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## Supporting entrepreneurship policy: an overview of Italian start-up competitions

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**Abstract:** Innovative start-ups are currently considered to be an important channel for industrial change and for the renewal of economic systems. Among the initiatives that have been implemented to promote their diffusion, start-up competitions (SUCs) have received much recognition from policy-makers, followers and participants. Although the number of SUCs has grown, there are no comprehensive or systematic overviews of SUCs in the literature. Hence, this paper presents a cross-sectional exploratory analysis of Italian SUCs to provide an overview of their core characteristics. This in-depth study will support the diffusion of SUCs and will provide a foundation for the creation of a suitable ecosystem to improve the processes of business start-ups. The results show that the diffusion of SUCs is accompanied by deep structural changes, which can be interpreted as a consequence of the growing involvement of private organisations in promoting SUCs. Nevertheless, wide-ranging public intervention appears to be necessary to increase the effectiveness of SUCs.

**Keywords:** entrepreneurship policy instrument; start-up competitions; SUCs; business plan competitions; start-up ecosystem; entrepreneurial process; innovation; policy-maker.

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## 1 Introduction

The business and managerial literature is increasingly focusing on research on entrepreneurship as a driving force of social and economic development and societal wealth. According to this view, a crucial role is assigned to newborn firms and to start-ups in particular, as they are recognised as important sources of economic dynamism and employment net absorption (Acs et al., 2005; Audretsch and Thurik, 2001; CEC, 2005; Welter, 2011). In fact, start-ups are characterised by innovativeness, scalability and rapid growth, which enable them to play a key role in boosting socio-economic development (Dorf and Blank, 2012; Clarysse and Bruneel, 2007; Reid and Garnsey, 1997). Considerable growth in the number of start-ups in operation has been highlighted and analysed from this perspective through several studies conducted on different areas of the world in the last two decades (ESM, 2016; EMKF, 2015).

This trend is mirrored by a growing focus on start-ups among scholars and policy-makers. Consistent with these assumptions, the European Union (EU) has supported several initiatives (business competitions, workshops, and meetings) and actors (incubators, venture capitalists, and science parks) with the aim of triggering entrepreneurial decisions among an increasingly broad number of individuals (EC, 2003, 2006; Massa and Testa, 2009). These initiatives are targeted at entrepreneurial individuals likely to successfully launch start-ups (Bosma et al., 2012). Among them, start-up competitions (hereinafter SUCs) have attracted the attention of researchers, policy-makers and participants. Also known as business plan competitions, SUCs can be understood as a selective instrument of *entrepreneurship policy* that aims to screen more innovative and feasible business ideas and to indirectly encourage start-ups via soft measures rather than through financial, monetary or fiscal support (Stevenson and Lundstrom, 2007). Furthermore, such initiatives can be arranged by both public and private organisations and can thus support a broad range of entrepreneurial activities.

SUCs appear to be well suited to the on-going economic requirements of several EU countries (Schwartz et al., 2013). In particular, these initiatives serve as a valid means to promote innovative entrepreneurship via the use of soft measures (e.g., education, tutorship, and incubation periods) rather than hard measures (financial, fiscal or monetary incentives). Innovative entrepreneurship has been defined in terms of new ventures that are based on innovation (not easily replicable) and that operate in high-tech or cutting-edge industries (Baumol, 2007).

Additionally, as SUCs focus on high-tech and innovative industries, business ideas that are submitted to SUCs are more likely to be consistent with the industrial structures and economic development level of a given country (Esposito and Passaro, 2009; Michelsen et al., 2013; Schwartz et al., 2013).

Despite the growing importance of this issue in practice, there is a gap in the literature with regard to the social and economic advantages provided by SUCs and in terms of their impacts on new venture creation (Schwartz et al., 2013). In fact, studies have mainly focused on specific issues such as the impacts of team diversity (Foo, 2010; Weisz et al., 2010), SUC roles in supporting entrepreneurial learning (Russell et al., 2008), and spin-off creations from universities (Colombo and Grilli, 2006; Fini et al., 2009). Therefore, an *ex-ante* investigation into the current situation is necessary to better support the diffusion of such competitions and to facilitate a stronger understanding of ways to enable the creation of a suitable start-up-friendly ecosystem (e.g., incubators, venture capitalists, business angels, science and technology parks, and dedicated institutional entities).

From this perspective, a comprehensive (wide-ranging) and systematic (based on a detailed methodological approach) overview of Italian SUCs focused on their main features, functioning principles and levels of diffusion is currently missing from the literature. This is mainly attributable to the limited collection and diffusion of information by SUC organisers.

Accordingly, to address this gap in knowledge, this study develops a conceptual basis for evaluating SUCs as an entrepreneurship policy instrument. The paper presents an explorative cross-sectional analysis of Italian SUCs. It identifies core SUC characteristics by partially replicating Schwartz et al.'s (2013) study of a German case and by comparing the two countries. Italy constitutes a particularly interesting case owing to its high start-up failure rate (roughly 70% – Minister of Economic Development); a large number of national initiatives, measures and actors in place to support the development of a start-up friendly ecosystem; and the country's large number of extant SUCs. Moreover, Italy could be considered representative of the realities of most developed countries (EMKF, 2015; ESM, 2016). Thus, this analysis is designed to further understanding of SUCs as relevant potential entrepreneurship policy instruments designed to increase the number of innovative nascent entrepreneurs and their probability of success.

Further, the paper presents a knowledge framework that has value for both policy and practice. In fact, if entrepreneurship policy instruments are designed to favour new venture success, they should provide correct and useful knowledge that can be adopted by SUC organisers and policy-makers. A comparison between the German and Italian SUC contexts can represent a proper methodological means to facilitate a stronger understanding of the importance of SUCs for participants, policy-makers and the entrepreneurial ecosystem. Finally, the results of our comparison highlight a need for similar cross-sectional studies on SUC diffusion, classification, structures and

effectiveness levels. Based on the current state of research on this subject, this work sheds light on and theoretically frames the SUC phenomenon by contributing to existing knowledge and by supporting its diffusion. Future developments should be addressed to measure SUCs' effectiveness as an entrepreneurship policy instrument.

The paper is organised as follows. Section 2 presents the existing framework of SUCs, and Section 3 presents the methodology used. Findings derived from our investigations and from our comparison between the Italian and German cases are presented in Section 4. Section 5 is devoted to discussion and concluding remarks while the study's implications and limitations are presented in Sections 6 and 7, respectively.

## 2 Framework

### 2.1 *Entrepreneurship policies and SUCs*

The strong interplay between entrepreneurship and social and economic development has been widely demonstrated at both practical and theoretical levels (Acs et al., 2005; Audretsch, 2007; Audretsch et al., 2009; Audretsch and Thurik, 2001; OECD, 2003). Several reports published by the EU and primary research centres highlight a need to increase entrepreneurial vitality by encouraging member states to adopt and strengthen measures and instruments that promote the development of a broader entrepreneurial culture among their citizens and direct participation in entrepreneurial processes (EC, 2003, 2006; Reynolds et al., 2002, 2003; Bosma et al., 2012). Today, encouraging people to make entrepreneurial choices is considered to be an indispensable response to the increasing unemployment rates observed in many EU countries as a result of the recent deep economic and financial crisis (e.g., Audretsch et al., 2009; Bosma et al., 2012).

In turn, new entrepreneurship policies designed to trigger the development of instruments and measures that enable people to engage in entrepreneurial activities have emerged. Such policies are also designed to create an entrepreneurial environment and to support the development of start-ups (Colombo and Grilli, 2006; Stevenson and Lundstrom, 2005). Put differently, entrepreneurship policies should primarily aim to increase the number and improve the performance of entrepreneurs (Rigby and Ramlogan, 2013) while creating suitable conditions (e.g., support services, entrepreneurial networks, demand stimuli, and entrepreneurial cultures) from which entrepreneurship can develop (Stam, 2015).

