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## **Types, services, and the economic and social impact of Italian Startup Incubators and Accelerators**



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*Dedicato ai miei genitori.*

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## **Abstract**

The thesis, after proposing an overview of the main Literature findings related to the typologies, work methodologies, and the impact of incubators and accelerators in terms of economic and social value creation, presents the results of the data collection and analysis work made in collaboration with the Social Innovation Monitor that has led to the redaction of the 2023 Annual Report of Italian incubators and accelerators.

The thesis includes an in-depth analysis of findings related to the geographical distribution of incubators, the different characteristics and design choices made by these organizations, the various services provided, an overview of the main cost items and revenue streams, and a detailed representation of the challenges faced by incubators that support organizations and startups with a positive social goal.

Overall, the thesis aims to contribute to the understanding of the incubation ecosystem in Italy and to support the growth and development of startups in the country, especially in the form of socially impactful ventures.



# **1. Introduction**

Entrepreneurial activity has long been recognized as a driving force for economic growth and job creation, the engine that moves capitalism (Shaker A. Zahra and Mike Wright, 2016). As new and innovative ideas emerge, entrepreneurs bring them to life, creating new businesses and industries that spur economic development. Entrepreneurial firms have a very important and specific role in creating employment, increasing productivity growth, and producing and commercializing high-quality innovations. (C. Mirjam van Praag, Peter H. Versloot ,2007).

To support these entrepreneurs and their ventures, various forms of assistance and resources have been developed, including incubators, that have been increasingly playing an important role in providing support activities. Incubators are, at their core, organizations that support the foundation and/or growth of new businesses as a central element of their organizational goal (Hausberg, J.P., Korreck, 2020).

The attention towards these kinds of support organizations has increased steadily since the 90s (Gema Albort-Morant, Domingo Ribeiro-Soriano, 2016) together with the diffusion and the increasing impact of incubators and accelerators on the development of innovative startups (Susan Cohen, Daniel C. Fehder, 2019).

An example of the magnitude of the impact that an incubation program can have on the development of successful startups might be provided directly by the most famous and successful incubation program in the world, Y combinator, that have supported more than 3500 startups like Airbnb, Dropbox, Stripe, Coinbase, Reddit, and Twitch, which right now have a combined valuation of almost 1 trillion dollars (Y Combinator, 2023).

More specifically, incubators are initiatives that provide a range of support services to entrepreneurs, including business services like hands-on management, access to funding, facilities, infrastructure, and external resources to help startups get off the ground and grow (Aernout, 2004). This support is crucial for innovation and technology as it helps to create a safe environment for startups that help them survive and develop (Sean M. Hackett, David M. Dilts, 2004).

This thesis aims to explore the state of incubation activities in Italy and provide insights into the role of incubators in supporting entrepreneurship and innovation. The research focuses on the relationship between incubation and the support services tailored to help startups in the early stages of their journey and provides an in-depth analysis of different typologies of incubators, including incubators

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that support Social Startups, and of the differences in public and private-owned incubators. The study provides valuable information for entrepreneurs, policymakers, and stakeholders interested in supporting the growth and development of startups in Italy.

In the Literature Review, the results of several peer-reviewed papers published in important scientific magazines are summarized and presented. This part presents an overview of the various types of incubation programs, including a useful taxonomy, their characteristics and the services provided, and the effect that incubators have on tenants and society as a whole.

It also explores the characteristics and peculiarities of Social Enterprises and of incubators that support Social Enterprises. It also highlights the importance of considering the social impact of entrepreneurship and the concept of blended value, which balances economic wealth with societal wealth.

In the Methodology section, the process used to collect and analyze data regarding a sample of 94 Italian incubators and accelerators is presented, in particular referring to 3 different phases of the work, which are the scouting for the identified incubator's population, the data gathering and integration process and, finally, the data analysis.

In the "Analysis and Results" section, the main findings of the research activity are presented, together with graphs that were elaborated through data analysis performed on the dataset including the entire population of Italian Incubators and on the sample of 94 incubators that have answered the survey. This section is divided into 5 subsections, each one regarding a particular aspect of the research on incubators.

In paragraph "4.1 Complete Overview of Italian Incubators" it is possible to find the main findings related to the geographic distribution of incubators in Italy, and the division of the sample incubators into different typologies according to the taxonomy introduced in the Literature Review.

In paragraph "4.2 Incubators' economics", balance sheet, economic, and financial data related to Italian Incubators are presented in such a way as to present a snapshot of the financial situation of these organizations. In particular, data regarding turnover, number of employees, costs, and revenues of Italian Incubators can be extremely valuable to understand the financial situation of the ecosystem.

In paragraph "4.3 Characteristics of Italian incubators", characteristics like age, number of requests, selection process, and competitive scope choices are presented. Most of these characteristics represent design and strategic choices made by incubators that, together with the choice of the service pool to provide, contribute to the positioning of different types of incubators in the overall incubation ecosystem.

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In paragraph “4.4 Services and Impact of Italian Incubators”, the results of the analysis of the services provided by incubators to their tenants and the quantification of the impact of incubators on the incubated organizations measured as funding received by the incubated organizations are presented. Lastly, paragraph “4.5 Supporting Social Startup”, presents a detailed overview of incubators supporting Social Enterprises, the involved sectors in which incubated social organizations are active, the peculiarities and difficulties encountered in the provision of incubation services to these particular types of startups, and the use of metrics of social impact both to measure incubated tenants impact and to measure the Social Impact of the incubator.

In the “Discussion” section, general considerations coming from the results of the data analysis are connected to considerations and remarks made in the Literature.

