Entrepreneurial University and Triple Helix's Development.

ATTRACTING FINANCIAL RESOURCES TO ENTREPRENEURIAL UNIVERSITY: THE ROLE OF CROWDFUNDING.

Prof. Roberto Parente, Università degli Studi di Salerno, rparente@unisa.it - Professor of Entrepreneurship and Innovation, whose research interests are mainly related to high tech start-up from academia and the entrepreneurial University on the whole. Co-founder of several academic spin offs in the field of Biotech, Nanotech and ICT. Director of the LISA Lab, (Laboratory on Innovative Entrepreneurship and Academic Spin-Off), that is part of Department of Management Studies at University of Salerno and promotes research and exploratory studies on key issues related to innovation and entrepreneurship. Moreover, Prof. Roberto Parente and LISA Lab move their activity to offer unique opportunity to connect an ecosystem of people and organizations involved in Technology Transfer initiatives.
Dr. Rosangela Feola, Università degli Studi di Salerno, rfeola@unisa.it - is graduated with honors in Economics in 2002 from the University of Salerno. She obtained a PhD in management at the same university with a thesis on the exploitation of science-based entrepreneurial opportunities.
Currently she is a member of research groups on innovation and innovative entrepreneurship and co-authors of several national and international publications on the same subjects. She is also member of LISA Lab.
She is founder of several academic spin-offs of the University of Salerno operating in the field of new materials and nanotechnology. In these spin-offs she conducts business planning activity, analysis of technology and market research.
Ezio Marinato, Università degli studi di Salerno, emarinato@unisa.it – PhD. Student in Management and Information Technology at the University of Studies of Salerno. His research interests are mainly oriented to the understanding of Entrepreneurship and Innovation, with focus on opportunity recognition, business modeling and innovation management. Currently, he is member of the LISA Lab.
Valentina Cucino, Università degli Studi di Salerno, valentina.cucino@gmail.com – She graduated cum laude in Business Economic at the University of Salerno. LISA Lab fellow, an Laboratory of Entrepreneurship and Innovative academics spin-off promoted by Department of Management & Information technology. She has been working of support and mentoring to start-up. Currently, she is member of the LISA Lab.

Abstract: *Crowdfunding have recently drawn the attention of both scholars and professionals as an outstanding financial tool. From its birth, because of its evolutionary nature, this financial mechanism has experienced a lot of changes, with a common driver: the capability to adapt the crowdfunding model to many different fields. In this study, the authors focalize their attention on the relation between crowdfunding and academia, especially looking at the perspective in attracting financial resources to jumpstart the academic spin off in their pre-seed stage. The proposed research model is an exploratory study to analyze the role of crowdfunding in financing academic spin off. Following the evidence from the literature review and the state of the art analysis, the authors aim to build a case study research (Eisenhardt, 1989; Yin, 2009) through the observation (Burgess, 2002) of some Italian University and Academic/University Spin Off behavior among different crowdfunding models and platforms. Because of the newness of the topic, the case study approach is expected to capture the complexity of the phenomenon, starting with an heuristic investigation*.

Keywords: Entrepreneurial University; innovation; financing; crowdfunding.

Introduction: Crowdfunding have recently drawn the attention of both scholars and professionals as an outstanding financial tool. From its birth, because of its evolutionary nature, this financial mechanism has experienced a lot of changes, with a common driver: the capability to adapt the crowdfunding model to many different fields. In this study, the authors focalize their attention on the relation between crowdfunding and academia, especially looking at the perspective in attracting financial resources to jumpstart the technology transfer processes and to exploit the entrepreneurial capabilities of researchers.

State of the art:

In the last years, economic systems have been subject to a radical evolution towards technology-based models of competition, within which the innovative capacity and the recombination of the internal and external technological competences are the basis for the foundation of a solid competitive advantage (Kogut & Zander, 1992). With specific reference to the academic system, this evolution has been actualized in the definition of a third mission for universities, that means they have to contribute more directly to innovation and to the local economic development (Etzkowitz, 1998). Many universities, in recent years, became attracted by an entrepreneurial orientation, combining the more traditional functions of teaching and researching with a new role in the economic system, through specific forms of technology transfer processes (Brett et al., 1991; Blair & Hitchens, 1998; Piccaluga, 2001; Bonaccorsi & Deraio, 2007). The Entrepreneurial University is a central concept to the Triple Helix Model developed by Etzkowitz (1993) and Etzkowitz and Leydesdorff (1995). The Triple Helix model is based on the idea that the potential for innovation and economic development, in a Knowledge Society, lies in a more prominent role for the university and in the collaboration and hybridization of the three pillars of the virtuous circle of innovation: university, industry and government.