While SME policies favour economic organisations with tangible support resources (monetary and fiscal benefits in particular), entrepreneurship policies focus on entrepreneurs or aspiring entrepreneurs through the provision of intangible tools and initiatives such as training resources, incubation periods, consultancies or proposal screenings conducted by academics and other experts.

Additionally, entrepreneurship policies should support entrepreneurial activities exhibiting the highest probability of success in cutting-edge industries without neglecting coherence between new business features and the particularities of local economic systems (Sternberg, 2007). For instance, local areas in which most firms are small and family-owned and operate in traditional industries may be an inappropriate location for new high-tech start-ups due to the technological gaps of these environments (Busenitz et al., 2000).

Finally, entrepreneurship policies should focus on relevant consequences linked to the motivations of aspiring entrepreneurs. Many people who lack professional alternatives or who are attracted to widely available facilities and resources are inspired to follow an entrepreneurial path without robust conviction or a clear business plan. Such aspiring entrepreneurs are generally associated with the highest failure rates (Reynolds et al., 2002; Smallbone and Welters, 2006).

To summarise, entrepreneurship policies should:

- 1 work to limit any imperfections in markets for entrepreneurial resources (Schwartz et al., 2013)
- 2 support identification of suitable potential or aspiring entrepreneurs with sustainable business plans by analysing the entrepreneurs' subjective characteristics (personal traits, motivations, experience, and values) (March-Chorda, 2004; Reynolds et al., 2002; Smallbone and Welters, 2006)
- 3 help to develop an effective entrepreneurial environment, as this represents an important dimension in increasing the probability of start-up creation (Michelsen et al., 2013).

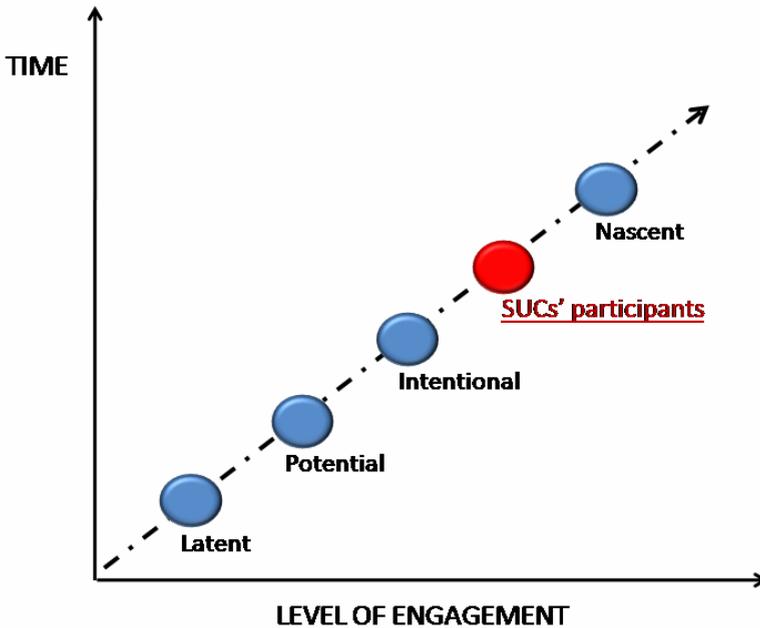
With this in mind, SUCs may serve as an effective entrepreneurship policy instrument with the capacity to reveal, support and guide nascent entrepreneurs in the development of innovative start-ups with higher chances of success. In this way, SUCs can contribute to the development of innovative systems.

## 2.2 SUC participants in the entrepreneurial process

Different types of SUCs employing heterogeneous structures and organisational arrangements (e.g., differences in duration, the number of stages, the composition of judges, the types of awards and organisers) have been identified in many countries in recent decades. Nevertheless, they share some basic characteristics (Schwartz et al., 2013). One of the most important variables concerns the use of a business proposal, which is usually accompanied by a business plan and evaluated by a panel of experts (academics, consultants, managers, and entrepreneurs). During the evaluation process, the panel of experts critically assesses the quality, innovativeness, feasibility and market attractiveness of each proposal based on different criteria. Based on these evaluations, the best proposals (or so-called business ideas) pass through planned stages of competition. Such ideas should be innovative and should exhibit high levels of potential; however, they also tend to be risky and difficult to develop. Furthermore, SUC participants generally have a more educated profile (university level) than other aspiring entrepreneurs, and they are motivated to directly implement their ideas and engage in entrepreneurial processes. Such entrepreneurial processes can be defined as a logical sequence of steps that a would-be entrepreneur should follow before establishing a firm (Hisrich et al., 2005).

Consequently, according to this assumption (Figure 1), an SUC participant may at least be identified as a *latent entrepreneur*, where latent entrepreneurship is measured by the probability of a declared preference for self-employment over employment (Blanchflower et al., 2001).

**Figure 1** Entrepreneurial process (see online version for colours)



Source: Adapted by van Horne et al. (2012)

By recognising a market or an economic opportunity, an individual may also be identified as *potential entrepreneurs* (Shane and Venkataraman, 2000). Potential entrepreneurs do not need to exhibit any salient *intention* to start a business; their potential is causally and temporarily latent prior to exhibiting an *intention* to become an entrepreneur (Krueger and Brazeal, 1994).

An individual becomes an *intentional entrepreneur* when his or her “attention (and therefore experience and action) towards a specific object (goal) or a path” [Bird, (1988), p.442] is finalised with a decision to pursue a career of self-employment rather than being organisationally employed. Studies on individual intentions have been some of the strongest works in the entrepreneurship field over the last 20 years (Fini et al., 2012).

Beyond such intentions, when an individual begins to seriously commit his or her time and tangible resources to founding a viable new firm and when his or her new venture can be considered an independent start-up (Reynolds and White, 1998), she or he becomes a *nascent entrepreneur*. A nascent entrepreneur is an individual who is able to launch a new business after having prepared a business plan and after having valued the feasibility of his or her business idea (Davidsson and Honig, 2003).

Statistically speaking, only a small percentage of nascent entrepreneurs can secure on-going business success and thus assume the title of *entrepreneur* (founder) tout court. Currently, no one can effectively predict whether a latent, potential or intentional entrepreneur will actually realise a new firm or if a firm will be successful. Moreover, the closer an individual is to the initial stages of the entrepreneurial process, the more difficult it is to predict his or her entrepreneurial potential. Nevertheless, these stages only have formal or educational value, as individuals may also follow different paths. Furthermore, although these stages proceed progressively, none can be considered in

isolation or as having been fully completed before work on other phases has occurred (Hisrich et al., 2005).

Based on the above-described entrepreneurial process, SUC participants could be positioned after intentional entrepreneurs and before nascent ones. In fact, by deciding to participate in an SUC, they are conscious that the aim of the initiative is not to simply win a prize or to obtain scientific merit but also to demonstrate their entrepreneurial capacity, to challenge themselves and to test the validity of their ideas in the market (Brush et al., 2001). Therefore, we can hypothesise two effects of SUC participation:

- a it directly supports the individual in making the entrepreneurial choice, which posits their status as extending beyond intentions but prior to making the decision to found a new venture
- b it can indirectly influence the dynamics of the entrepreneurial process (e.g., by affecting both the stage duration and the transition from one stage to the next).

These aspects are more fully discussed in the following section.

### *2.3 Potential effects of SUC on the entrepreneurial process*

SUCs can be considered compelling entrepreneurship policy instruments, as they can affect the entrepreneurial process in different ways. In fact, it is possible to distinguish between the direct and indirect effects that affect individuals who participate in such initiatives and in the system as spillovers derived from SUC organisations. Clearly, such impacts can differ. Indeed, while direct effects are generally more immediate, easily measurable and powerful, indirect effects can be described as gradual, soft and long lasting.

