-based CF, which belongs to the wider community CF category. In particular, it consists of individuals support to a project or business with the expectation of receiving a non-financial benefit, such as goods or services at a later stage, or other forms of emotional or material compensations (Gerber et al., 2012; Gerber and Hui, 2013Mollick, 2014). Reward-based CF not only may ensure the necessary finance to new initiatives, but it also provides the opportunity to test in a preliminary way the interest of people in the launch of new goods/services (Mollick, 2014). Backers are those who support new ventures' growth and development, by financing the project and generally by acting frequently as first user/consumer (Ordanini et al., 2011; Gerber and Hui, 2013; Belleflamme et al, 2014; Mollick, 2014). Although, entrepreneurs present their market proposal through a mix of material and immaterial resources (Frydryck, 2016), information asymmetry is a matter in CF campaign, given the limited reliability on traditional source of soft and hard information (Gangi and Daniele, 2017). Thus, several types of informational resources provided by entrepreneurs should allow backers to evaluate the utility expected from the new good or service. The latter are generally offered in several commercial solutions that encompass a lower-base price, the opportunity to receive exclusive or additional materials, continuous upgrades during the campaign (Thürridl and Kamleitner, 2016; Hardy, 2013). Finally, another feature of a reward-based CF campaign is the emotional value associated with the opportunity to share a new idea between proponents and the crowd (Gerber and Hui, 2013).

Therefore, reward-based CF represents a powerful tool that boosts financial resources while maximizing social capital (Belleflamme et al., 2014), which, in turn, can help to increase the quality and the quantity of the collected resources (Skirnevskiy et al., 2017). Indeed, although the main contribution asked to the crowd has a financial nature, social capital plays a primary role for the development of the project that is promoted by the CF campaign. As highlighted by Leibovitz et al. (2015), reward-based CF is a new media that relies on the development of a more participatory culture. Digital platforms allow the building of personal relationships, by promoting and disseminating new projects among many people (Belleflamme et al. 2014; Lambert and

Schwienbacher, 2010; Gerber and Hui, 2013, Giudici et al. 2013; Mollick 2014; Agrawal, Catalini and Goldfarb, 2015).

In the reward-based CF we do not find only a new method for funding projects, but an innovative logic of offering that is based on the interaction and collaboration among several actors. From this perspective, Valančienė and Jegelevičiūtė, (2014), distinguished two main stakeholders' groups, namely the contextual stakeholders (e.g. society, government and regulators), as well as, organizational stakeholders (e.g. shareholders, consumer, suppliers, financial institution, managers and employees). Among the different actors, backers play a critical role. About them, literature highlights a mix of tangible and intangible benefits related to the participation at a CF campaign (Gerber and Hui, 2013). First, these supporters might satisfy their utility function through the usage of a new good or as the experimenting with a new service (Belleflamme et al. 2014; Gerber and Hui, 2013; Cholakova and Clarysse, 2015). Second, prior studies on reward-based CF highlighted the psychological aspects associated with the decision to finance a CF campaign (Frydrych et al. 2014; Jardat and Pesqueux 2016). Accordingly, research speaks about ago-boosting phenomenon, such as social prestige in a community (Colombo et al. 2015), or the possibility to obtain information on specific market proposals through the community engagement and the word of mouth. Furthermore, backers can share their expertise and know-how during a CF campaign. This opportunity allows to improve the overall quality and efficiency of the idea presented to the crowd (Kelly et al., 2010; Kim and Viswanathan, 2018). Regardless if backers become consumers, they are engaged in a non-traditional experience of investing and gaining tangible and or intangible resources that increase the possibility of value co-creation. The other actors, such as entrepreneurs and CF platforms interact with backers (Figure 2). More specifically, CF platforms intermediate the demands for the test and launch of a new market proposal, whereas the entrepreneur is the generator and proponent of the new idea.

As VCC model, in the reward-based CF actors may be considered resource-integrators[8] (Vargo and Lusch, 2004, 2006). Resources exchanged can be highly specialized and related to a functional or emotional sphere (Payne et al. 2008). Indeed, reward-based CF actors can provide several types of resources, as well as they expect several kinds of benefits, not-mutually exclusive (Table 1). The VCC process starts with the proposal made by the entrepreneur to the CF platform and, then, to the backers[9]. Accordingly, VCC will occur when both, backers and CF platforms, integrate the

[8] The FP (9) of S-D Logic affirms, "All social and economic actors are resource integrator", (Vargo and Lusch, 2004).

[9] The FP (7) of S-D Logic states, "Actors cannot deliver value but can participate in the creation and offering of value propositions", (Vargo and Lusc, 2016).

entrepreneurial offering through their own resources (Vargo and Akaka, 2009; Vargo and Lusch, 2016).