According to the New Geography Theory, proximity always has an impact on interaction and innovation propensity because of the well-known advantages of co-location (Boschma, 2005). The concept of co-location is present in regional studies and in the analysis of clustering (Porter, 1998; Rullani, 2000; Cesaroni & Piccaluga, 2003; Parente, 2008) that push the focus on economies of agglomeration and localization. Looking at the financial sub-pillar, the importance of geographical proximity is seen more and more important. Many authors (Mason and Harrison, 1994; Harrison &

Mason, 1996; Sohl 1999; Auerswald & Branscomb, 2002; Wong, 2002; Wong *et al.*, 2009) agree on the idea that the most part of investors, especially angels, doesn't *fly*. But what about the new financial investments like crowdfunding? Is this a possible mean to overcome the lack of a regional effective financial system? Crowdsourcing revolution (Howe, 2006) and technology platforms started a disintermediation process that changed the dynamics of integration economies (Piller *et al.*, 2004) between the broad types of user and producer. In the last years, crowdfunding is arising as a widespread financing and fundraising tool, by allowing to turn a large audience of customers into investors (Schwienbacher & Larralde, 2010; Ordanini et al., 2011; Rubinton, 2011; Castrataro *et al.*, 2012; Belleflamme et al., 2014). These authors agree on the idea that crowdfunding lies on different elements that could be macro-categorized in: web, social (relational) capital (Bourdieu, 1985) and, indeed, crowdsourcing. The need to feed a strong wide community highlights the social network structure behind the crowdfunding mechanism. This is a funding vehicle that embraces different contexts as well as the dimension of social groups and communities (Giannola & Riotta, 2013; Davies, 2014). Currently, a new wave of platform to support scientific research and technology transfer processes is developing. Many are the examples of crowdfunding platforms launched by USA Universities and, recently, such initiatives have been started in Italy too. Crowdfunding represents a novel mechanism of fundraising embedded in the current financial innovation (Moenninghoff & Wieandt, 2013), which operates in order to produce convergent innovation (Dubé *et al.*, 2014). It means innovation that produces both economic and social (human) outcomes. Academic Crowdfunding has been proved as useful tool to fund research and Entrepreneurial University plays an important role because crowdfunding literally connects entrepreneurs/researcher with potential funders, individuals who can supply financial capital (Wheat *et al.*, 2013; Marlett, 2015). This is possible thanks to intermediation internet based platforms, which act as market place where is possible to collect and canalize the scattered unlocked private capitals to sustain business ideas from research, decreasing the weight of geographical proximity in the innovation process (Agrawal *et al.*, 2011).

Methodology:

The proposed research model is that of an exploratory study. Following the evidence from the literature review and the state of the art analysis, the authors aim to produce a comparative analysis, at

both national and international levels, of academic crowdfunding to understand which model is more effective than others and to test the subscribed hypothesis. Because of the newness of the topic, in order to evaluate the relevance of innovative financial tools like academic crowdfunding in triple helix ecosystem, the research has been conducted through the analysis and comparison of some academic crowdfunding platforms, launched by some Universities, by adopting the case study approach (Eisenhardt, 1989; Yin, 2009). The case study approach is expected to capture the complexity of the phenomenon, starting with an heuristic investigation. Because of the strong social peculiarity and the community-based character of the investigation object, the case-based research empirical evidence is collected by observation of participants (Burgess, 2002). The data were collected by observing the web and technical report (Massolution, 2013; Castrataro & Pais, 2014; CrowdValley 2015) that have already conducted a census on the crowdfunding platforms' population. Moreover, some US platforms offer insights from the movement and traffic of projects and ideas. The authors identified and analyzed some crowdfunding platforms on the basis of the following criteria: platforms that are the direct emanation of Universities, platforms that host (or will host) academic research projects and spin off, platforms with a peculiar partnership or agreement with one or more Academic Institutions.

Research Focus:

The aim of this paper is to analyze the role of crowdfunding in financing academic research and spin off. We will start collecting information about crowdfunding manifestations fostered by Academic Institutions. The aim of this study is not merely quantitative, but it is qualitative in nature. We are, in fact, interested in defining the different strategic and operational approaches of these platforms. Our final research question is:

Q1: Can the lack of professional investors in the regional system be bypassed?

To answer the question the authors will test the hypothesis:

HP1: The lack of professional investors in the regional systems can be overcome by new financial instruments like crowdfunding.