In particular, SUCs foster the development of entrepreneurial skills and bolster individual self-confidence and risk-taking (Passaro et al., 2018; Russell et al., 2008) through the delivery of real services such as mentoring and consulting services and opportunities for networking and idea scouting (Foo et al., 2005). Access to these services in turn affects the system by increasing chances of start-up success and/or survival (Centobelli et al., 2017; Schwartz et al., 2013), by increasing the visibility of a new venture (Parente et al., 2015), and by enabling the development and diffusion of an entrepreneurial culture.

As noted above, SUCs can directly affect the entrepreneurial process and its stages (Passaro et al., 2017). Indeed, SUC participants, who can be considered intentional entrepreneurs, are motivated and supported to become nascent entrepreneurs. This in turn affects the duration of stages and the dynamics of the entrepreneurial process. Put differently, these competitions bridge the gap among between those who intend to become entrepreneurs and those who actually engage in creating a firm. This effect can produce indirect effects such as imitative entrepreneurial behaviours, increase in entrepreneurial activity and the development of start-up-friendly environment.

Finally, given these attributes, SUCs favour the transition of an economic system towards cutting-edge and very innovative industries by serving as a vehicle for technological transfer and diffusion (Foo et al., 2005; Russell et al., 2008).

**Table 1** Potential direct and indirect effects that are derived from SUCs' activities and services obtained from the literature review

<i>Activities/services provided by SUCs</i>	<i>Direct effects</i>		<i>Indirect effects</i>
	<i>On participants</i>	<i>On the system</i>	
Provision of real/educational services (mentoring, training, consulting, coaching, etc.)	Creation of new entrepreneurial skills, knowledge and competencies	Contribution to an entrepreneur-friendly and supportive socio-economic system	Valorisation of the education system
Monetary prizes and awards in kind	New venture formation	Stimulation of business idea formation and emergence of potential start-ups	Imitative behavioural effects and increase of entrepreneurial activity
Networking with ecosystem actors (incubators, venture capitalists, potential customers, institutions, research centres, TTO, etc.)	Development of relational capital, visibility and idea testing	Increase of social capital and start-up success/survival rate	Support of technology transfer and innovation-oriented industries
Supportive and non-threatening environment	Idea testing	New venture failure rate reduction	Development of entrepreneurial culture and improvement of a start-up-friendly environment
	Development of risk propensity, self-confidence, etc.	Entrepreneurial information, opportunities and knowledge diffusion/sharing	Diffusion of entrepreneurial culture
	Reduction of transition time between stages of the entrepreneurial process (from potential to intentional to nascent)		Information and knowledge sharing: connecting new business idea and industry features
Scouting of ideas and talent in the community	Entrepreneurial choice support among potential entrepreneurs to become nascent entrepreneurs	Increase of entrepreneurial activity	Initiative behavioural effects Development of entrepreneurial culture: improvement of a start-up-friendly environment

*Source:* Foo et al. (2005), Parente et al. (2015), Passaro et al. (2018), Russell et al. (2008), Schwartz et al. (2013) and Weisz et al. (2010)

Table 1 shows the effects that can be derived from the activities and services provided by SUCs that justify the importance of the issue under study and the need to deepen research on SUCs. This data also supports policy-makers in defining more appropriate entrepreneurship policies and in contributing to the development of a start-up-friendly ecosystem that can support the development of innovative systems.

### 3 Methodology

To analyse the Italian SUC landscape and to compare systems in Germany and Italy, the methodology adopted in this work partially engages both the data collection approach and the classification criteria proposed by Schwartz et al. (2013). The latter are based on a data collection approach that involves three stages. In the first stage, officially available data and data from other related organisations were screened from an initial list of SUCs. Next, specific data on competitions were collected by screening SUC websites and previous research on German SUCs. Third, the authors selected those SUCs that were found to be consistent with the aims of the research project for inclusion in the database. Following this data collection stages, the authors analysed the selected SUC database according to six core criteria.

Through this study we have expanded and enriched Schwartz et al.'s (2013) methodology by adopting a multi-staged approach (Table 2). Thus, with the aim of framing the paper in an appropriate theoretical landscape, a review of the international literature with regard to this issue was performed. Although Schwartz et al. (2013) did not perform a literature review, we found that it allowed us to further identify classification criteria to analyse the Italian competitions identified (see Section 3.1). Next, a raw database of 88 Italian SUCs was defined following steps a), b) and c) shown in Table 2, which broadly coincides with the first two stages of Schwartz et al.'s (2013) approach. A final list of 77 SUCs was defined according to the three criteria described in Table 2, which mirror those used by Schwartz et al. (2013). The 77 SUCs were then analysed according to the classification criteria proposed by Schwartz et al. (2013), and further criteria emerged from the literature review. Next, a comparison of Germany and Italy was performed based on the classification criteria used for both cases with the aim of underscoring the relevance of SUCs as an entrepreneurship policy instrument in Europe (see the following section).

#### 3.1 *The classification criteria*

In replicating Schwartz et al.'s (2013) methodological approach, the identified SUCs were classified according to different criteria that should appropriately reflect their unique qualities and structural features. Nevertheless, three additional criteria were considered to better investigate Italian SUCs as an entrepreneurship policy instrument. These criteria were applied on the basis of interviews with experts and based on the results of our literature review.

**Table 2** Adopted methodology

<i>Phases</i>	<i>Aim</i>	<i>Procedure steps</i>	<i>Results</i>
Literature review	Frame the theoretical landscape and review contributions on SUCs	Query the Scopus and Web of Science database by using different keywords (business plan competitions, start-up competitions)	Very few papers on SUCs at European and international level were found and reviewed by the component of the research group
Setup of a raw database of Italian SUCs	Creation of a database on Italian SUCs focusing on a list of criteria	<ul style="list-style-type: none"> <li>a) Different keywords (start-up competition, business plan competition, start cup) in Google's search engine were used to get basic information</li> <li>b) Information was filtered by screening and analysing various sources (reports, websites, brochures)</li> <li>c) The website of identified competition was accessed to gather detailed data (announcements and regulations)</li> </ul>	<p>A list of classification criteria was defined (Section 3.1)</p> <p>An initial list of 88 Italian SUCs was obtained</p>
Analysis of a raw database of SUCs	Selection of those SUCs consistent with the aims of the research	<ul style="list-style-type: none"> <li>a) Several SUC organisers were contacted by phone and/or e-mail/to collect information not readily available or ambiguous</li> <li>b) Seven experts (two venture capitalists, one angel, two consultants, two academics, etc.) were interviewed to verify the collected data and accredit the database during the last quarter of 2015</li> </ul>	<p>A final list of 77 SUCs to analyse by means the classification criteria was defined</p> <p>Eleven competitions were excluded for various reasons:</p> <ol style="list-style-type: none"> <li>1 Oriented exclusively to award outstanding innovation/businessmen (four SUCs)</li> <li>2 Definitively ceased operations (five SUCs)</li> <li>3 No activity at survey time (two SUCs)</li> </ol>
Comparison between Germany and Italy	Analysis of the relevance of SUCs as an entrepreneurship policy instrument in Europe	Comparison between Italian and German SUCs on the basis of the common classification criteria	Identification of main similarities and differences between Italian and German SUCs

The following nine criteria represent key variables that can be used to better explain the impacts of SUCs on the entrepreneurial process:

1 *Geographical coverage* measures the geographic coverage from which applications are accepted. The Italian SUCs were classified as:

- local with a focus on single cities
- regional, covering one or more regions
- national, with a focus on the whole country
- supra-national in applying applications from beyond Italian borders.

Through spatial proximity, local competitions are supposed to create a more beneficial setting by promoting frequent face-to-face interactions between participants, experts and organisers and b facilitating collective learning and knowledge sharing. However, broader geographic coverage, which increases the number of potential participants involved, increases the probability of a competition's success and viability (Schwartz et al., 2013).