Time spent in the launch of the proposal, the virtual storytelling and the emotional engagement can be considered the immaterial resources that entrepreneurs make available to the crowd. These resources are updated through the backers' engagement within the virtual space accompanying the project[10]. Furthermore, material resources occur in the form of graphical, textual and video descriptions or rewards that contribute to explain and promote the new idea. Through the involvement of backers, entrepreneurs collect strategic resources, beyond financial support, including early customer experience and commitment that allow creating a more competitive offering (Frow et al., 2015).

In the CF scheme, platforms represent the regulatory mechanism that enables the resources exchange and the integration among the actors (Prahalad and Ramaswamy, 2004a; Cova et al., 2011). Resources interchanged do not belong to CF platforms. As intermediaries, they provide digital solutions to match the expected benefits, with the multiple scope to mitigate information asymmetries, minimize transaction costs and maximize the experience coming from the participation of the crowd (Agrawal et al., 2014). Platforms benefit from successfully CF campaign, both in terms of monetary fees and additional social capital. The fee represents the revenue stream for CF platforms. Immaterial and strategic resources provided to entrepreneurs by platforms are visibility and sponsorship through their networks and media. At the same time, visibility and reputation are benefits that platforms obtain through successful CF campaigns. Well-reputed platforms are often associated with higher level of social capital, trust relationships, transparency and community engagement (Agrawal et al., 2014; Bonzanini et al., 2016). Well-reputed platforms show higher success rate of CF campaign, measured by the reaching or the overcoming of funding target.

In summary, reward-based CF configures a continuous dialogue between different actors, such as backers, platforms managers and entrepreneurs, similarly to a "forum for co-creation experiences" (Prahalad and Ramaswamy, 2004a, pp.8). Beyond to be co-investor (Ordanini et al., 2011), backers can be seen as co-evaluators, co-producers or co-testers (Vargo and Lusch, 2006; Russo-Spena and Mele, 2012; Frow and Payne, 2013; Frow et al., 2015). At the same time, proponents launch new ideas and receive financial and non-financial benefits from the crowd. Platforms provide the virtual space for engaged virtual community. From the VCC perspective, a successful reward-based CF is

[10] In the practice is frequent that entrepreneurs create dedicated online space (eg. Facebook groups and page) where engage in a direct dialogue with future supporters. Backers' are actively involved in the launch of the proposal, they access to the main product and components previews', having the possibility to dialogue, participate in a contest to win a prize, socialize, raise doubts or offer their time and knowledge as co-creator. Some examples are the organization of a prize contest to promote the product, asking backers to make an action online, such as like, sharing or comments. Further, experts' backers often collaborate with entrepreneurs as moderator of these communities, sponsoring the product among their network. Finally, experts' backers tend also to collaborate adding their knowledge in terms of rules, the strategy of the game or additional features.

the result of "balanced centric" outcomes ensuring that all actors are adequately satisfied by taking part in a collaborative process (Gummesson, 2008. p.17).

2.2.1 The specific role of backers in the reward CF as VCC model

From the S-D logic, value is co-created by several stakeholders, with a central contribution of beneficiaries (Vargo and Lusch, 2006). In the reward-CF model, benefits searched by CF actors are realized only when the entrepreneurial proposal has been successfully funded by backers. Thus, in the current study we apply the VCC theoretical framework to highlight whether and to what extent CP and ViU domains are effective mechanisms helping to explain the role of backers in the reward-based CF model.

In the CF context, backers co-define with the entrepreneur the overall CF offering, acting as co-producer of the new market proposal (Frow et al., 2015; Ordanini et al., 2011). Knowledge sharing characterizes CF as a VCC process. In particular, reward-based CF implies the interactions among communities that co-create value through the exchange of information. This social interaction is embodied in the reward-based CF mechanisms (Ordanini et al., 2011), since backers participate to the launch of a new initiative primarily exchanging evaluations and suggestions or participating at online communities.

Backers can actively and publicly debate and communicate with the entrepreneurial team. Platforms provide a space in the project page that hosts the dialogue between supporters and proponent. Additionally, backers can contribute to co-define the market proposal offering diversified competences and expertise[11] (Kim and Viswanathan, 2018; Mollick and Robb, 2016). A supporter can limit his participation to financial contribution, or can act more proactively, socializing with other supporters and behaving as an ambassador (e.g. spreading the CF campaign among his/her own network), or performing more specialized activity, such as feedbacks and new insights to the product design and test. In CF context, backers' decision to engage in co-investing experience is considered a function of the communicational efforts and preparedness of the proponent, in addition to the reputation among platforms communities (Mollick, 2014; Frydrych et al., 2014; Kuppusmwamy and Bayus, 2015; Kunz et al. 2017).