Findings:

The first crowdfunding platform that was born with an "academic characteristic" was RocketHub, which in 2012 closed an agreement with the University of Utah to support four crowdfunding

campaign. Perhaps, in this work the authors focalized their attention on a few sample platforms which have declared their academic orientation. Throughout the analysis of the collected data, Crowdfunding could be classified into two macro-areas: token crowdfunding and investing crowdfunding (Schweinbacher & Larralde, 2010). Token Crowdfunding encompasses the different expression of donation crowdfunding, which is a donation based model – i.e. charity online fundraising campaign. Instead, investing crowdfunding can be further broken down into passive investment and active investment. The passive investment encloses the lending based and reward based models, that differ one another from the type of return provided for the investors. The active investment, essentially, defines the equity based model, which is going to be the most important crowdfunding manifestation for the SMEs. Looking at a generalized context, Crowdfunding on the whole acts in different but correlated directions: supplies financial resource, offers markets insights, lets the SMEs to engages venture capital (Wardrop *et al.*, 2015). Thus, Crowdfunding represents an alternative finance market.

According to Massolution (2013) and a prior study (Rota *et al.*, 2015), there are more than 800 crowdfunding platforms actively working around the world, thus the authors, in order to simplify the research process, identified the most important ones in US and Europe, where are located the greatest number of platforms. Perhaps, what emerged from the first stage of research was an overload of information. So, an optimization and rationalization of the volume of data have been occurred: the investigation processes were relocated on the understanding of higher education institution behavior with regard to the crowdfunding. The well-known implementation of crowdfunding mechanisms at the different levels of social and economic life, shows an upgrowing interest in researchers and scholars. This interest gets over the pure studies of the phenomenon and affects the idea to adopt new funding solution for Entrepreneurial University's projects. All around the world, Academic Crowdfunding is spreading itself affecting scientific research, student entrepreneurship, spin off projects and a lot of generalist projects that could be summarized under the unfair concept of bulk. What is considerable is the different approaches adopted by the single academic institution facing the crowdfunding mechanism. Following the above quoted optimization of research, the authors identified and gathered nine platforms (tab. 1) which represents the expression of the four models for academic crowdfunding: academic owned crowdfunding platform (Academic Owned) that encompasses also crowdfunding

platform provided by white-label software house (Marlett, 2015); academic platform provided by a private actor (Platform Provider); a partnership with an existing crowdfunding platform (Partnered Platform); an inside-out model, meant to be as a campaign led on an external existing platform (Private), decided by the individual project, without any partnership or agreement between the chosen platform and the mother university.

Tab. 1 – The observed Crowdfunding Platform clissified by model and type.

MODEL	PLATFORM	NAT.	TYPE	Project	
Donation				Total	Successful
	Colorado Boulder University Crowdfunding	US	Academic Owned	19	18
	Universitiamo	IT	Academic Owned	7	3
Reward					
	Eppela	IT	Private	N/A	N/A
	Experiment**	US	Partnered	139	135
	Boston University	US	Academic Owned	5	4
	Crowdfund MIT	US	Academic Owned (WLS)	17	7
	Hubbub.net*	UK	Platform Provider	82	66
Equity					
	ShareIn	UK	Partnered	6	2
	Starsup	IT	Private	12	2

*Hubbub.net recently joined Crowdcube, the world first equity crowdfunding platform, to provide both reward and equity crowdfunding solution.

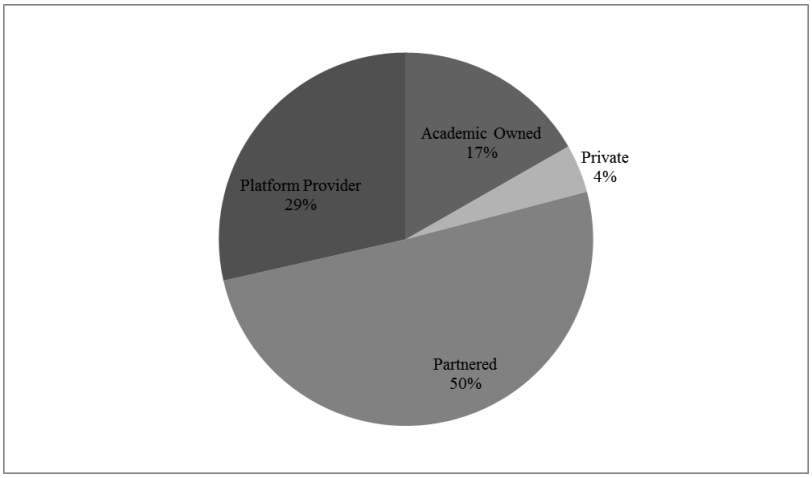
**The authors only cosidered the campaign linked to an Academic Institution.

Self-elaboration, 2015.

All the observed platforms, except for Eppela, provided insights to describe the phenomenon and they are all oriented to the academic crowdfunding. The authors investigated the platforms in order to understand their activities and the peculiarity of the campaign: while the academic owned platforms, except for Universitiamo, use a generalist approach in the choice of the projects, platforms like Experiment are strongly involved in the scientific research funding. Within the whole of ten classified platform, the partnered platform seems to express a major capability to attract project (50%); moreover, the platform provider express more than a half (29%) of the partner platform capability (graph. 1). Some considerations have to be done: the smallest contribution to the development of academic crowdfunding comes from the private platforms that gather only the 4% of campaigns.