2 *Target groups* focus on the reference industries and/or technologies in the proposals. Specifically, when SUCs are restricted to proposals focused on one specific industry and/or technology or on complementary sectors, they are referred to as *specialised*; otherwise, they are referred to as *diversified*. In adapting the PNICube taxonomy (Italian association) to our data, the identified target groups are internet and ICT, healthcare, social innovation, and other. This last category includes proposals relating to various different industries and/or technologies (e.g., biotechnology, the food industry, industrial automation, and the transportation industry).

3 *Number of stages* measures the tasks that participants must undertake until a winner is announced by the organisers (Schwartz et al., 2013). The SUCs are divided into the following categories: *one-staged SUCs*, *two-staged SUCs* and *multi-staged SUCs* (at least three stages).

4 *Duration* refers to the time period running from the deadline for proposal submission to the date of an award ceremony (as specified on the competition's website). With regard to time periods, the SUCs are classified as *short* (up to 3 months), *medium* (4–6 months) and *long* (longer than 6 months).

5 *Award/prize* analyses the prizes awarded for the best proposals. Prizes represent an important incentive to participate, because they represent a key opportunity for the submitted business proposal to become a successful enterprise. We differentiate the prizes as *money*, *coaching packages* and combinations of these typologies (*mixed*). Moreover, an analysis of the value of money prizes is presented. These categories do not include other typically indirect benefits of SUCs such as collective learning, networking, and knowledge sharing.

6 *Funding institution* refers to the SUCs' organisers. Italian SUCs are organised by different institutions and organisations that are *public*, *private* or *mixed*. As they can include different actors, a more detailed classification is proposed to support a stronger understanding of who the main organisers of Italian SUCs are. These categories are:

- bank and venture capitalists (all possible investors)
  - private organisations (small and medium-sized enterprises and large corporations)
  - public authorities (i.e., provinces, municipalities, and local agencies)
  - trade or industrial associations
  - university and research centres.
- 7 *Composition of judging committee* measures whether an SUC's organisers provide information on the composition of judging panels (e.g., the number of members, their specific competencies, and their professional positions). In the Italian SUC landscape, it is possible to distinguish between judging committees composed of only business experts and combined committees composed of individuals from academia and the business sector.
- 8 *Evaluation criteria* analyses whether a SUC's regulations provide information on selection criteria. In particular, we identify the following three levels of criteria: *general criteria* (criteria that are generally defined), *detailed criteria* (a complete list of the criteria is provided), and *very detailed criteria* (a complete list of criteria with their related weights is provided).
- 9 *Educational activities* measure the presence of educational resources available to participants during a SUC. Specifically, it is possible to distinguish between *mentoring, tutoring, and training activities* and a combination of different educational techniques (mixed).

Due to a lack of systematic approaches examining SUCs as potential instruments of policy, SUC organisers cannot provide reliable data on other potentially relevant criteria of analysis such as the age and gender of submitting individuals and voting modalities or evidence of the impacts of such initiatives on entrepreneurship outcomes. Therefore, such information was not taken into account. Regardless, this work is designed to help further studies address this gap in knowledge.

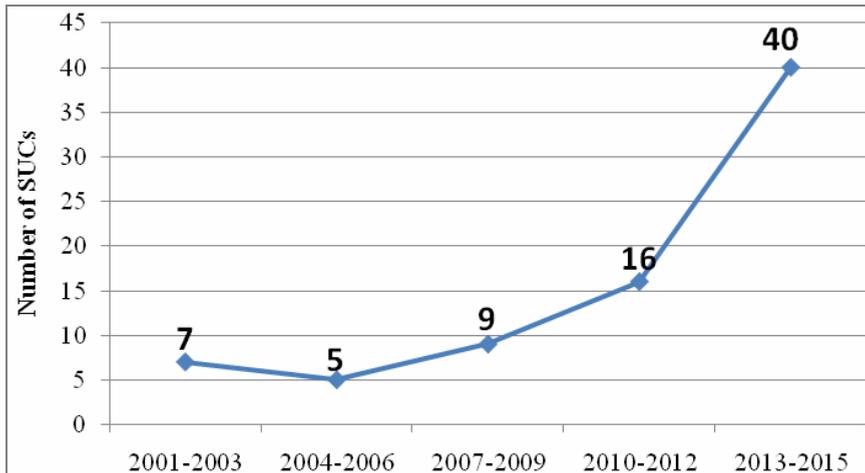
## 4 Findings

### 4.1 *The Italian SUC population*

In total, 77 Italian SUCs were screened. This can be considered a good result and especially when compared to data for Germany, which by far includes the largest number of SUCs in Europe (Schwartz et al., 2013). It is reasonable to assume that this interesting finding could mainly be rooted in the growing number of European and national policies and incentives (i.e., EC 2003, 2006; CEC, 2013) designed to support entrepreneurship. Nevertheless, since 2001, growth in the number of new SUCs (77 in total) established yearly can be observed (Figure 2), and this does not ensure an increase in new venture creation or a geographically balanced result. In fact, with the exception of five

competitions organised by foreign organisations, most Italian SUCs have been held in Northern Italy (46%), with 30% held in Central Italy and the remainder 24% held in Southern Italy.

**Figure 2** Number of newly established SUCs (see online version for colours)



This geographical distribution is not surprising and reflects Italian socio-economic statistics. Indeed, Northern Italy offers conditions that better support entrepreneurial activity than other Italian regions. For instance, incubators and venture capitalists are mainly located in this macro-area. Further, due to its high concentration of SMEs and large corporations, Northern Italy can deliver a larger number of potential customers, suppliers and investors as well as better infrastructure.

Such conditions might have positive effects on the choices of aspiring entrepreneurs with a positive influence on the localisation of SUCs. Hence, the lower share of SUCs organised in Southern Italy may be due to the presence of a context less conducive to new business creation (a relatively low share of high-tech industries, a limited regional entrepreneurial culture, low rates of private entrepreneurship, and scarce public infrastructure). Paradoxically, the presence of less favourable economic conditions could delay the spread of SUCs in lagging areas where there is a stronger need for this type of policy instrument to boost local entrepreneurship. This assumption also represents a relevant limitation, as public institutions that can finance SUCs are less available in these areas.

As it is shown in Table 3, from 2001 to 2015, the Italian landscape of SUCs changed considerably with regard to adopted criteria. Specifically, there has been an increasing diffusion of national and supra-national competitions (respectively, 16 and 14) with respect to others. This trend shows a consolidation of the SUC phenomenon, and it mirrors a recent general orientation towards international openness. At the same time, by expanding geographical coverage, SUC organisers seek to increase the number of potential participants involved, which should enhance the probability of selecting and rewarding more valuable proposals.