The second sub-dimension of CP we can find in reward-based CF is what Ranjan and Read (2016) VCC framework defines as equity. In the case of backers, equity can express both the willingness and the sense of responsibility deriving from sharing a core-value process (Ranjan and Read, 2016). In particular, in the reward-based CF model, backers share with entrepreneurs a responsibility over the

[11] In the frame of the case study adopted – Black Rose Wars game by LMS accurately described in the section 3 – several backers was cited in the game booklet as product' co-creators. Community management and engagement, amabassador, expert in miniature painting, translators and proofreaders are some of the roles encompassed by bakers mentioned in the Credits section. Available at: http://www.ludusmagnusstudio.com/resources_web/blackrose/BR_CORE_Rulebook_v1.2_ENG_web.pdf.

outcome of CF campaign (Ordanini et al., 2011). Accordingly, Hu et al. (2015) found that certain types of backers are aware that until the financial threshold is not reached, the entrepreneur will lack financial resources to realize the new market proposal. This constraint produces a sense of common responsibility among first supporters for the success of the new proposal (Hu et al., 2015).

Finally, relative to CP, the Ranjan and Read model (2016) encompasses a third sub-dimension, which is represented by interaction. The latter includes all reciprocal actions through which actors influence each other, in turn influencing the final outcome. In the CF context, backers can potentially interact with others that are interested in the entrepreneurial proposal for hedonic or social aims (Gerber, and Hui, 2013; Verleye, 2015). At the same time backers may participate in the public debate to gain information on the economic value associated with the future usage of the product or service proposed through the CF campaign (Hardy, 2013; Thürridl and Kamleitner, 2016; Cholakova and Clarysse, 2015). Opinions and actions created by actors that interchange information generate a specific sentiment about the project (Cordova et al., 2015; Courtney et al. 2016). Furthermore, CF literature has empirically identified several patterns of reciprocal influence among backers, determining the outcome of the CF process (Gangi and Daniele, 2017; Colombo et al. 2015), including the endorsement from more expert backers that act as reviewers or mentors of the project (Chen & Xie, 2005; Zhu & Zhang, 2010; Gangi and Daniele, 2017).

Thus, based on the above background, we pose the first proposition to test (P.1) as follows:

P.1 CP is a VCC axiom that explains backer engagement in reward-based CF model.

The second dimension of Ranjan and Read VCC framework (2016) is the ViU. This VCC axiom in the CF context is potentially explained by all personal-based perceptions of value extracted by backers participating to the CF experience (Edvardsoon et al., 2011; Sandtrom et al., 2008). Analyzing the role of backers in CF, Ordanini et al. (2011), detect that backers' participation can be driven by innovation orientation, namely the backer attitude in experience new ways of interact with firms. Thus, the first sub-dimension which may explain the ViU axiom is the experience. In particular, within the reward-based CF model, experience can be understood as the willingness of backers to evaluate proponent ability to enhance commitment opportunities (Frow et al., 2015; Gerber and Hui, 2013). In accordance with the experiential benefits associated with CF, the ViU for backers may depend on the extent to which they can personalize their experience, both in terms of pragmatic and personal benefits (Verleye, 2015). Indeed, as co-creators, backers are driven by the possibility to obtain a fair economic compensation from the support to the entrepreneurial proposal. Rewards in the form of new product or service are often found among the first motivations influencing the backer participation in a reward-based CF campaign (Gerber and Hui, 2013; Hardy, 2013; Thürridl and Kamleitner, 2016). Analyzing the attitude of backers towards new goods or services, Hardy (2013)

distinguished several incentives that may enhance the increasing of ViU, scuh as general incentives to invest in the product's value, individual incentives rewarded with special material, incentives to participation itself. For example, by the growing of the level of funding, backers may be rewarded through additional or exclusive materials that contribute to increase the expected value deriving from the participation to the CF initiative. Backers may be willingness to pay more whether the CF campaign provides additional rewards that expand the utility of the products or services proposed. Moreover, incentives to participate may be related to special recognition, future discounts or special proposals that contribute to improve the ViU coming from the experience as supporter of a CF initiative.

Finally, the third sub-dimension that may influence the value extracted by backers from a VCC process is represented by relationship. Social and relational capabilities are sources of value. The collective process among backers during a CF campaign reinforces some personal value, such as cooperation and reciprocity (Ranjan and Read, 2016; Chandler and Vargo, 2011). In the CF context, backers can benefit from social participation within virtual communities (Ordanini et al., 2011). Backers are motivated to engage in CF as a VCC process due to the possibility to feel themselves as part of a wider community, which is sharing the same new idea, project, and experience (Gerber and Hui, 2013). Thus, we can speak about social and hedonic benefits, consisting of the pleasure to be connected with other people and to be a part of trusted relationships (Kock and Siering, 2015).