In the “Conclusion” section, the objective and the achievements of the thesis and the research work are expressed, together with the main limitations of the study and the applicability of the results. Also, the main stakeholders that can benefit from reading this thesis and the Italian incubator's research report made by SIM are listed, together with the reasons why they could benefit from the study.

## **2. Literature Review**

### **2.1 Introduction to the Literature Review**

In recent years researchers have started focusing more and more on entrepreneurial activities, seen as an engine of social, technological, and economic development, and, as a consequence, on those entities and organizations that create and aliment a support network that can nurture and foster venture establishment and growth.

Aernoudt (2004) is one of the first to highlight the importance of the role of incubators in helping ventures' growth and development, especially when incubators support tenants thanks to strong links between Business Angel Networks, other companies, universities, and other incubators. He sustained that entrepreneurship, incubation, and the provision of seed and early-stage capital exist in a dynamic process and that the reason behind the lagging of incubators in Europe revolves around the lack, or weakness, of one of those elements.

This literature review, analyzing the results of several peer-reviewed papers published in important scientific magazines, discusses the various types of incubation programs, their characteristics and the services provided, and the effect that incubators have on tenants and society as a whole. It also highlights the importance of considering the social impact of entrepreneurship and the concept of blended value, which balances economic wealth with societal wealth.

The studies reviewed have shown that incubation programs, can be useful in, among others, promoting economical, social, and technological development, balancing market failures in access to financial and technical resources for innovative startups, improving financial performances of incubated firms, and having positive effects in terms of investment and growth of particular target regions.

Corporate Accelerators are also discussed as a way for established firms to engage with startups, which can benefit the corporation's innovative activity, for example, helping to solve problems related to a specific corporation's business unit or problems posed by the company's clients.

Social Enterprises are also introduced and discussed highlighting both the positive aspects, such as the attempt of pursuing both social and commercial goals and the negative aspects caused by the presence of managerial tensions and the danger of "mission drift".

This literature review also touches upon the concepts of social entrepreneurship and social innovation, showing how different organizations spanning from the private sector to the nonprofit and public sector, can participate and cooperate in bringing a social impact.

Overall, the literature suggests that all the different stakeholders, especially policymakers, should be interested in understanding the mechanisms behind incubation programs and should try to incentivize the formation of incubators with specific characteristics.

## **2.2 Definitions and taxonomy**

There is still confusion about definitions and a clear and agreed-upon taxonomy of the different types of incubators is lacking (Mian, Lamine, Fayolle, 2016). There is also a lack of an agreed-upon systematic framework that would allow a better understanding of incubators and incubation dynamics (Phillip H. Phan, Donald S. Siegel, Mike Wright, 2005). Based on the analysis of different papers that contributed to the literature around this point, I will try to provide a useful set of definitions that will be used in this work to refer to different types of entities fostering and nurturing venture creation and growth.

Mian et Al. (2016) suggest that incubators, accelerators, innovation centers, and science parks are all different types of TBI (Technology Business Incubation) mechanisms. These TBIs can be defined as initiatives providing tenant firms with a portfolio of support services for new ventures, including business services, networking, access to university or external resources, and capital to help the startup scale and grow. While it might be interesting to analyze the differences that characterize different TBIs mechanisms, the focus of this paper will be directed at Incubation programs, and accelerators will be treated as a particular type of incubation program, according to the most used and agreed-upon definition, provided by Hochberg (2015), that define accelerators as “fixed-term, cohort-based Technology Business Incubation programs, providing education and mentoring for start-up founders.”

One of the first definitions of a business incubation process as a “dynamic process of business enterprise development” (NBIA, 1997), is good at encompassing the heterogeneity of the different forms of incubation programs but might be considered too much generic. It is useful to the purpose and scope of the work presented in the thesis to think of incubators as organizations providing a portfolio of business support services to startups (Johanna Vanderstraeten, Paul Matthyssens, 2012), and using the term “incubator” to refer to various initiatives with different structures and objectives (Aernoudt, 2004).

Often, in the Literature, differentiation between the typologies of incubators is related to the propensity in the use and transfer of technology, like in Colombo and Del Mastro (2001) where business incubators are differentiated from technology incubators, in the forms of Business Innovation Centers, defined as initiatives encouraging the formation and growth of “innovative businesses in the fields of technology and science”. This differentiation, also present in Mian (2016), is not particularly useful and will not be taken into account, given that incubators in this study are not differentiated according to their choice of incubating exclusively tenants in highly scientific or technological sectors.

Some of the analyzed studies like Fehder, Hochberg, 2015 and Gonzalez Uribe, Leatherbee 2017, differentiate between incubators and accelerators. Accelerators are seen as programs having fixed, short-term duration, usually ending with a pitch day, often where start-ups that graduate from the program can present themselves to investors and VC funds.

Cohen (2013) also claims that one of the main differences between incubators and accelerators is mentoring and seed capital provision, which should be present in an accelerator but can be absent in incubators. In some cases, scholars criticized the incubation model in favor of the accelerator model, like in Fehder Hochberg 2015, where incubators are defined as “primarily real estate ventures that offer co-working space and services in exchange for a fee and provide poor educational offerings”. Even if differences between the two models are widely evidenced in the Literature, the differences are often not fully understood and received by the incubation programs themselves and other actors involved in incubation and acceleration activities. Indeed, as also highlighted in the analysis of the results, many incubators refer to themselves as accelerators even if they lack some accelerator characteristics, and the opposite happens for accelerators. For this reason, and similarly to what was done in the Report on Italian incubators and accelerators, the distinction is not made and the two concepts are used interchangeably in the part of this Thesis where the results of the data collection and analysis work are presented.