**Table 3** Analysis of SUCs in the period from 2001 to 2015

	2001–2003		2004–2006		2007–2009		2010–2012		2013–2015		Total			
	Geographic coverage										n	%		
Supra-national	0	1	3	3	16	23	30	0	1	3	3	16	23	30
National	0	1	1	5	14	21	27	0	1	1	5	14	21	27
Regional	7	2	5	7	28	36	7	2	7	7	28	36		
Local	0	1	0	1	3	5	6	0	1	1	1	3	5	6
<i>Total</i>	7	5	9	16	40	77	100	7	5	9	16	40	77	100
	<i>Target groups</i>													
Diversified	7	5	8	12	25	57	74	7	5	8	12	25	57	74
Internet and ICT	0	0	1	3	6	10	13	0	0	1	3	6	10	13
Healthcare	0	0	0	0	1	1	1	0	0	0	0	1	1	1
Social innovation	0	0	0	0	1	1	1	0	0	0	0	1	1	1
Other	0	0	0	1	7	8	10	0	0	0	1	7	8	10
<i>Total</i>	7	5	9	16	40	77	100	7	5	9	16	40	77	100
	<i>Number of stages</i>													
One-stage	0	0	0	2	4	6	87	0	0	0	2	4	6	87
Two-stages	2	4	3	7	15	32	42	2	4	3	7	15	32	42
Multiple-stages	5	1	6	7	23	39	51	5	1	6	7	23	39	51
<i>Total</i>	7	5	9	16	40	77	100	7	5	9	16	40	77	100
	<i>Duration</i>													
Short (up to 3 months)	1	1	1	7	21	31	40	1	1	1	7	21	31	40
Medium (3–6 months)	2	4	5	5	12	28	36	2	4	5	5	12	28	36
Long (> 6 months)	4	0	3	4	7	18	23	4	0	3	4	7	18	23
<i>Total</i>	7	5	9	16	40	77	100	7	5	9	16	40	77	100
	<i>Funding institutions</i>													
Public	4	2	5	10	12	33	43	4	2	5	10	12	33	43
Private	1	2	2	6	27	38	49	1	2	2	6	27	38	49
Mixed	2	1	2	0	1	6	8	2	1	2	0	1	6	8
<i>Total</i>	7	5	9	16	40	77	100	7	5	9	16	40	77	100
	<i>Prizes (N = 72) (five SUCs are not able to provide such information)</i>													
Monetary	2	2	4	3	9	20	28	2	2	4	3	9	20	28
Coaching	1	1	2	6	13	23	32	1	1	2	6	13	23	32
Mixed	3	2	2	7	15	29	40	3	2	2	7	15	29	40
<i>Total</i>	6	5	8	16	37	72	100	6	5	8	16	37	72	100

In considering SUCs' target groups, one can note that more recent competitions are increasingly restricting the involvement of proposals focused on specific industries or technological fields. Regardless of this fact, the total number of diversified SUCs is greater than the sum of specialised ones (respectively 74% *versus* 26% of all competitions). Additionally, EU and national financing programs strongly affect the types and target groups of new SUCs. In fact, it is important to highlight that in the last two years, 50% of SUCs classified as 'other' have focused on the food industry. Growing interest in this field can mainly be attributed to a recent international social trend towards healthy nutrition and to the influence of the universal exhibition in Milan with the theme 'feeding the planet, energy for life'.

In focusing on the duration and the number of stages, it is possible to note that the more recent SUCs have been increasingly shorter but also very selective, as most of them require participants to undergo two or three stages before a winner is announced. Specifically, approximately 76% of SUCs established in the last two years have operated over a short or medium-term period (up to 6 months) involving two or three stages. This trend could be based on a need to increase the number of potential participants by reducing the level of commitment required in terms of time. However, there is a need to ensure the quality of proposals submitted and ultimately rewarded.

Focusing on funding institutions, we observe a considerable increase in the number of privately organised SUCs and especially over the last two years (2013–2015). Indeed, in the considered period, approximately 70% of newly established SUCs were privately funded. This phenomenon is better explained in the following section, and growth in private funding institutions (from 1 to 27 over the whole period, representing 49%) has mainly depended on the consolidation processes of the SUC phenomenon. However, public actors have played an important role in the Italian SUC landscape by boosting the development of these competitions, particularly early on. Finally, only a few SUCs are organised by a mix of public and private institutions (8%); this is most likely due to a divergence of goals between private and public actors that could negatively affect the success of partnerships and, as a consequence, of competitions.

Of the prizes that have been awarded to SUC winners, money prizes represent an important incentive to participate. It is conceivable that such competitions represent a first means for participants to gather risk capital to invest in their start-ups and to gain access to other initiatives that could support them in the start-up phase.

Other important factors include the composition of judging committees, the evaluation criteria adopted and the organisation of educational activities during competitions. Specifically, approximately 70% of Italian SUCs provide general information on the compositions of judging committees. Of these, 37% provide very detailed information. This information is made available from each SUC's official regulations or websites. Additionally, 61% of Italian SUCs provide information on the evaluation criteria adopted. These factors appear to be very important, as they highlight the quality, transparency and reliability of Italian competitions.

Finally, with the regard to the organisation of educational activities, 51% of Italian SUCs provide participants with specific actions designed to support their entrepreneurial learning. It is conceivable that this occurs because educational activities often involve awarding SUC winners with prizes.

## 4.2 *The cross-analysis*

### 4.2.1 *Target groups*

In recent years, the number of SUCs focused on proposals on a particular technological tool and/or industry has increased considerably over time (see Table 3). This trend may be attributed to various factors such as economical changes, technological advances, social improvements, and Italian and EU financing programs aimed at favouring investments in cutting-edge sectors that are consistent with a country's level of knowledge and development. It is important to note that specialised SUCs can better support collective learning and knowledge sharing by providing participants with essential industry-specific knowledge as a result of the involvement of advisors, consultants and experts who are more focused on defined technological fields. Such efforts should support the development of an entrepreneurial culture.

This tendency towards the specialisation of SUCs is also reflected in other criteria (e.g., geographical coverage and funding institutions) (Table 4). The evidence shows that specialised competitions are becoming increasingly nationally and supra-nationally focused. Such data suggest that specialised competitions must be held to support broader geographical coverage, as a narrow sector and/or technological focus is likely to decrease the pool of potential participants from a specific industry. This may be at the root of the expanding geographical coverage of SUCs. It is also possible that this trend has been a consequence of SUC organisers' efforts to improve planning and management capabilities over time.

Table 4 presents SUC target groups according to funding institutions. The results show that specialised SUCs are primarily organised by private organisations, while public organisations mainly support diversified competitions. We presume that this result stems from the different aims of private and public institutions; specifically, private institutions, in being more market-oriented, focus more on attracting industries or technologies while public actors, to support the development of more favourable entrepreneurial conditions, organise diversified initiatives.

### 4.2.2 *The number of stages*

In focusing on the number of stages involved, 51% of the examined SUCs reach a decision after at least three stages, 42% apply two stages, and a minority (7%) apply only one stage. It is conceivable that a higher number of stages denote more careful and rigorous modes of proposal evaluation and selection characterised by several rounds of review and assessment (Schwartz et al., 2013). Thus, Italian SUCs apply quite rigorous and intensive selection procedures where by winning proposals are selected after several rounds of evaluation, project revision and final elimination.

Table 5 shows that the number of stages increases according to the duration of SUCs. In addition, in this case, it is possible to assume that as more time is devoted to evaluation and selection, competitions become rigorous and intensive. The positive relationship between SUC duration and the number of stages is confirmed by a one-tailed Kruskal-Wallis test. Indeed, the average duration of one-staged competitions is 1.25 months, that of two-staged SUCs is 3.82 months, and that of multiple-staged initiatives is 5.12 months. Overall, Italian SUCs last 4.42 months on average, which is a moderate duration. Additionally, although most Italian SUCs (40%) occur over a short duration, most of them involve two stages. Therefore, we can conclude that while Italian SUCs have become increasingly shorter in duration, organisers pay attention to the quality and rigour of selection procedures by maintaining a certain number of stages.

**Table 4** SUCs' target group according to geographical coverage and funding institutions

Target groups	Geographical coverage				Funding institutions			Total
	Local	Regional	National	Supra-national	Public	Private	Mixed	
I.Net&ICT	0	1 (10%)	6 (60%)	3 (30%)	3 (30%)	6 (60%)	1 (10%)	10
Healthcare	0	0	0	1 (100%)	0	1 (100%)	0	1
Social innov.	0	0	1 (100%)	0	0	1 (100%)	0	1
Other	0	0	5 (62%)	3 (38%)	1 (12%)	7 (88%)	0	8
Diversified	5 (9%)	27 (47%)	9 (16%)	16 (28%)	29 (51%)	23 (40%)	5 (9%)	57
Total	5	28	21	23	33	38	6	77

**Table 5** Relationship between SUC duration and number of stages ( $N = 77$ )

<i>N. of stages</i>	<i>SUC duration</i>				<i>Average duration</i>
	<i>Total</i>	<i>Short</i>	<i>Medium</i>	<i>Long</i>	
One-stage	6	6 (16%)	0	0	1.25 months
Two-stages	32	20 (54%)	5 (23%)	7 (39%)	3.82 months
Multiple-stages	39	11 (30%)	17 (77%)	11 (61%)	5.12 months
Total	77	37 (100%)	22 (100%)	18 (100%)	4.42 months

Note: One-tailed Kruskal-Wallis test:  $p < 0.01$ .