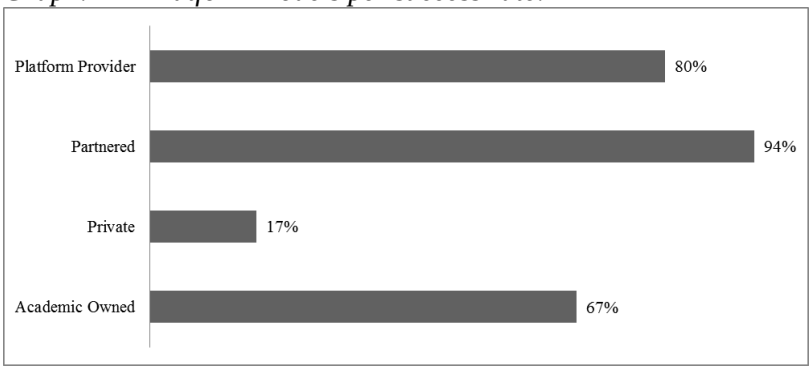
The analysis of the success rate percentage (Successful Project/Total project on the platform) underlines a great capability in leading project to the success by the partnered platforms (graph. 2).

*Graph. 1 – Classification of platform by projects.**



*Eppela was excluded, because it did not provided any insight.
Self-elaboration, 2015.

Graph. 2 – Platform models per success rate.



Self-elaboration, 2015.

Classifying the platform per backers, meant to be the individuals and formal investors who funded the projects (tab. 2). The analysis shows that Academic owned platforms are able to attract backers more than other platforms (53%) (Graph. 3), followed by the partnered platforms (34%). This is meant to be a change from the previous results.

Tab. 2 – The observed Crowdfunding Platform classified per backers.

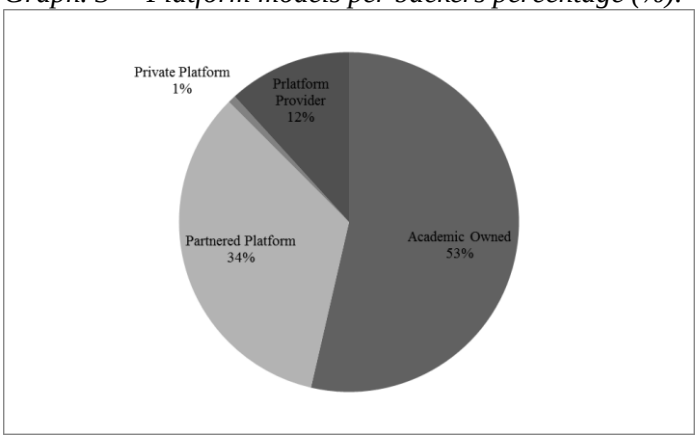
MODEL	PLATFORM	NAT.	TYPE	Backers	
Donation				Total	Mean
	Colorado Boulder University Crowdfunding	US	Academic Owned	2926	114
	Universitiamo	IT	Academic Owned	790	112
Reward					
	Eppela	IT	Private	N/A	N/A
	Experiment**	US	Partnered	6491	101
	Boston University	US	Academic Owned	515	103
	Crowdfund MIT	US	Academic Owned (WLS)	6214	366
	Hubbub.net*	UK	Platform Provider	2288	381
Equity					
	ShareIn	UK	Partnered	120	20
	Starsup	IT	Private	144	12

*Hubbub.net recently joined Crowdcube, the world first equity crowdfunding platform, to provide both reward and equity crowdfunding solution.

**The authors only cosidered the campaign linked to an Academic Institution.

***The mean is weighted on the number of backers

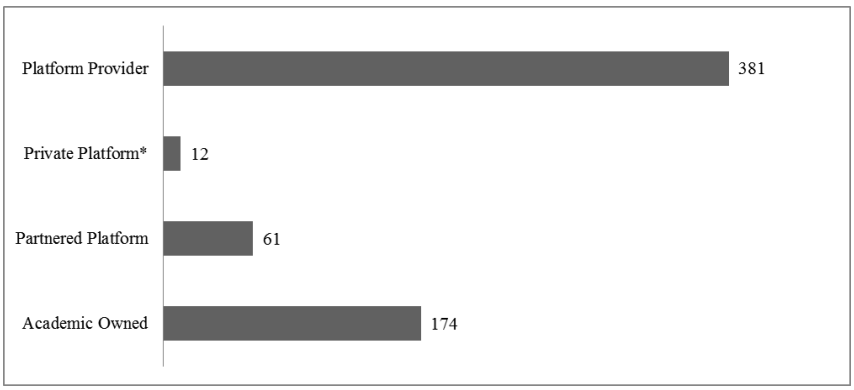
Graph. 3 – Platform models per backers percentage (%).