One of the first taxonomy to be accepted in literature is the one proposed by Aernoudt (2004) (Table 1) that distinguished different types of incubators based on their main objectives. The terminology used by Aernoudt, and especially the introduction of the concept of “Social Incubator” is very useful for the purpose of presenting the research results, because the terms “Mixed Incubator” and “Social Incubator”, even if are considered with a different meaning than the one used by Aernoudt, are used in Sansone’s taxonomy (Table 2) and also in the presentation of the results of the data analysis on Italian incubators and accelerators.

Table 1: Aernoudt taxonomy (2004)

<b>Tipology of incubator</b>	<b>Objectives</b>	<b>The gap they are trying to fill</b>	<b>Sectors</b>
<i>Mixed Incubators</i>	Startup creation; Employment creation	Business gap	All sectors
<i>Economic Development Incubators</i>	Regional development	The regional economic and social gap	All sectors
<i>Technology Incubators</i>	Create entrepreneurship; stimulate innovation	Entrepreneurial gap	Highly technological and scientific sectors
<i>Social Incubators</i>	Integration of Social categories	Social gap	Non-profit
<i>Basic Research Incubators</i>	Blue Skies Research	Discovery gap	High Tech

The incubator taxonomy that will be used in the presentation of the results is based on the tenants that are part of the incubator and not on incubator objectives. This approach has been applied concerning the social aim of tenants and led to a simpler taxonomy composed of Business, Social, and Mixed Incubators, defined in Table 2 (Sansone, Andreotti, Colombelli, Landoni 2020).

Table 2: Sansone’s taxonomy of incubators (Sansone et al. 2020)

<b>Tipology of Incubator</b>	<b>Definition</b>
<i>Business Incubator</i>	Do not support any start-up with a positive social goal
<i>Mixed Incubator</i>	Less than 50% of supported start-ups do have a positive social goal
<i>Social Incubator</i>	More than 50% of supported start-ups have a positive social goal

Sansone’s taxonomy is very useful to capture differences related to a specific aspect of incubation, in this case, regarding the social impact of incubators. It is also very simple and easy to use and does not introduce uncertainty related to subjective perceptions of the incubators. In particular, empirically classifying Social Incubators is very useful, especially considering that previous definitions of Social Incubators were mostly based on subjective categorizations. (Sansone et al, 2020).

This is the main reason why this taxonomy is used in SIM’s report regarding Italian incubators and accelerators and will be used later in this Thesis.

Even if the proposed taxonomy is useful to the specific investigation of this thesis, classifying incubator typologies is an extremely problematic Literature theme. Confusion in definition derives mainly from the fact that the original concept of incubation has been adapted to fit many different economic areas (Kuratko, LaFollette, 1987) and different types of organizations (Aernoudt,2004). As an example, a very specific term used in the Literature to identify a particular type of incubation program is “Ecosystem Accelerator”, proposed by Gonzalez Uribe and Leatherbee (2017), and refers to a type of accelerator that has the aim of stimulating start-up activity in a focal region.

Based on the different perspectives adopted by the literature, it seems that incubators classification happens on different levels or layers. In particular, the different types of incubators are associated with differences in objectives (Aernoudt, 2004), incubator characteristics (Mian, 2016; Vanderstraeten Matthyssens, 2012), tenant's social aims (Sansone, 2020), and links with external organizations (Becker, Gassman, 2006; Shankara, Shepherdb,2018).

In the following paragraph, I’ll try to build on this knowledge to explicitly summarize all the different kinds of incubators in a modular classification model for incubation and acceleration programs, which I feel could be extremely useful, given the need for building a universal taxonomy around these organizations.

The first layer of this modular model is the program’s characteristics. In particular, we can identify the following types of incubation typologies: physical incubators, virtual incubators, and accelerators. The three different types of programs all have in common the fact that they provide services that are hard to find elsewhere and all have the common objective of providing tenants with the ability to survive from a financial standpoint once they graduate from the program, and possibly grow. In Table 3 every program type is associated with its defining characteristics.

Table 3: based on the program’s characteristics (Mian et al. 2016; Colombo et al. 2001)

<b><i>Program’s typology</i></b>	<b>Defining characteristics</b>
<i>(Physical) Incubator</i>	Provide a portfolio of business-related services to tenants, including co-working space, in exchange for a fee.
<i>Virtual Incubator</i>	Provide a portfolio of business-related services to tenants, non-including physical co-working space, in exchange for a fee.
<i>Accelerator</i>	Provide a portfolio of business-related services to tenants, but is defined by the contemporary existence of a fixed term duration, a cohort model, a graduation day, and the provision of seed capital to tenants.

The attention on business-related services is common among accelerators and incubators, and accelerators can be seen as a particular type of incubators that are defined by their peculiar

organizational model, involving the cohort-based system, the fixed term duration, the provision of seed capital to tenants and a focus on attracting capital to accelerate growth and scale.

Please note that these definitions are coherent with the definitions provided by Mian et al. (2016) and Colombo (2001). The concept of a Virtual Incubator is very interesting, as it allows organizations to provide all the necessary support services without having to provide one of the most expensive and less impactful services, which is the provision of physical space (Michael J. Nowak, Charles E. Grantham, 2000). Moreover, physical proximity to other enterprises is sometimes considered disadvantageous, as it can create tensions regarding privacy and protection of intellectual property and competitive strategies (McAdam M., Marlow S., 2007).

The second layer of the modular taxonomy is related to objectives. It assumes that every typology of incubation program has at least one objective in common, namely the development of start-ups into financially viable autonomous organizations.

Table 4: based on objectives (refined from Arnoudt 2004).