Thus, based on the above background, we pose the second proposition to test (P.2) as follows:

P.2: ViU is a VCC axiom that explains backer engagement in reward-based CF.

3. Methodology

In order to empirical test our research propositions, the current study adopts a mixed research method, by integrating a case study with a survey technique. The design of the research method is justified by the aims and it's the explorative approach of the analysis. In particular, the use of a case study allows to gain a holistic comprehension of a certain phenomenon within the real-life context from the perspective of those who are involved (Boblin et al., 2013; Yin, 2003) within the context of use (Yin, 1994). Integrating a case study with a survey, the current study collected both qualitative and quantitative data (Eisenhardt, 1989) that enable a deeper understanding of the groups under consideration (Dyer and Wilkins, 1991; Yin, 2003) through constructs validation and interpretation of observed associations (Gable, 1994). Given the complexity of CF context, both case study and surveys have been largely adopted as research methods, especially to deepen actors' motivation to engage the CF process. (Aitamurto, 2011; Gerber and Hui, 2013; Gerber et al., 2012; Mollick, 2014;

Lehner, 2014; Cholakova and Clarysse, 2015; Gleasure and Feller, 2016). Thus, our methodological approach is consistent with prior literature.

3.1 Case study and the Survey sample

Theoretically, in order to improve generalizability of findings, the population should comprise all backers who participated in a CF campaign through a given CF platform. For the current study we refer to the Kickstarter protocol on personal protection information that prevents access to all backers mail due to the privacy concerns. This explains why this study considers a non-probabilistic sampling procedure, e.g. a convenience sampling procedure.

The case study is the CF campaign called "*Black Rose Wars*" (BRW), launched on Kickstarter in 2018 by *Ludus Magnus Studio*[12] (LMS) in the Game category. LMS is an Indie hobby game company who has gained a reputation in the CF market managing three successful CF campaigns on Kickstarter (see Table 2). The BRW game involved 8,363 backers, with an overfunding of 2185%. This result testifies Black Rose Wars as a successful campaign.

Kickstarter (KS) is a leading USA reward-based CF platform, where project backers receive non-financial rewards for their contributions. KS adopts an all-or-nothing funding method, thus if a project proposal does not reach the capital requested, the campaign fails, and supporters are reimbursed of financial resources provided. KS projects fall into 15 categories[13], since its launch, Kickstarter collected $ 4.258.392.693 billion from 162,191 successfully funded projects, with the support of more than 16.000.000 backers, 33% of which are serial backers, namely recurrent users. Interestingly, the Game category shows the highest level of project launched and capital allocated to campaigns (1.02billions), with an average success rate of 37% (followed only by the Comic, Dance and Arts categories, with success rate respectively of 57%, 61% and 42%)[14].

3.2 Protocol and items of the survey

After the case study identification, our analysis proceeded with an online survey. Backers were invited by mail and they received an explanation of the aims and motivations of the research. A hyperlink for the on-line questionnaire was included in the e-mail, thus backers directly access to the survey page through this link. Supporters who participated in the survey were rewarded with a special prize offered by LMS. Relative to the total population represented by the 8.363 backers that participated at the CF campaign for BRW game, our survey collected responses from 3.592 backers,

[12] http://ludusmagnusstudio.com/.

[13] Kickstarter categories: Art, Comics, Crafts, Dance, Design, Fashion, Film & Video, Food, Games, Journalism, Music, Photography, Publishing, Technology, Theater. Accessed: January 2019.

[14] Kickstarter Statistics: https://www.kickstarter.com/help/stats?ref=global-footer. Accessed: January 2019.

representing respectively the 43% of the population. A pilot study was conducted prior to the actual data collection, in which 50 randomly selected supporters were asked to fill out the online survey and report any difficulties in understanding the questions (Collins, 2003). Pilot study indicated that there were not difficulties in understanding the questionnaire instruction and items.

Backers had to indicate their level of agreement relative to 22 statements explaining whether VCC process occurs in CF context. Two 5-point Likert (1932) scales are used (for CP and ViU axioms respectively), ranging from strongly agree to strongly disagree. The two scales are consistent with the CF and VCC literature. All items are all positively worded. Table 3. Reports the items measuring CP and ViU from the side of backers. Questionnaire and sources complete Table 3.

3.3 Scale reliability

A reliability analysis with SPSS software was carried out on the Backers VCC behavioural scale, as reported in Tables 4 and 5. Cronbach's alpha (Cronbach, 1951) is used to measure internal consistency of the scale's measurement concepts. All items appeared to be worthy of retention, resulting in a decrease in the alpha if deleted. Consistent with prior literature (Nunnally, 1978; Peterson, 1994), the acceptable threshold of Cronbach's alpha is equal to 0,7.