Self-elaboration, 2015.

Perhaps, the average number of backers per project (Graph. 4) shows a different behavior for each one of the four models. The platform provider model expresses a better capability to canalize individuals on a single project; following, the academic owned models are able to gather 174 individuals per project. Looking at the private platforms, authors noticed a big gap regarding the platform providers in attracting backers. Although, these results should be read under the glass of financial resources attracted.

Graph. 4 – Platform models per average number of backers per project.



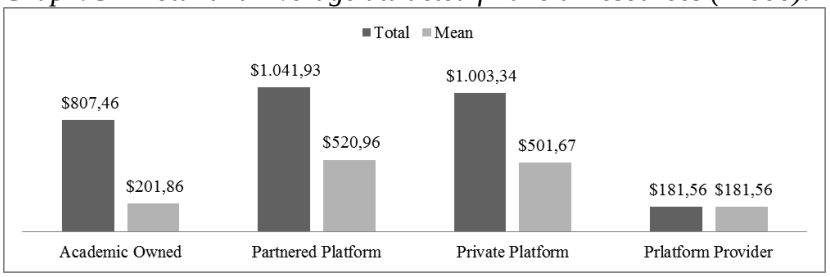
*Only Equity platforms are included

Self-elaboration, 2015.

On the financial side, the attracted resources are not considerable (Graph. 5 & Tab.3), except for the Italian equity platforms which are able to attract a consistent injections of capital per project, thanks to an existing and valuable regulation[1]. In the detail, authors break the results into different parts, for each observed platform (Tab. 4). Excluding the equity model platform which are able to attract more

financial results than backers, Experiment seems to be the strongest platform on the market, since it has raised more than 700K of dollars. Otherwise, given the weight of the number of backers for each project, Universitiamo shows its capability to raise more funds per project than the other platform (37K of dollars). The analysis of the average volume of financial resource attracted highlights how the Private (Equity) Crowdfunding Platforms and Partnered Platforms are able to canalize much higher investment on each project (Graf. 6).

Graph. 5 – Total and Average attracted financial resources (x1000).



Self-elaboration, 2015.

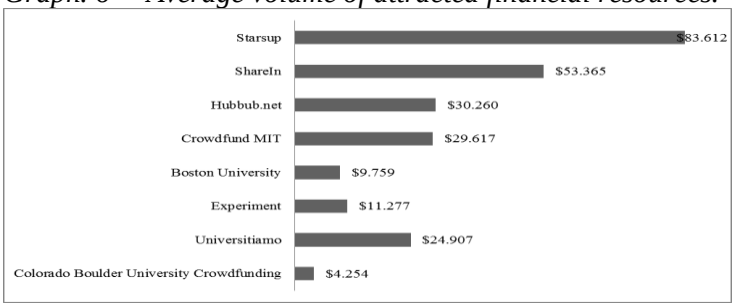
Tab. 3 – The observed Crowdfunding Platform classified by attracted financial resources.

MODEL	PLATFORM	NAT.	Attracted Financial Resource		
Donation			Total	Mean	Weighted Mean***
	Colorado Boulder University Crowdfunding	US	$ 80.818,00	$ 4.253,58	$ 15.407,45
	Universitiamo	IT	$ 174.348,94	$ 24.906,99	$ 37.889,13
Reward					
	Eppela	IT	N/A	N/A	N/A
	Experiment**	US	$ 721.734,00	$ 11.277,09	$ 6.805,12
	Boston University	US	$ 48.796,00	$ 9.759,20	$ 11.745,32
	Crowdfund MIT	US	$ 503.495,00	$ 29.617,35	$ 1.866,20
	Hubbub.net*	UK	$ 181.558,75	$ 30.259,79	$ 3.327,07
Equity					
	ShareIn	UK	$ 320.192,12	$ 53.365,35	$ 72.403,64
	Starsup	IT	$ 1.003.342,12	$ 83.611,84	$ 136.690,62

*Hubbub.net recently joined Crowdcube, the world first equity crowdfunding platform, to provide both reward and equity crowdfunding solution.
**The authors only cosidered the campaign linked to an Academic Institution.
***The mean is weighted on the number of backers

Self-elaboration, 2015.

Graph. 6 – Average volume of attracted financial resources.