<b><i>Program's typology</i></b>	<b>Defining objective</b>
<i>Ecosystem</i>	Regional Development, objectives like increasing the region's innovative output or region's employment.
<i>Innovative</i>	Entrepreneurial and innovation development focused on highly technological, innovative, or scientific sectors
<i>Community-based</i>	Integration and employment of low-employment categories

This objective classification is rooted in Aernoudt's (2004) taxonomy, where the term "ecosystem" has replaced "economic development", "innovative" has amplified the concept of "technology" and "community-based" has replaced "social". Although, as previously highlighted, incubation programs' objectives can be multiple, this layer is specific to the main, first objective that has caused the start of the program and that continues to shape the program's logic and internal organization. This is especially useful when looked at from a policymaker perspective, that could decide to launch public programs with a clear objective in mind.

These two first layers can be combined to describe specific types of programs, for example, they could describe characteristics of programs like Innovative Virtual Incubators or Ecosystem Accelerators.

Another possible classification is related to the control exercised by other organizations on the incubator. In Table 5, the classification emerges from differences related to external links with other organizations, in particular, the classification highlights whether a program is directly controlled by

another public or private entity. This is especially important, as it directly reflects and influences the objectives of the incubation program.

Table 5: based on links or control from external entities (Report Italian Incubators and Accelerators, SIM 2021; Shankara, Shepherdb, 2018)

<b><i>Program's typology</i></b>	<b>Linked entity</b>
<i>Private</i>	Private program's with no external link or control from other organizations
<i>University</i>	One or multiple universities exercise control over the incubator, which can be either private or public based on the nature of the university
<i>Corporate</i>	The program is supported by a private company
<i>Public</i>	Organizations or programs that are completely controlled by public entities
<i>Public-Private</i>	Organizations or programs that are controlled both by public and private entities

The classification distinguishes between Private, University, Corporate, Public, and Public-Private programs. The distinction between Private, Public, and Public-private reflects if control of the incubator is entirely or partially given to public institutions. This can happen very frequently, especially given how relevant those programs can be in fostering specific public objectives, influencing innovation output, employment, and entrepreneurship. Those impacts, from a policymaker's perspective, are analyzed later.

The distinction between University and Corporate incubators is also very relevant, especially as it translates into very different ways to organize programs, given different objectives. In particular, Corporations are extensively starting to use Corporate Incubators as a way to engage with startups and apply open innovation techniques (Shankara, Shepherdb ,2018). Corporate Incubators, their objectives, and the different types of company incubation programs are analyzed later in this Literature Review.

A fourth classification can be made accordingly to the program's strategic choice of adopting or not a narrower competitive scope, that is the choice of being focused on a specified sector or technology field or adopting a generalist approach, including tenants from a wide variety of areas and sectors. This distinction implies the presence of different strategic approaches and differentiation strategies for incubators and will be analyzed further, especially in the findings of Vanderstraeten Matthysens (2012). This classification layer can be found in table 6 below.

Table 6 Distinction according to competitive scope: Focused and Diversified incubation programs (Vanderstraeten Matthyssens, 2012).

<i>Program's typology</i>	<b>Linked entity</b>
<i>Focused</i>	Focused incubation programs only allow entrance to tenants that are active in a well-specified area or technological sector
<i>Diversified</i>	Diversified incubation programs allow entry to companies from a wide variety of areas and sectors.

The last layer of the classification regards the tenant's social objectives and it corresponds to Sansone's classification in table 2, where incubators are defined as Business, Mixed, and Social based on the percentage of Social Enterprises among their tenants. Discussions regarding the social value of entrepreneurship and Social Enterprises are carried out later in this Literature Review.

The proposed modular classification can describe the different programs attributing the different layers that are relevant in a given context.

Hoping that this overview of the various manifestations of different types of support programs for start-ups will be useful, I will refer to the most generic connotation of the phenomenon with the word Incubator, including all the different programs that were described before.

### 2.3 Incubator's effectiveness and policy implications

Literature has been trying to prove the effectiveness of different types of incubators. The idea of proving the effectiveness of these kinds of programs, trying to measure outcomes and results of tenants but also effects on a given region is extremely important and has deep implications for policymakers, that wish to understand whether these kinds of programs should be fostered with public fundings, and what type of impact they can bring in terms of economic, technical and social development. Indeed, policymakers see incubators as a tool that is capable of initiating and boosting innovation in a target region, or as a way to help the commercialization of research results (Aaboen, 2009).

Colombo and Delmastro (2001) have studied a sample of 45 incubated Italian NTBFs and compared it with a control sample of off-incubator firms and have proven that Italian incubators, have a higher chance to attract a more educated and technically specialized kind of entrepreneurs, and are capable of developing tenants with higher average annual growth rates. Incubated firms were also more likely to engage in formal agreements with other entities, especially universities, and had easier access to public funds.

The rationale for the higher performances of incubated firms is to be found in either the services provided by the programs, the easier access to technical and financial resources, or agglomeration economies. Evidence of the impact of incubators on Italian startups was also found by Martin Lukeš, Maria Cristina Longo, and Jan Zouhar (2019), which showed how incubators in Italy have, in the long run, a positive effect on tenants' sales revenues.

The role of incubators in supporting Technology-based firms is said to be particularly important in the Italian context, which is characterized by entrepreneurial activity mostly in low-tech sectors, with the provision of key inputs (financial resources, technical knowledge) characterized by market failures (Colombo, Delmastro, 2001). According to this study, policymakers should therefore try to facilitate incubation programs given their ability to balance off the market failures that affect the innovative start-up ecosystem in Italy.