Table 6a shows the number of SUC stages in relation to types and amounts of money prizes given. In cases involving multiple winners, money prizes comprise the cumulative money for all awarded participants. Overall, money prizes combined with coaching packages (mixed) is the dominant type of award that is received by winners. Specifically, 43% of the SUCs reward participants with mixed prizes, 26% of all of the competitions provide money rewards, and 31% provide the participants with coaching packages and other personalised services. Moreover, cash and mixed prizes are mainly used in two or multiple-staged SUCs, while coaching packages are more common for one-staged competitions (4 of 6). This confirms that two or multiple stages are considered to be necessary to fund more valuable proposals.

**Table 6** Type and amount of prizes according to the number of stages

<i>Award</i>	<i>One-stage</i>	<i>Two-stages</i>	<i>Multiple-stages</i>	<i>Total per award typology</i>
<i>(a) Type of prizes (N = 72)</i>				
<i>(five SUCs were not able to provide such information)</i>				
Money	1 (17%)	7 (22%)	11 (32%)	19 (26%)
Coaching packages	4 (66%)	11 (34%)	7 (21%)	22 (31%)
Mixed	1 (17%)	14 (44%)	16 (47%)	31 (43%)
Total	6 (100%)	32 (100%)	34 (100%)	72 (100%)
<i>(b) Amount of money prizes (N = 45)</i>				
5.000–10.000	2 (100%)	3 (18%)	2 (8%)	7 (15%)
10.001–20.000	0 (0%)	8 (46%)	5 (19%)	13 (29%)
20.001–50.000	0 (0%)	4 (24%)	8 (31%)	12 (27%)
Beyond 50.000	0 (0%)	2 (12%)	11 (42%)	13 (29%)
Total	2 (100%)	17 (100%)	26 (100%)	45 (100%)

Nevertheless, according to other contributors (Russell et al., 2008; Schwartz et al., 2013), SUC organisers emphasise additional indirect and long-lasting benefits of participating [e.g., access to networks; networking with other aspiring entrepreneurs; meeting potential customers, suppliers and investors; invitations to other events (i.e., trade fairs); and visibility and reputation benefits] (Parente et al., 2015). These benefits are not taken into consideration here.

As another important finding, the amount of money prizes also increases according to the number of stages involved (Table 6b). Specifically, we find that only two of the one-staged competitions offer money prizes, while 73% of the multiple-staged competitions award participants with a total amount of between €20,000 and over

€0,000. This result may be based on the higher costs and levels of commitment that participants must invest in multi-staged or longer competitions, meaning that organisers need to offer more tangible incentives to potential participants.

#### 4.2.3 Funding institutions

Most Italian SUCs that are currently in operation are organised by private organisations (49%), 43% of all of SUCs are organised by public actors and only six SUCs (8%) are funded by a combination of public and private actors.

**Figure 3** Funding institutions (see online version for colours)

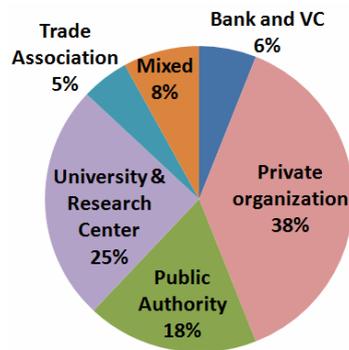


Figure 3 shows that private organisations (especially large firms), universities and research centres play an important role in the funding and planning of SUCs. However, the number of banks and venture capitalists involved is limited (6%). Evidently, lack of an extensive and consolidated venture capitalist network represents an important limitation to limits the development of an adequate culture for SUC diffusion. This trend is more evident when observed in different areas of the country.

**Figure 4** SUCs' funding institutions according to the geographic distribution ( $N = 72$ ) (see online version for colours)

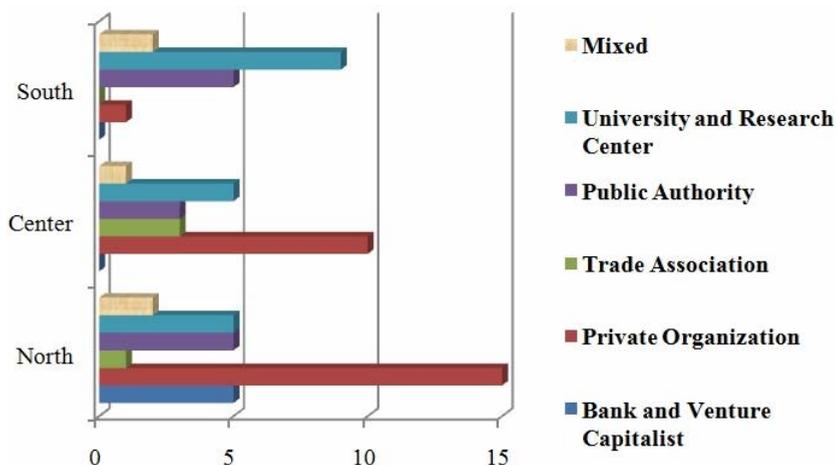


Figure 4 shows that the number of private organisers (private organisations, banks and venture capital and trade associations) organising and funding SUCs is much higher in Northern Italy than in the Southern region (respectively 21 *versus* 1). These results mirror current obstacles to entrepreneurship and SME development in southern Italy, which are rooted in a lack of business-friendly environments and in the presence of an inadequate entrepreneurial culture.

Moreover, our findings confirm the presence of venture capitalist networks as SUC funding institutions in the Northern region, while in the Southern region these networks are completely absent. Finally, we note how public authorities (29%) and universities and research centres (53%) are slightly more active in the southern region than in the Northern region as SUC funding institutions. Presumably, these institutions strive to compensate for a lack of private investors in these areas.

**Table 7** SUCs' funding institutions according to the type and amount of prizes

<i>Funding institutions</i>	<i>5.000–10.000</i>	<i>10.001–20.000</i>	<i>20.001–50.000</i>	<i>Beyond 50.000</i>	<i>Coaching</i>	<i>Total</i>
Public	3 (10%)	11 (38%)	5 (17%)	1 (3%)	9 (32%)	29 (43%)
Private	1 (3%)	4 (12%)	5 (15%)	10 (30%)	13 (40%)	33 (49%)
Mixed	0	1 (20%)	2 (40%)	1 (20%)	1 (20%)	5 (8%)

Note:  $N = 67$  because ten SUCs did not provide data on the amount of the money-prize.

Table 7 relates funding institutions to types of prizes and total amounts. Private institutions generally provide SUC winners with larger money prizes than public institutions. Specifically, most of the privately funded SUCs provide participants with money prizes of over €50,000 (30%), while publicly funded SUCs mainly offer money prizes of between €10,001 and €20,000 (38%). Regarding the coaching packages given, there are no considerable differences between private and public organisers. Nevertheless, public authorities should invest more in the provision of real services due to their key role in the development of the most effective conditions for entrepreneurship. Generally, it is reasonable to claim that private organisers can provide larger money prizes and more coaching packages than public authorities, as they have access to greater financial resources and real services (managerial competencies, skills and knowledge).

To conclude, this exploration of the Italian SUC landscape, we analysed SUC organisers according to the compositions of judging committees, the evaluation of classification criteria and the organisation of educational activities during competitions.