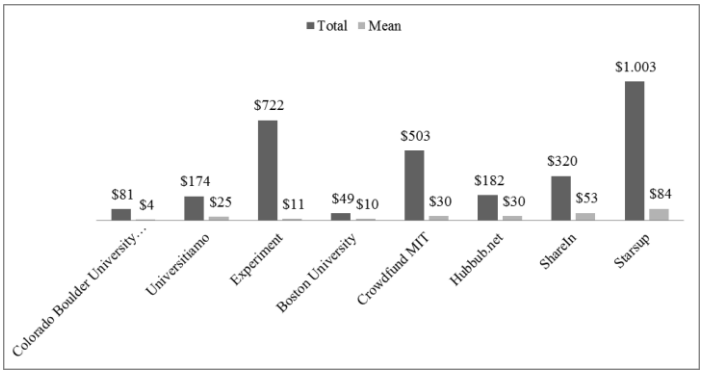


Self-elaboration, 2015.

Equity crowdfunding platforms prove their superiority even if all the observed platforms are compared with one another through the total amount of funds raised (Graph. 7). Comparing the total amount with

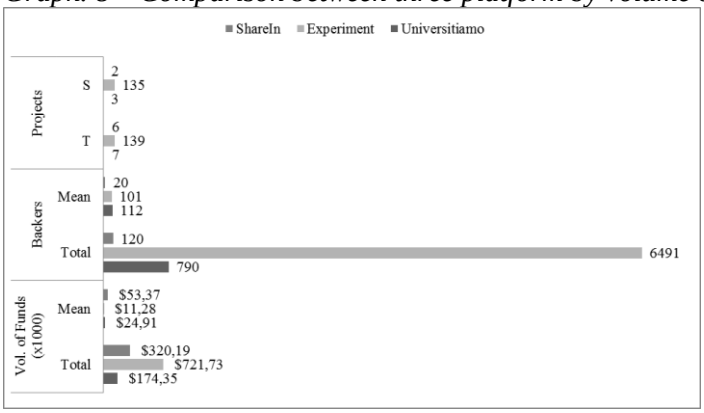
the average amount of financial resources (Graph. 7), the platform Experiment shows a better capability to attract resources than other non-equity platforms, but looking at the average volume of money per project, there is a countertrend: Universitiamo, Crowdfund MIT, Hubbub.net attract more money per project. Through the analysis of the single platform, a specific orientation to the academic research and spin off is expressed mainly by three platforms: Universitiamo, Experiment, ShareIn. These platforms are expression of the three principal subset of crowdfunding model; in fact, Universitiamo is a donation platform, Experiment is a reward based platform and ShareIn is an equity crowdfunding platform. They are all European. Moreover, they represent three of the four identified sub-set for the academic crowdfunding: academic owned platform, partnered platform, private platform. Thus, the authors compared them by three main elements: money, backers, projects (Graph. 8).

Graph. 7 – Comparison of Total and Average volume of attracted financial resources.(x1000)



Self-elaboration, 2015.

Graph. 8 – Comparison between three platform by volume of funds, backers, projects.



Self-elaboration, 2015.

The results shows how different approaches produce different effects. The partnered platform Experiment is affected by a huge traffic of backers, but the academic owned platform Universitiamo has more backers per project. Although, ShareIn is able to attract an average investment of 53K of dollars; thus, considering its number of project, ShareIn underlines a strong impact on the financial needs both for start-up and for academic spin-off. Moreover, equity platforms likely seem to act as a Venture Capital Fund. Finally, looking at the single case, Experiment experience could proof the highest success rate owned by the partnered platforms on the whole, because of the highest participation shown by individuals. Thus, Experiment seems to be the closest crowdfunding manifestation to the long tail model (Anderson, 2006). Shifting the perspectives, the authors noticed that the reported results sprang a new behavior from academic spin off. According to NETVAL (Ramaciotti *et al.*, 2015) in Italy there are 1144 living academic and university spin off, almost equally distributed across the country. There is a promising relationship between crowdfunding and spin off, which are open to this mechanism as a way to overcome the financial barriers. Unfortunately, only few projects can close their campaign with a success. This is the case of the project #SmartME. #SmartME's target is to turn the city of Messina, in Sicily (South of Italy), and encompasses different actors from University and Insitution. In fact, the project has been ideated by the academic spin off DHLab, the research group MDSLab, the IT Centre of the University of Messina (CIAM) and it has been fostered by the Municipality of Messina. The core of the project is to apply the IoT paradigm to the city area in order to create: an open data platform; an interlinked urban infrastructure that involves transportation system, traffic management system, lightning control system and community. This would be possible thanks to an integrated network of sensors, actuators and other smart devices already installed in the Messina area and only used on domains and for specific purposes so far. The proposers of #SmartME project launched the crowdfunding campaign in the beginning of 2015 and, following the initial success that quickly brought the campaign beyond critical threshold, they decided to extend the duration of the campaign that was closed on April the 13th. The adopted model was the "all-or-nothing" reward based one, with seven levels of reward, appealing for different kinds of potential backers, both individual and business or firms. Considering the international approach of the chosen platform, Eppela, the basin of potential backers was huge. The financing goal, €15.000, was