4. Results

As reported in Table 4 and 5, Cronbach's alpha for the CP and ViU sub-dimensions exceed the acceptable threshold of 0,70 ($\alpha = 0.73$; $\alpha = 0.76$) . As a whole, the constructs exhibited sufficient internal consistency and reliability. Both CP and ViU scales show on average an inter-item correlation above 0.20, indicating that items are reasonably homogenous (Piedmont, 2014) and well correlated to explain the main constructs (Cohen & Swerdlik, 2005). Empirical results confirm CP and ViU as main dimensions of Reward-based CF as a specific model of VCC.

In particular, with reference to the CP domain, findings from the explorative study support positively P.1 (*CP is a VCC axiom that explains backer engagement in reward-based CF model*). That is, the Reward-based CF model enhances backers' participation in terms of value co-production opportunities. Backers concur to co-create the definitive entrepreneurial offering, exchanging several types of material and immaterial resources. This interaction allows backers sharing information and evaluations about the proposal in a public discussion around the CF campaign. Backers' expertise and the team preparedness are factors enabling knowledge sharing, thus activating co-production opportunities. Furthermore, the expertise of Backers in the usage of CF platforms allows backers to extract more value from a CF campaign. As co-creator (Ordanini et al., 2011), backers' share with the entrepreneur a sense of common responsibility (say equity in the sense of Ranjan and Read, 2016) about the outcome, understood as the success of the CF campaign. This feature indicates a

convergence between firm interest and the backers' willingness to experience new roles in a creation processes, confirming equity as a sub-dimension underlying CF as a VCC process. Interaction sub-domain in the Reward-based CF model occurs in terms of reciprocal influence among actors involved in the funding process. By sharing the risk of the initiative with entrepreneur, backers can act as an ambassador of the initiative among their personal and professional networks. Moreover, backers' interactions mitigate information asymmetry associated with the CF campaign. The expert backers drive the others that show less experience in the field of the proposal and with CF in general.

Relative to P.2 (*ViU is a VCC axiom that explains backer engagement in reward-based CF*) , findings from our study further confirm that Reward-based CF represents a peculiar model of VCC, able to enlarge experiential benefits for backers participating in the process. In particular, experience sub-dimension explains the willingness to experiment innovative consuming and producing behaviours by backers. They prefer to participate in the definition of a new market proposal, rather than limit themselves to buy or use the new market idea. The extent to which backers can benefit from VCC will depend on the grade the backers experience can be customized. In terms of economic benefits in the CF context, general and personal incentives related to the product represent additional means through which backers can enlarge their utility function. Finally, the participation at a virtual community represent the social benefit that can be maximized trough CF campaign, by reflecting trust and reciprocity values.

5. Conclusive remarks

Over the years, the entrepreneurial finance landscape has changed very rapidly (Block, Colombo, Cumming, Vismara, 2018). New players have emerged, with a significant contribution of the technological revolution. The resources exchange in peer-to-peer network has led to a new financial model, such as Crowdfunding. The latter is able to boost innovation and new ventures creation through different forms of interaction among different stakeholders, thus mirroring a VCC process. Co-creation is evolving as a new paradigm in the management literature (Galvagno and Dalli, 2014), due to its potential to greatly impact on society (Agrawal et al., 2015). Despite the growing evidence of CF success, very few studies have posed attention to co-creation opportunities emerging in CF context (Ordanini et al., 2011; Quero et al., 2016). Accordingly, we highlighted a lack of conceptualization and empirical evidence on CF as a specific VCC model. Little attention has been dedicated to how the value is created, distributed, paid for and exploited during a CF campaign, thus limiting its comprehension as a new and virtual site for a forum of experience (Galvagno and Dalli, 2014; Prahalad and Ramaswamy, 2004a).

Based on the above considerations, the current study aimed at conceptualize and empirical investigate whether and to what extent CF can be considered a peculiar VCC model. By adopting the Ranjan and Read (2016) VCC framework, we have had the opportunity to conceptualize CF from the VCC perspective, in terms of dimensions and sub-dimensions of a complex theoretical construct. Empirically, our findings support the thesis of CF as a VCC process.