In particular, the provision of financial resources to innovative startups in Italy is characterized by severe market failures, Venture Capital funds are not developed enough and banks lack the technical knowledge and the propensity to risk that is needed to effectively distinguish between promising startups and not, causing lack of credit for innovative ventures. As proved recently, some kinds of incubation programs are able to stimulate financing activity from local investors in a given region (Fehder and Hochberg 2014) and can therefore be used to balance out this particular market failure. Another reason for policymakers to directly finance incubators, proposed in the same paper by Colombo and Delmastro, is to be found in the fact that innovative tenants play a crucial role in the economic dynamism of developed economies, proposing radical innovations that directly challenge existing technological paradigms and have the potential to revolutionize industries, opening up new segments and creating new jobs.

Specifically, the study findings related to on-incubator firms can be summarized in the following table.

Table 7: effects of incubators on tenants (Colombo Delmastro, 2001).

<b><i>Factors Considered</i></b>	<b><i>Study Conclusion</i></b>
<i>Founders' characteristics (education and work experience)</i>	Italian incubated startups tend to have founders with better education and work experience.
<i>Firm growth</i>	Incubated firms have higher growth rates compared to non-incubated firms.
<i>Technology adoption</i>	Incubated firms perform better in terms of technology adoption, including advanced technologies and participation in international R&D programs.
<i>Networking and Collaborations</i>	Incubated firms tend to establish more collaborative arrangements, particularly with universities.

<i>Access to Public Subsidies</i>	Incubated firms have easier access to public subsidies.
<i>Innovation output</i>	There is no evidence that incubated firms perform better in terms of innovation output than non-incubated firms.

The main limitation of this Colombo and Delmstro (2001) is that, given the heterogeneity of incubation programs, it's hard to claim that all kinds of incubators can have the same positive effects on the innovation ecosystems. Barbero, Casillas, and Wright (2014) showed for example how different kinds of incubators are associated with different likelihoods of generating different types of innovation. Even if several studies have shown a positive effect of incubators on tenants in terms of job creation (Stockan, Thompson, Mahu, 2015) and tenants' growth (Westhead, Storey, 1997; Colombo, Delmastro, 2001; Lukes et al., 2019), generalizing the statement might be problematic as some studies found positive effects only when incubators provided specific services, like management or entrepreneurial training (Gonzalez-Uribe and Leatherbee, 2017), some others didn't find any evidence that incubation services might be determinant to startup survive or growth (I. Peña, 2004). Given the challenges arising from the heterogeneity of the incubation mechanisms in evaluating incubator's performance (Heckett, Dilts, 2004) research has been trying to focus more and more on the different services provided by incubators and understand if there is an optimal portfolio of services that an incubator program should provide. This aspect is still very relevant and provides opportunities for future research, as one of the main issues in this particular research field is further understanding the incubator's characteristics and building a comprehensive theory (Mian et al. 2016).

An effective incubator must have enough young start-ups with scale-up potential, rotation, a high survival rate of graduates, a positive impact on the creation of entrepreneurial culture, a strong connection with firms, R&D centers, and universities, and finally, a structure facilitating access to capital (Aernoudt, 2004).

However, being an effective incubator doesn't mean being financially independent, as, in 2004, most American incubators couldn't operate without the financial help of public funds. Public subsidy cost was estimated at around 1100\$ for every job created by the incubator, which is very low and provides again another reason for public funding use. (Aernoudt, 2004).

Also in Europe, many government funds, both national and European, directed toward the structural support of the innovation system, are financing business incubators. (Kris Aertsa, Paul Matthyssense, Koen Vandenbempt, 2007).

The effect of incubators on venture performance is also analyzed by Gonzalez-Uribe and Leatherbee (2017) that have made very interesting discoveries by using as a case study the peculiar Ecosystem

Accelerator “Start-up Chile”. One of the hardest things in analyzing an incubator’s performance is that is hard to understand which type of services are the most impactful on tenants’ performances and growth. As suggested by Aernout (2004) an incubator is not simply a shared office with a secretary but should be providing services like hands-on management, access to finance (mainly through links with seed capital funds or business angels), legal advice, operational know-how, and access to new markets. Gonzalez-Uribe and Leatherbee (2017) analyze the importance of providing another service, entrepreneurship schooling.

The peculiarity of the accelerator used as a case study in the paper is that it provides all its services, including co-working space and provision of capital to every tenant, but provides entrepreneurship schooling only to a certain selection of tenants. By taking advantage of this peculiarity, researchers have found out about the different impacts of services on venture performance.

Accelerated firms all outperformed non-accelerated firms (in a 5 years timestamp) in terms of the likelihood of raising capital, a result that is coherent with Colombo-Delmastro findings. However, the most precious contribution relates to the finding that, among the accelerated firms, the ones that received entrepreneurship schooling bundled with the provision of capital and co-working have an increased probability of raising capital of 21% against non-schooled accelerated start-ups. They also average triple the amount of capital raised, double the number of employees, and five times the valuations of non-schooled start-ups.

Gonzalez-Uribe and Leatherbee's (2017) study shows no evidence that the basic services of providing capital and coworking space had a positive effect on new venture performance on their own. These results suggest that entrepreneurial capital, or the skills and resources needed to start and grow nascent businesses, is important for new venture success and that providing entrepreneurial education in addition to basic services may be more effective for ecosystem accelerators that attract early-stage businesses.

The study also tries to justify the fact that basic services alone did not affect start-up performances by claiming that basic services have the only effect of accelerating the natural outcome of start-ups, with high-potential start-ups that survive and grow, and low-potential start-ups that eventually go bankrupt.

Entrepreneurship schooling instead provides the much-needed entrepreneurial capital, including know-how, increase in productivity, enhancement of founder’s capabilities, and access to business and social networks, with a positive effect on tenant’s performances. However, an alternative reason for the increase in performances due to entrepreneurship schooling might reside in the “certification effect”, as schooled start-ups obtained increased exposure and legitimacy that might have helped in

securing more external funds. Studdard (2006) has found how this “certification effect” in the form of “enhanced reputation” is the sole benefit gained by incubated firms.