doubled. In fact, #SmartME raised €34.132 from 84 backers that financed from €5 up to €500 or more each, excluding about 6 backers who financed an amount not enlisted in the reward classification. Through the collected secondary data, the authors noticed that the 84 backers are the sum of 63 individual, 18 legal entities and 3 undetermined subjects; the number of total backers is larger than the average number of backers per projects on private platforms (12) and partnered platforms (64) but the raised money are in line with the above quoted results. Another correspondence, between the findings about the platforms comparison and the #SmartME case, comes from the geography of the investors that is heterogeneous. The 63 individual backers belongs to the community of Messina and part of Italian country; instead the 18 legal entities are the sum of businesses, consortiums and authorities all across Europe and United States. These data are noteworthy, the geography of investments does not represent a parameter that influence nor the success neither the investment flow of a crowdfunding campaign. This information agrees with Agrawal (2011) observations about geography dispersion of crowdfunding investors. The reason lies under the effect of IT-mediation produced by both the non-boundary technology of online crowdfunding platforms and their social network peculiarity. This could be translated not only as a success, but also as an expression of the community needs to actively participate to innovation projects. The investments from the backers abroad Italy, on the other hand, express two different needs to be satisfied: first, the need to test new solution and to receive the proof of concept from other context; secondly, the need to enforce their image and brand via the connection on a social innovation project.

Conclusion:

The findings shown a complex ecosystem that is dynamically changing and they also agree with the results of some agency like Massolution that underlines the strength of the reward based model and donation based models even in the academic crowdfunding mechanism. Otherwise, the rapid growth of the equity crowdfunding model is opening an opportunity window to jumpstart academic projects, highlighting a major disruptive potential thanks to the superior average volume of funds raised per projects. The recent Italian regulation, meant to be the flywheel for others foreigner governments, is the reason to explain the growth of the equity model. The difficulties to measure the potential still remain hard to overcome because of the “historical consolidation” of the reward based and donation

based platforms. Going back to the hypothesis of this work, by the analysis of the findings, the HP1 could be confirmed. As the authors wrote above, the crowdfunding environment is complex and varied, a bubble that contains many manifestation of the three principal models. This complexity conserves the advantage of the choice between different solutions, thus the project creators could choose which model fits better to their idea. Consequently, there is a platform for each projects, i.e. scientific research projects could express their maximum potential on the academic owned platform (both reward based and donation based) and partnered platform. On the other hand, the Equity model capability to attract funds seems the ideal model to be adopted by academic and university spin off. Equity Crowdfunding act as a Venture Capital indeed, but it could only satisfy the financial needs in the proof of concept and pre-seed stage, working as a catalyst for Business Angels and Venture Capitalist attention. In this way, crowdfunding for Academia could jumpstart both the research and the venture creation. According with the results, the key factor for the success of a crowdfunding campaign is not about the platform and the traffic on a specific platform (Wheat *et al.*, 2013), but is about the capacity to attract, in the Newtonian meaning, a critical or gravitational mass of backers.

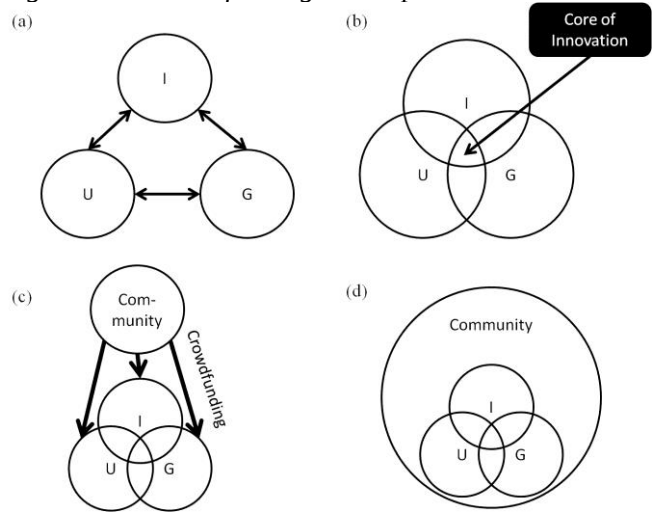
The success rate (Graph. 3) shows how a focalization policy is more effective, underlining a big gap between the partnered platform and the private one – overtly generalist. The major number of successful campaign describes an higher potential to succeed for the academic projects that are uploaded on partnered platform and academic owned. Evidently, given that the revenue stream of the platforms come from a success fee fasten to the ending of the single campaign, the partnered platform are more interested in pushing the research and the spin off than other platforms. To answer the question Q1, the case of #SmartMe shown how the distance between creators and investors is non influential. Moreover, comparing the findings with the last AIFI report (2015), that draw the attention to a decrease in the number of investment in the South of Italy, crowdfunding seems to be able to fill the existing investment gap between the Italian geographical areas and Europe. According to Boschma (2005), geographical proximity is neither necessary nor sufficient to create co-evolutive innovation systems. Entrepreneurial University has the task to adopt and improve financial innovation like crowdfunding, not to place side by side with other financial resources, but to jumpstart the business and technology transfer projects in order to overcome the absence of both formal and informal