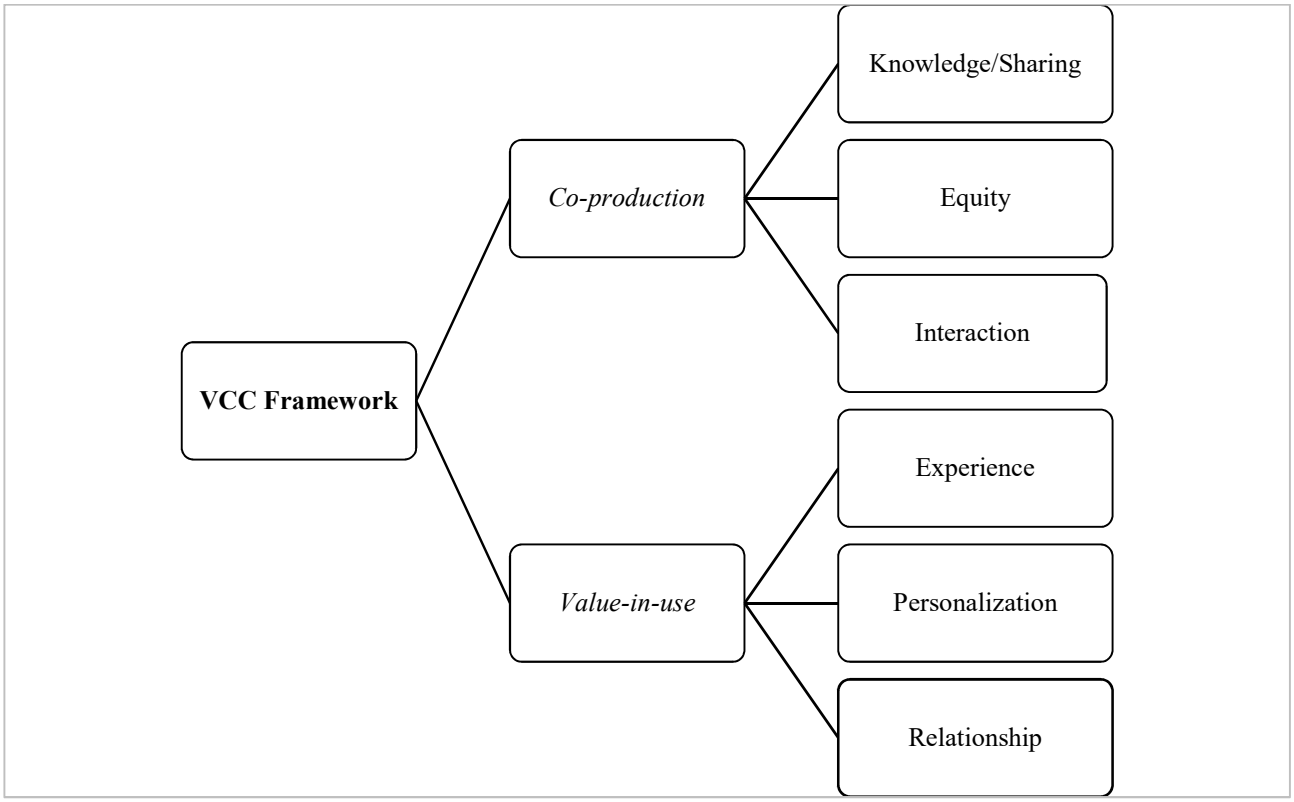
Consistent with a broader conceptualization of VCC, the current study offers a holistic perspective of CF, highlighting the resources exchanged and non-mutually exclusive benefits that actors may obtain as parts of a co-creation process. Indeed, CF can be read as a many-to-many VCC process (Gummesson, 2006), that relies on the interaction of a multiplicity of stakeholders that have different and simultaneous roles and aims (Gummesson and Mele, 2010).

Covering a limitation of prior literature (e.g. Ordanini et al. 2011), our study gathered information directly from backers involved in a CF campaign. This allows a progress of the extant studies on the role of backers from co-investor to a hybrid market actor that encompasses several co-creation roles. Developing and testing a behavioural backer's scale, the study explores personal and contextual traits describing value and benefits associated with CF participation. Both dimensions, CP and ViU, are useful to explain the functioning of backers' support to a new venture or to a new market proposal. From this perspective, the study advances previous studies framing the CF as a service-ecosystem (Quero et al., 2016). Moreover, differently from prior evidence (Ordanini et al., 2011 and Quero et al., 2016), this study offers empirical insights on how Reward-based CF can deliver co-creation experiences.

Our analysis has practical implications. In particular, findings spur entrepreneurs and platforms to intensify their own efforts toward increasing interactions among themselves and with backers. This means enriched pages or virtual sites to share experience, valuations and comments on platforms. Concurrently, proponents have to invest in additional and exclusive materials to reward the higher level of involvement of backers, acting in the quality of co-financiers, co-creators and final beneficiaries of a new initiative.