Something similar to this “certification effect” can be found in the results of Fehder, and Hochberg (2014), analyzed later, that attribute the reason for the increase of funding activity in a given area to the reduction of searching costs for Venture Capitalists, that are more willing to invest given that a tenant is “certificated” from a certain incubation program.

The results of Uribe and Leatherbee might be applicable more in countries and regions that have significantly less entrepreneurial capital, where the absence of entrepreneurial culture might be one of the limiting factors in developing a strong technological start-up ecosystem. For example, the need for entrepreneurial schooling might be higher in European countries rather than in the US, especially in Italy, where the lack of strong entrepreneurial activity and the missing links between providers of capital (Business Angel networks and VCs) and innovative firms is limiting start-up growth (Aernoudt, 2004).

From a policymaker’s perspective, the implications of this study have to be analyzed and applied. Accelerators that propose good entrepreneurial schooling should be fostered more than the ones that are simply providing classic incubator services such as co-working spaces, capital injections, or having links with Venture Capitals and Business Angels networks. Even if all these services are useful and alleviate start-ups from the burden of having to look elsewhere for the provision of such services, not having adequate entrepreneurial capital might be the number one reason for low potential start-ups' waste of resources.

It must also be said that it is not obvious that the same conclusions can be applied both to Incubators and Accelerators, as the differences between the two types of programs are extremely relevant as highlighted in Fehder, Hochberg (2014).

Given the difficulties for policymakers in discerning between incubators and accelerators and in identifying which program is providing qualitatively good entrepreneurial schooling, it might be appropriate for nations to foster entrepreneurial education outside these programs, in schools and universities.

One extremely important contribution is represented by Fehder and Hochberg (2014), that analyzed the effects of the presence of an acceleration program on the entrepreneurial ecosystem of a specific region. Given that one of the purposes of incubation and acceleration programs is to increase the economic, social, and innovative output of a target region, it is necessary to understand whether a specific program has a true impact on the target regional ecosystem. Note that this line of reasoning is different from other studies that were analyzed in this same thesis, as it proposes to capture the

impact of a program not only on the accelerated start-ups but also on the ecosystem as a whole, considering also the effects on non-accelerated start-ups in the same region.

The study, which analyzed a sample of 58 accelerators in 38 different MSA (Metropolitan Statistical Areas), found that the arrival of an accelerator in a given region is associated with significant increases in the number of seed and early-stage venture capital (VC) deals and the total dollar amount of seed and early stage funding in the region.

Specifically, the model analysis showed that the presence of an accelerator leads to a 104% annual increase in the number of deals and an 1830% increase in the total dollar amount of seed and early-stage funding. There was also a 97% increase in the number of distinct investors in the region (Fehder and Hochberg 2014).

The findings also suggest that the presence of an accelerator benefits the general regional ecosystem, with non-accelerated start-ups that are capable of securing more funding.

The effects of accelerators on funding activity appear to be greater in industries such as software and IT services. In these industries, funding events for startups significantly increase following the entry of an accelerator. In contrast, early-stage funding for biotechnology startups does not show a significant increase.

Much of the increase in funding activity comes from local investors in the same target region, showing that an accelerator can act as a sort of catalyst, drawing attention from latent local forces and can stimulate the creation of entrepreneurial clusters. The rationale behind these results might reside in the ability of accelerators in lowering the search and sort cost of Venture Capital Funds, which can more easily find promising investment opportunities and are more incentivized in investing more capital.

The authors of the study are particularly careful in generalizing these results also to classic incubation programs, which are considered not good enough in catalyzing the attention of the VC forces. Given the characteristics of both programs, accelerators are seen as a more organized and effective way for VCs to discover and invest in promising startups, with incubators seen as primarily real estate ventures offering coworking space and professional services for a fee, not strongly incentivized in making the incubated start-up grow and scale-up.

To summarise the main implications of the previous studies from a policymaker point of view, it seems that public heads should be extremely interested in understanding the mechanisms behind incubation processes and should try to incentivize the formation of incubators with certain specific characteristics, especially in countries like Italy, with the aim of developing a strong and vibrant start-up ecosystem. All the reasons for policymakers to foster incubation programs with public funds can

be found in table 8. Among the various types of incubators, accelerators might be a better choice, especially if the objective is stimulating VC deals.

Table 8: Reasons to foster incubation with public funds (from all the previously analyzed studies)

<b>Reasons for Investment</b>	<b>Explanation</b>
<i>Attracting more educated and technically specialized entrepreneurs</i>	Incubators have a higher chance of attracting this type of entrepreneur, resulting in tenants with higher average annual growth rates.
<i>Promoting university technology transfer</i>	Incubated firms are more likely to engage in formal agreements with other entities, specifically universities, helping in the transfer of technology and launching innovative products in the market.
<i>Balancing market failures in access to financial and technical resources</i>	Incubators can balance off market failures in the innovative startup ecosystem in Italy by providing key inputs such as financial and technical resources, and simplifying access to public funds.
<i>Promoting financing activity from local investors</i>	Incubation programs can stimulate financing activity from local investors in a given region, with positive impacts, for a given target region, in terms of economic and technological development
<i>Creating economic dynamism and job opportunities</i>	Innovative tenants play a crucial role in economic dynamism of developed economies, proposing radical innovations that directly challenge existing technological paradigms and have the potential to revolutionize industries, opening up new segments and creating new jobs.
<i>Investing in Entrepreneurship and creating entrepreneurial capital</i>	Incubators are able to create and distribute entrepreneurial capital, through schooling and networking, which is crucial for startups' performances.