In focusing on the composition of judging committees, privately funded SUCs opt for judging committees that are mainly composed of experts from the entrepreneurial world with specific competencies in business planning, start-up management and financing (50%). Publicly funded SUCs tend to involve judging committees composed of a combination of experts from both the business and academic sectors (45%). This latter result appears to be quite pronounced, as most public institutions involved in SUC organisations are universities and research centres.

As shown in Table 8a, most SUCs provide information on the evaluation criteria adopted. In particular, both private and public organisations pay considerable attention to the procedural aspects of SUCs. Indeed, 53% of privately funded SUCs and 73% of publicly funded SUCs provide information on the adopted evaluation criteria. These differences could be attributed to public institutions' greater propensity to define rules

and regulations owing to their public role. The provision of this information could be an indicator of an SUC's quality, as the availability of this information increases the transparency and thus the reliability of selection procedures.

**Table 8** SUCs' funding institutions according to the adopted evaluation criteria and educational activities

<i>(a) Evaluation criteria</i>	<i>Funding institutions</i>			<i>Total</i>
	<i>Private</i>	<i>Public</i>	<i>Mixed</i>	
General criteria	2 (5%)	3 (9%)	2 (33%)	7 (9%)
Detailed criteria	8 (21%)	14 (43%)	0 (0%)	22 (29%)
Very detailed criteria	10 (27%)	7 (21%)	0 (0%)	17 (22%)
N/A	18 (47%)	9 (27%)	4 (67%)	31 (40%)
Total	38 (100%)	33 (100%)	6 (100%)	77 (100%)
<i>(b) Educational activity*</i>				
Tutoring	5 (31%)	0 (0%)	1 (25%)	6 (15%)
Mentoring	0 (0%)	1 (5%)	0 (0%)	1 (3%)
Training activities	7 (44%)	13 (68%)	3 (75%)	23 (59%)
Mixed	4 (25%)	5 (26%)	0 (0%)	9 (23%)
Total	16 (100%)	19 (100%)	4 (100)	39 (100%)

Note: \*39 out of 77 SUCs organises educational activities.

We analysed the organisation of typologies of educational activities delivered during competitions by funding institution (Table 8b). In general, it is possible to conclude that only 51% (39 of 77) of the Italian competitions organise educational activities for their participants. Educational activities are more frequently engaged in during publicly funded SUCs (49%) than during privately funded SUCs (41%). Additionally, private organisations offer tutoring services, while public organisations do not.

Such trends are quite pronounced when we consider that public authorities mainly aim to support the development and diffusion of entrepreneurial knowledge, and for this reason, they offer seminars, lectures and workshops. Private organisations on the other hand are more focused on fostering entrepreneurial skills and competencies through tutoring activities.

### 4.3 Comparison of the German and Italian SUC landscapes

Given the few studies addressing the diffusion and roles of SUCs, the comparison of German and Italian SUC contexts provides us with useful information from which to develop a more in-depth understanding of the importance and role of SUCs for participants and SUC organisers and for policy-makers and business ecosystems as a whole. Germany and Italy are the only countries for which cross-sectional analyses of SUCs are available, and the two countries also have comparable socio-economic structures. Moreover, our results highlight a need for further cross-sectional studies on SUC diffusion, classification, structuring and effectiveness.

Germany and Italy are two European countries that are strongly comparable in terms of socio-economic structures. In particular:

- 1 both countries present considerable economic divergences between developed and lagging regions
- 2 manufacturing SMEs represent the backbone of both German and Italian productive structures
- 3 most German and Italian SMEs are family-owned (D'Aurizio and Romano, 2013; Fear, 2012)
- 4 both countries have shown an increase in the number of innovative SMEs in the last three years (Symbola-CNA Report, 2015)
- 5 both countries have the largest number of creative EU registered patents (Symbola-CNA Report, 2015).

Finally, the relevance of the SUC phenomenon is very similar in both countries (respectively 71 *versus* 77).

Specifically, Table 9 shows major similarities between the German and Italian SUC landscapes in terms of organisational and structural features.

**Table 9** Similarities between German and Italian SUCs

<i>Classification criteria</i>	<i>Similarity</i>
Number of SUCs	<ul style="list-style-type: none"> <li>• Growing number of newly established SUCs (77 and 71)</li> </ul>
Geographical distribution	<ul style="list-style-type: none"> <li>• Prevalently localised in more developed areas (West Germany and North Italy)</li> </ul>
Funding institutions	<ul style="list-style-type: none"> <li>• Increasing involvement of private organisations</li> <li>• Public institutions organise mainly regionally and locally focused SUCs</li> </ul>
Geographical coverage	<ul style="list-style-type: none"> <li>• Most SUCs are regionally focused (41% and 36%), although they increasingly widen their geographical coverage over time</li> <li>• Wider SUC geographical coverage, more rigorous selection procedure (e.g., multiple stages)</li> </ul>
Target groups	<ul style="list-style-type: none"> <li>• SUCs specialise in proposals from specific industry/technology</li> <li>• Specialised SUCs show a wider geographical coverage</li> </ul>
Prizes	<ul style="list-style-type: none"> <li>• Greater number of stages is related to higher total amount of money prizes</li> <li>• No-cash and coaching packages are more frequent in one-and two-staged competitions</li> </ul>

Despite the several common features identified, some key differences must be noted with regard to the number of stages, durations and funding institutions (Table 10).

Therefore, the main findings of our comparison of the German and Italian SUC landscapes can be summarised as follows:

- a The two SUC landscapes are very similar in terms of organisational and procedural features although they present specific characteristics that are mainly related to different territorial and cultural contexts.
- b German and Italian SUCs are currently experiencing a boom phase given the large number of competitions that are currently active in both countries. It is reasonable to

claim that this boom is mainly a result of the growing awareness of the relevance of entrepreneurship for socio-economic growth at the EU and national levels.

- c Both countries are witnessing more involvement from private organisations in the organisation and funding of SUCs. This has deeply altered SUCs' structural features (e.g., broader geographic coverage, greater specialisation, and a prevalence of money prizes).
- d German and Italian publicly funded SUCs are locally or regionally focused. This shows that public authorities strive to exploit these initiatives to support the development of a local entrepreneurial culture and of an ecosystem for start-ups by defining geographical requisites for participation.
- e Italian SUCs occur over medium-term periods and involve multiple stages by employing more rigorous evaluation procedures. Additionally, by considering the prevalence of privately funded competitions, Italian SUCs follow more business-oriented logics than German ones.

The composition of judging committees, the provision of information on evaluation criteria and the organisation of educational activities were not considered for this comparison, as such data were not available for the German case.

Finally, a lack of systematic and complete databases on the impacts of SUCs on the development of entrepreneurship and on their effectiveness as entrepreneurship policy instruments is common to both the German and Italian cases.

**Table 10** Differences between Italian and Germany SUCs

<i>Germany</i>	<i>Italy</i>
Specialisation is not a new trend	Specialisation is a very new trend
Prevalence of two-staged competitions (46%)	Prevalence of multiple-staged competitions (51%)
On average, SUCs last 6.6 months	On average, SUCs last 4.3 months
Prevalence of mixed-funded competitions (55%)	Prevalence of privately funded competitions (42%)
Prevalence of money prizes (76%)	Prevalence of mixed prizes (40%)

## 5 Discussions

From our field analysis of Italian SUCs running from 2001 to 2014, it is possible to observe a growing number of Italian SUCs. This trend has also facilitated numerous deep transformations in other SUC features (e.g., geographical coverage, the number of stages, durations and target groups).

The following key factors are considered:

- 1 Most SUC organisers do not collect and/or provide reliable data on relevant SUC procedures, on participants or on the impacts on new venture creation, thus exacerbating the gap in knowledge this phenomenon.
- 2 SUCs affect the entrepreneurial process in different ways. In particular, two different effects have been identified. Specifically, direct and indirect effects can affect SUC

participants and socio-economic systems. Additionally, while direct effects are largely more immediate, easily measurable and powerful, indirect effects and benefits are gradual, soft and long-lasting.