This research has several limitations. In order to offer a preliminary empirical evidence of the CF as a VCC model, the study gathered information from a convenience sample extracted from a single case study. Gamers' communities, which is the reference of our analysis, are generally highly creative and engaged (Frow et al., 2015), thus their willingness to co-create value might differ from backers' active in other categories or sectors. Thus, further studies can apply the conceptual model of VCC in CF to a large and more heterogeneous backers' sample. This would strengthen evidences obtained. Additionally, the current study limits the analysis of CP and ViU dimensions to backers. Therefore, a further research agenda may include other actors involved in the CF process, such as CF platforms or entrepreneurial team.

Figure 1. VCC Conceptual framework.



Source: Authors' adaptation from Ranjan and Read (2016).

Figure 2. Reward-based CF as a VCC model.

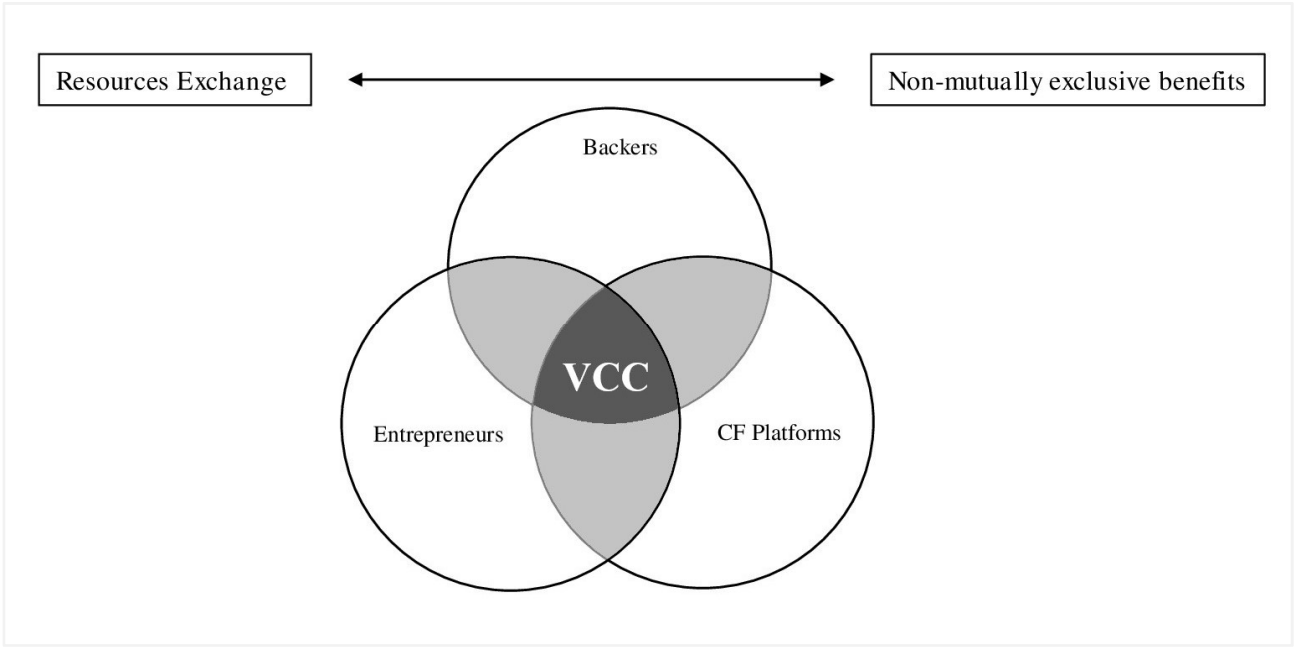


Table 1. Reward-based CF as a VCC model: actors' benefit and resources integrated.

Actors	**Resources exchanged**		**Non-mutually exclusive benefits**
	Material	*Immaterial*	
Backers	Financial	Time Feedback/insight Expertise E-wom	Material/non-material reward Collaboration / Participation Social benefits
Entrepreneurs	Campaign materials: graphics, video, reward.	Time Update Storytelling Emotional engagement	Financial resources Market test Feedback/Insights Social and relational capital Visibility Legitimation
CF Platforms	Digital Technologies Support Payment system	Community Social regulatory norms Visibility	Fee Visibility Reputation

Table 2. Ludus Magnus Studio, CF campaigns overview.

Crowdfunding campaigns	Funding Goal	Funding Obtained	Overfunding	Backers
Nova Aetas (2016)	$40.000,00	$170.118,00	425%	1103
Sine Tempore (2017)	$45.000,00	$654.848,00	1455%	4094
Black Rose Wars (2018)	$60.000,00	$1.311.558,00	2185%	8363
Grand Total	$145.000,00	$824.966,00		13.420

Table 3. Backers' VCC behavioural scale: Constructs and Items.