## 2.4 Incubator’s competitive scope and services.

Incubation programs, as seen in the section of this literature review regarding incubators' taxonomy, are extremely heterogeneous in terms of objectives and characteristics. However, all the different types of incubators provide shared services to their tenants (Mian et al. 2016; Vanderstraeten 2012) including office space, a pool of shared support services, professional business support or advice, and internal/external network provision.

Vanderstraeten and Matthyssens (2012) are among the researchers that focused on the provision of these services and tried to link different service offerings to the incubator’s competitive scope, through qualitative research on a set of nonprofit economic development incubators (Ecosystem Incubators according to our taxonomy) in Belgium between 2009 and 2010. Incubators’ classification according to their competitive scope can be found in table 6 which distinguishes between focused incubators, those programs that allow entrance only to startups from a well-specified area or

technological field, and diversified incubators, allowing entrance to tenants independently from the startup field or sector.

The authors argue that this choice is one of the main sources of differentiation for incubation programs and that, according to competitive theory, internal and external strategic fit with this scope-related choice is crucial, as it allows to achieve a competitive advantage against other incubators and be able to provide enhanced value to tenants.

This is extremely important because incubators are not the only type of organization providing the same set of services. A successful incubator must therefore adopt a competitive framework, as it has to beat competition coming from other incubators and accelerators, logistic infrastructure providers, nonprofit advice organizations, for-profit advice organizations, and finance providers.

The two main theories regarding competitive advantage are the Industrial Organization theory, which, adopting an external viewpoint, sees competitive advantage as a result of a successful strategic market positioning coming from the analysis of the external market situation, and the Resource Based View and Dynamic Capabilities theories (Newbert, Gopalakrishnan, Kirchoff, 2008), which, adopting an internal viewpoint, see competitive advantage as the result of the possession and exploitation of Valuable, Rare, Inimitable and Non-Substitutable resources (Barney, Clark, 2007; Li and Tsai, 2009). Adopting a strategic market positioning viewpoint, Incubators can choose their competitive scope by choosing sectors and areas of tenants that they are willing to incubate (Harri Haapasalo, Tuomas Ekholm, 2004), and should therefore adopt characteristics and provide services that align the incubator, both internally and externally, with the chosen competitive position. This alignment can only be found externally by analyzing the tenant's service expectation (which varies depending on the incubator's choice of being focused or diversified) and internally by structuring an appropriate selection mechanism, an appropriate internal resource use, and a good monitoring system.

The strategic approach of focused incubators is defined as a "specialist" approach, while the strategic stance of diversified incubators is defined as a "generalist" approach.

The main findings of Vanderstraeten and Matthyssens (2012) suggest that, among the different services provided by focused and diversified incubators, some are failures preventers, meaning that these services are expected from tenants, and not providing them would result in tenants looking for other organizations to fulfill their needs, and others are success producers, meaning that the provision of these services might lead to competitive advantage. In the following tables (9 and 10) the main services provided from respectively diversified and focused incubators are summarised and an indication is provided based on the distinction between failure preventers and success providers services.

Table 9: Diversified incubators services (from Vanderstraeten and Matthyssens, 2012)

<i>Service</i>	<b>Description</b>	<b>Failure Preventers/Success Providers</b>
<i>Basic secretarial functions</i>	Reception, secretary, telephone, postal delivery	Failure Preventers
<i>Logistic equipment</i>	Office space, Meeting rooms, internet connection	Failure Preventers
<i>Business support services</i>	Focusing on operational business activities and partners	Failure Preventers
<i>Access to high-quality partners</i>	Access to VC, bookkeepers and lawyers	Failure Preventers
<i>Advanced secretarial functions</i>	Filing minutes, organizing documents and agenda	Success Provider
<i>On-site operational business knowledge</i>	On-site bookkeeping, human resources management	Success Provider
<i>Personal network connection related to the company's support activity</i>	Managers and resources personal connections with lawyers, VC and other professionals	Success Provider

Table 10: Focused incubators services (from Vanderstraeten and Matthyssens, 2012)

<i>Service</i>	<b>Description</b>	<b>Failure Preventers/Success Providers</b>
<i>Basic secretarial functions</i>	Reception, secretary, telephone, postal delivery	Failure Preventers
<i>Logistic equipment and sector-specific infrastructure</i>	Office space, Meeting rooms, internet connection; technology-related infrastructure	Failure Preventers
<i>Business support services</i>	Focusing on operational business activities and partners and sector-specific business support services	Failure Preventers
<i>Access to high-quality sector-related partners</i>	Access to organizations and partners active in the same sector or field	Failure Preventers
<i>On-site sector-specific business knowledge</i>	On-site knowledge centers	Success Provider
<i>Personal network connection related to the company's core business</i>	Managers and resources personal connections with organizations active in the same sector	Success Provider

It's interesting to notice that some basic services, like basic secretarial functions and logistic equipment, are expected to be provided both from diversified and focused incubators. However, business support services and networking are much more related to support activities in the case of

diversified incubators and are more related to the company's core field or sector in the case of focused incubators.

This is evidence of the need for the two types of incubators to align their services according to their strategic choice and the different expectations of the tenants. The types of startups that choose one or the other type of incubator have profoundly diverse needs.

In particular, tenants in focused incubators prefer to be located in proximity to similar organizations and take advantage of the focused scope to improve their core business activities. They also want to use the incubator's image and expertise in a given sector to develop faster and gain investors' credibility.

Tenants choosing diversified incubators prefer to be located in proximity to organizations active in different fields as they are looking for partners and help to develop their operational business support activities.