- 3 Criteria used to analyse and classify SUCs could represent a set of preliminary variables used to comprehend the structural and procedural aspects of these competitions.
- 4 The strong growth trend observed over recent years can be interpreted as a result of SUC evolution from an initial phase to a consolidation phase. This shows that SUCs are undergoing evolution and that as a consequence, the monitoring of these trends appears to be crucial to effectively influence start-up expansion.
- 5 In analysing the classification criteria adopted, two main SUC profiles based on the nature of the organisers (public and private) and their different aims (Table 11) emerge. In particular, while public organisers primarily aim to create an entrepreneurial culture, private organisations primarily follow market and business-oriented approaches.
- 6 The growing number of SUCs observed in Italy is in line with the German case and has mainly depended on the considerable involvement of private actors in SUC organisation. This involvement, which is in line with the EU entrepreneurship policy, could be intended as part of the innovation strategies of companies or as a challenging opportunity pursued by venture capitalists and banks.
- 7 The comparison of the SUC landscapes in different countries shows that they have a twofold aim: to support the diffusion of knowledge about SUCs' specific country factors and to expand opportunities for participants to compete on an international level. According to this comparison, the German and Italian SUC landscapes appear to be quite similar, although there are some considerable differences with regard to time periods, types of prizes given and funding institutions involved.

Such factors are considered in identifying the implications discussed in the following section.

**Table 11** SUCs' organisers profile according to the results

<i>Classification criteria</i>	<i>Private organiser</i>	<i>Public organiser</i>
Geographic coverage	National and supra-national	Regional and local
Target groups	Specialised	Diversified
Prizes	High money prizes	Low money prizes
Duration and number of stages	Short duration with two or multiple stages	Medium and long duration with two or multiple stages
Judging committees	Experts from the entrepreneurial and professional world	Mixed committees composed of business expert and academics
Evaluation criteria	Great transparency	Great transparency
Educational activities	Low provision	Very high provision

## 6 Implications

This explorative analysis confirms that data provided by Italian SUCs' organisers are often fragmented, not readily available and not properly organised. As a consequence, there is generally little knowledge of SUCs' benefits and advantages from the perspectives of participants (Russell et al., 2008) and policy-makers in terms of related impacts on entrepreneurial processes. Specifically, such benefits should be ensured and strengthened through proper regulation (Stevenson and Lundström, 2007).

Based on this evidence, some implications for SUC participants, organisers and policy-makers can be derived:

- *Implications for SUC participants* – more knowledge (information, visibility, and transparency) of SUCs can encourage individuals to participate and thus foster the entrepreneurial process. At the same time, participation represents a first step of the decision-making process involved when entering an appropriate competition that is in line with business idea characteristics.
- *Managerial implications for Italian SUC organisers* – a first implication concerns a need for systematic data collection, analysis and diffusion of:
  - 1 competition effectiveness results (e.g., the number of new ventures, start-up success and survival rates)
  - 2 participants' information, evaluation and satisfaction with respect to their own expectations and additional procedural aspects (e.g., voting modalities and team creation).

Italian SUC organisers could use this data to improve the procedures, management and performance of their initiatives.

- *Policy implications – inward-oriented* – results about SUC effectiveness could be used by a central public authority to:
  - 1 monitor trends
  - 2 analyse performance
  - 3 develop guidelines
  - 4 support the definition of start-ups and innovation policies at the regional and national levels.

To achieve these aims, the proposed classification criteria could help support the development of a knowledge base of SUCs.

- *Policy implications – outward-oriented* – as the number of Italian SUCs is growing rapidly, policy-makers should introduce soft regulation elements to guarantee the quality and procedural transparency of competitions (guidelines, certifications or registrations of SUCs) from a public welfare perspective. Consideration of these elements should be a prerequisite to receiving support from central or local authorities and/or to participation in different funding programs. In this way, public authorities could minimise the risk of SUCs becoming tools for mere fund-raising or fruitless showcases for potential entrepreneurs.

According to our results, it is important to identify the presence of different Italian SUC profiles and different purposes to better support the definition of tailored managerial tools and policies.

Although our results refer to the Italian case, it is possible to adopt the proposed classification criteria in establishing an interpretative framework comparing SUCs at international levels. In this study, this aim was achieved by comparing the German and Italian SUC landscapes.

Finally, these interventions can boost the visibility and recognition of SUCs as an effective entrepreneurship policy instrument that can shorten transitions between different stages of an entrepreneurial process and increase the entrepreneurial activity.

## **7 Limitations and some possible directions for future research**

As this paper lists the initial results of explorative research, it presents some limitations.

First, the paper does not provide evidence of the impacts of the effectiveness of SUCs on entrepreneurial processes due to a lack of data available on initiative effectiveness and participant satisfaction. In other words, the impacts of SUCs on entrepreneurial processes are far from being well understood and analysed (Schwartz et al., 2013).

Second, particularities of the Italian context and considerable differences between competitions have a negative impact on the generalisability of our results. Nevertheless, some of our conclusions complement those of seminal studies (Russell et al., 2008) on SUCs.

Third, our analysis of cross-sectional data limits the possibility of evaluating structural and organisational changes in competition overtime. This compromises the possibility of analysing SUCs' evolutionary paths. Moreover, without longitudinal data, it is not possible to establish cause and effects relationships.

Finally, although some further classification criteria have been identified, this study strongly focuses on Schwartz et al.'s (2013) methodological approach, thus limiting the analysis to only certain SUC features.

To address these limitations, more concrete efforts should be realised. In particular, we highlight some possible directions for future research.

A first step could involve the identification and measurement of appropriate performance indicators to establish a model that can predict the effectiveness of SUCs in fostering the success of nascent start-ups. Once indicators are identified, research questions and hypotheses could be defined to verify their reliability and validity and to identify the most adequate set of indicators.

Second, a reference conceptual model for SUC analysis could be established for three main reasons:

- 1 to compare SUCs at regional and national levels
- 2 to enable SUC organisers to rely on a self-assessment tool
- 3 to support policy-makers in defining adequate innovation and entrepreneurship policies.

Third, further longitudinal analyses must be conducted to facilitate a stronger comprehension of the impacts of each SUC feature on SUC effectiveness in terms of an increase in the survival and/or success of start-ups. In applying this approach, an

interpretative scheme for the observation of different SUC categories and patterns should be developed.

Finally, studies may analyse the coherence and effectiveness of national and local start-up ecosystems to ensure the effectiveness of public budgets and the returns of investors. Both conditions can impact the development process and can further bolster economic and industrial policy-making.

## 8 Conclusions

Although start-up firms have been recognised as a driving force behind social and economic development over the last decade, researchers and policy-makers have focused little on SUCs as an entrepreneurship policy instrument. This view presents a conceptual basis for evaluating SUCs as an entrepreneurship policy instrument. Moreover, as few studies have examined SUCs at international levels, the present study is novel and enriches the scientific debate on ways to support entrepreneurship. In particular, the paper presents an explorative cross-sectional analysis of Italian SUCs to address a gap of knowledge on their chief characteristics by partially replicating Schwartz et al.'s (2013) study on the German case and by comparing the two countries.

Indeed, while the paper helps identify the role of SUCs in the creation of start-ups, it does not evaluate SUC effectiveness levels due to a lack of official data provided by SUC organisers.

Our main findings highlight that SUCs can affect the entrepreneurial process in different ways. Specifically, direct and indirect effects on participants and on the socio-economic system as a whole include:

- a reduction in the duration of each stage of the entrepreneurial process foster the transition of an individual from one phase to the next (e.g., from an intentional to a nascent entrepreneur)
- b improvements in the dynamics of the entrepreneurial process
- c improvements in start-up success and/or survival
- d the development and diffusion of entrepreneurial cultures and of proper conditions for the formation of start-up-friendly environments.

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