Sub-dimensions	Name	N°items	Item	Source
Co-production				
Knowledge	K1	5	I am an expert in the game sector.	Kim and Viswanathan (2018); Mollick (2014); Frydryck et al. (2014); Kuppusmwamy and Bayus (2015); Kunz et al. (2017); Mollick and Robb (2016).
	k2		I well know how KS works.	
	k3		I often support other KS campaigns in the games category.	
	k4		The team is competent and reliable.	
	k5		The team communicates adequately and frequently with supporters.	
Equity	E1	2	I felt I was sharing a kind of common responsibilities with other supporters for the success of the project.	Ordanini et al. (2011); Hu et al. (2015).
	E2		Supporting the project offered me an exciting new consuming-investing experience.	
Interaction	I1	4	I interacted with other supporters of the project.	Gerber and Hui (2013); Giudici et al. (2013); Colombo et al. (2015); Gangi and Daniele (2017).
	I2		After supporting the project, I spread the project among friends and other gamers potentially interested.	
	I3		Reviewers opinion reinforced my willingness to purchase the product.	
	I4		Backers' comment and opinion reinforced my willingness to purchase the product.	
Value in use				
Experience	X1	2	I consider participation in crowdfunding as an innovative behavior or innovative way of being a consumer.	Ordanini et al. (2011)
	X2		I prefer to co-create new market proposal, instead of simply buy it.	
Personalization	P1	7	I was interested in the rewards that were offered during the campaign.	Gerber and Hui (2013); Hardy (2013); Thürridl and Kamleitner (2016)
	P2		Exclusive Kickstarter materials influenced my reward choice.	
	P3		The number of times the reward had already been chosen by other supporters influenced my choice.	
	P4		I chose the reward, also considering the add-on.	
	P5		Stretch goals motivated me to choose the reward.	
	P6		I supported the campaign for an amount greater than the reward value, in view of additional orders.	
	P7		Shipping time estimation influenced my choice to pledge.	
Relationship	R1	2	Supporting the project, I felt to be part of a community of people that support each other.	Gerber and Hui (2013); Kock and Siering (2015); Ordanini t al. (2011)
	R2		The decision to support the campaign was influenced by a strong sense of being connected with the community.	

Table 4. Descriptive Results and Reliability Analysis of Co-production' sub-dimensions.

Co-production sub-dimensions

Statistics for Scale	N	Mean	Variance	SD	
	11	37,72	31,769	5,636	
	Mean	Min	Max	Range	Variance
Item Means	3,429	2,319	4,205	1,886	0,336
Item Variances	0,974	0,486	1,443	0,957	0,870
Inter-Item Correlations	0,202	0,004	0,606	0,602	0,200
Item Total Statistics	Scale Mean if item is deleted	Scale Variance if item is deleted	Corrected item total correlation	Squared Multiple Correlations	Alpha if item is deleted
K1	34,270	28,167	0,243	0,181	0,728
K2	33,580	28,245	0,330	0,443	0,716
K3	33,520	28,272	0,274	0,376	0,723
K4	33,900	27,984	0,447	0,363	0,705
K5	33,720	28,011	0,387	0,337	0,710
E1	34,610	25,428	0,497	0,345	0,691
E2	34,380	25,987	0,451	0,308	0,698
I1	35,400	25,632	0,436	0,295	0,700
I2	34,710	25,325	0,414	0,259	0,704
I3	34,370	27,346	0,304	0,177	0,720
I4	34,780	26,241	0,384	0,294	0,708
	Alpha	Alpha Standardized			
Reliability Coefficients	0,729	0,735			

Table 5. Descriptive Results and Reliability Analysis of Value-in-Use' sub-dimensions.

Value in use sub dimensions

Statistics for Scale	N	Mean	Variance	SD	
	11	36,5	37,732	6,143	
	Mean	Min	Max	Range	Variance
Item Means	3,318	2,427	4,354	1,927	0,454
Item Variances	1,056	0,480	1,469	3,060	0,069
Inter-Item Correlations	0,229	0,310	0,607	0,576	0,013
Item Total Statistics	Scale Mean if item is deleted	Scale Variance if item is deleted	Corrected item total correlation	Squared Multiple Correlations	Alpha if item is deleted
X1	32,830	32,088	0,440	0,333	0,740
X2	33,380	32,511	0,384	0,262	0,747
P1	32,150	34,161	0,382	0,303	0,749
P2	32,480	31,782	0,424	0,299	0,742
P3	33,980	31,194	0,397	0,244	0,746
P4	33,570	31,263	0,369	0,180	0,750
P5	32,640	33,019	0,343	0,216	0,751
P6	32,590	31,416	0,469	0,304	0,736
P7	33,920	32,534	0,308	0,169	0,757
R1	33,380	30,646	0,517	0,451	0,730
R2	34,070	30,589	0,515	0,461	0,730
Reliability Coefficients	Alpha	Alpha Standardized			
	0,761	0,766			

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