investors in its neighborhood and attract them. Academic crowdfunding acts like an interests catalyst and innovation accelerator. The case of #SmartME is symbolic and a simplified representation of a triple helix ecosystem (Etzkowitz, 1993; Etzkowitz, H., & Leydesdorff, L., 1993; Etzkowitz, H., & Leydesdorff, L., 2000) where the core of innovation is started from the original three pillar (Fig. 1a e Fig. 1b) but fostered and financed by a wider helix that is the community (Fig. 1c), that finally encompass the core of innovation (Fig. 1d). In fact, community seems to represent better the concepts of cultural based and media based public and civil society that legitimates the innovation policy (Carayannis & Campbell, 2009). Community has a triple function:

1) Innovation creator, as an exemplification of the co-creation model through its participation at three levels, financing, purchasing and knowledge production (i.e. in a smart city implementation the community is also a source of data).
2) Beneficiary of the innovation.
3) Catalyst of resources, according to a "Newtonian logic", because the community easily grows its mass and increase the force of attraction used to attract other actors who own new useful resources, especially the financial ones.

In this way, crowdfunding is an unconventional tool that intervenes in both Industry and Community Helix.

Fig. 1 – The crowdfunding in a triple helix environment.



Self-elaboration, 2015.

Moreover, Crowdfunding intervenes as a motivational crowdwork factor (Greber *et al.*, 2012; Miglietta *et al.*, 2013) that permits to pass over the barriers linked to proximity and credit crunch

(Freund, 2012). Actually, the results are interesting: even if the academic crowdfunding is not widespread as its original shape, the nature of entrepreneurial university's projects is aimed to produce benefits for all the society and to transfer knowledge as well as technology, and it pushes the diffusion of this mechanism. Even biomedical start-ups, penalized by the decrease in R&D investment, could have benefits from crowdfunding (Miglietta *et al.*, 2013). On the other hand, the findings highlight a risk for academic research and spin off to develop a "demand dependency", that is to say the risk to raise funds only if innovation and research could be understood by the "real world", distancing the opportunity of growth from that kind of research and firms too much technical and avant-gardiste.

This finding agree with the concept of knowledge as a resource and the common need to rebuild the entrepreneurial texture in regional context. The ideal target is innovating to create a sustainable economic development, via the creation of new business with solid and strong competitive advantages. Finally, authors noticed that both the donation and reward model seem to fit better for the Academic research funding, because of its estimated social impact; differently, equity crowdfunding model could be the best choice for academic and university spin off as a direct emanation of Academic Entrepreneurial attitude. Spin offs are both technology transfer tool and enterprise indeed, thus they have to enter the financial market; unfortunately, the lack of financial resources represents a barrier that makes hard to overcome the "death valley". AIFI (2015) shows how the Private Equity and Venture Capital Market has a larger number of investment in the expansion stage and buy out (35% each), while the early stage number of investment is 27%. Seed and pre-seed are not considered. Consequently, given the average amount of $53K raised through the (partnered) equity platform, crowdfunding could successfully intervene in the pre-seed stage, to help spin offs on the financial side. On the other hand, findings underline a limitation in the research are mainly connected to the explorative nature of the research.

Policy Implication and further research direction:

Currently, Institution have gathered the requests of defining the rules of the game of crowdfunding. Weighing out the potential of such financial mechanism, Government like the Italian one decided to study the phenomenon and release regulations about crowdfunding. US, India and Turkey are moving in the same way (Bruton *et al.*, 2014). Models like crowdfunding, today, are subject to high levels of

regulation (Heminway & Hoffman, 2010; Mollick, 2014). Looking at the innovation core of a Triple Helix's context, University highly contributes to the rebuilding of the entrepreneurial tissue, especially in sectors characterized by high R&D investment needs. This study underlines the importance to define and promote a different form of crowdfunding model such as the academic one, in the way to help policy maker to re-organize the regulation system. Rules count and there is a perceived need to incentivize and to make easier the access to crowdfunding for both formal and informal investors. On the other hand this paper helps University in evaluating the possibility to implement crowdfunding platforms and define the eventual approach adopted. This work leads the authors to another question they want to answer, strongly related to the peculiarity of each University. The future research focus will be aimed to understand how academic reputation and single University's scientific prestige impact on the fundraising effectiveness via crowdfunding platforms.

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