Successful incubators must also achieve internal fit to their strategic stance. In the aspect of tenant selection, both specialist and generalist incubators select companies that are more likely to develop into successful businesses, but specialists analyze whether the potential tenant can grow in the particular market or sector focusing on the technology or product feasibility. Generalist decisions focus more on financial, personal, or team aspects.

The findings reported by this paper can be very important for new incubators looking to build an effective portfolio of services or for existing incubators that are undergoing a radical strategic change and wish to understand which services are more likely to be appreciated by the type of tenants that they are wishing to attract.

The choice of the services to provide is not only linked to strategic choices but is also a manifestation of the different perspectives related to the incubator's value proposition, and usually evolves through time in a generational way (Johan Bruneel, Tiago Ratinho, Bart Clarysse, Aard Groen 2011), meaning that the choice of a given portfolio of services is usually influenced by the time in which the incubator is founded, and the ability to evolve these services might be different for different typologies of incubators.

Bruneel et al. (2011) suggested that each generation of incubators added particular services to their service portfolio, in such a way as to answer the growing needs of tenants in a given historic period. In particular, first-generation incubators (1950-1980) focused on the provision of shared spaces and services to take advantage of economies of scale while second-generation incubators (1980-1995) added mentorship and coaching as a service in an effort to accelerate the slow and gradual process of

developing routines and capabilities through experimental learning (Dosi, G., Nelson, R.R., Winter, S.G., 2000). Third-generation incubators (1995- ongoing) added access to technological, professional, and financial networks in the service pool, in the conviction, also supported by scientific research (McAdam and McAdam, 2008) that access to external networks is a critical aspect of tenants development, in that it eases acquiring external resources and building legitimacy faster.

## **2.5 Accelerating Corporate Entrepreneurship: Implications for the Corporate world.**

Incubators and accelerator programs have been increasingly used by big Corporations to engage with startups, especially in the form of Corporate Accelerators. Corporate incubators are seen as a form of R&D management for high-tech companies, hatching new businesses while at the same time enhancing the corporation technology's base (Barbara Becker, Oliver Gassmann, 2006).

Raj K. Shankara and Dean A. Shepherd (2018) have contributed to the study of this particular type of accelerator by analyzing the benefits for corporations that use this instrument of start-up engagement and tried to inductively create a theory of Corporate Accelerators, using data coming from 4 different Corporate Accelerators collected in 11 months.

One of the main rationales behind the use of Corporate Accelerators is that Corporations that are struggling with entrepreneurial or innovative activity can benefit from engaging with startups in this particular way. One objective of the study is to find out whether this rationale is true and identify the different positive impacts on established firms' innovative output.

Existing corporations usually struggle with innovative activity because of the trade-off arising between the choice of doing entrepreneurship and innovation (opportunity seeking) and the one of doing strategic management (advantage seeking). This is also justified by the difficulties that large established firms face in fostering radical innovation (Christensen, 1997), due, for example, to organizational inertia. (Hannan and Freeman 1984). Corporations willing to invest in innovative activities might find investing exclusively in internal entrepreneurship a very slow and expansive process, and the "venturing strategy " has produced mixed results, given that the engagement with high-potential ventures comes often very late, and gets more expensive over time.

Corporate Accelerators (CA), defined as company-supported, limited-duration programs supporting a cohort of start-ups via mentoring, education, and use of company resources are different both from Internal Corporate Venturing activities and External Corporate Venturing activities.

In CA programs all ventures are outside the corporate boundaries, differentiating them from Internal Corporate Venturing activities, and their goal is not to create new external ventures, as those ventures already exist. Typically, CAs do not involve any capital exchange and do not require contracts between tenants and the corporation, or a common goal.

Raj K. Shankara and Dean A. Shepherd (2018) try to answer the questions of how corporate benefits from these kinds of programs, which are the different types of Corporate Accelerators, and which factors influence the emergence of one or another type of Corporate Accelerator. It should be said that Corporate Accelerators, even if are extremely similar to other accelerators in terms of services provided (providing access to external resources, markets, funding, training, mentorship, and professional support services) are different in terms of objectives and outcomes. One of the main reasons for a big corporation to create, back, and run Corporate Accelerators is to explore and scout new technologies and innovations early, in order to detect potentially disruptive changes in their industries and markets.

The study distinguishes between two very different types of Corporate Accelerators, those accelerating strategic fit and those accelerating venture emergence.

The first approach involves identifying ventures that have some level of strategic fit with the corporation's existing businesses and that could potentially solve problems that are internal to some company's business unit, or have some technology that could potentially disrupt the corporation's business. The second approach involves identifying early-stage startups that have the potential to be disruptive, not necessarily in a field that is related to the company, and providing them with resources such as mentors, investors, and customers to support their growth and development.

The former is more related to corporate strategic learning and focuses on ventures that solve problems related to the parent corporation's business units. The latter focus on helping startups grow and then making an exit or an acquisition.

The type of corporate acceleration can vary depending on the CA's strategic posture and investment time horizon. CAs that have an adapting posture and a short to medium-term investment time horizon (accelerating strategic fit) focus on speed and early validation testing, while those with a reserving the right-to-play posture and a long-term investment time horizon (accelerating venture emergence) use valuations metrics such as startups' portfolio valuation and the number of exits.

The identification of potential ventures to accelerate can also differ depending on the type of CA. CAs that focus on strategic fit tend to scout for specific ventures and have employees and senior corporate leaders involved in the selection process, while those that focus on venture emergence use product market fit as a key selection criterion and have experienced entrepreneurs and investors in the selection jury.

The main differences are summarized in Table 11 below.

Table 11: Different Corporate Accelerators (Raj K. Shankara and Dean A. Shepherd 2018).

	<b>Accelerating strategic fit</b>	<b>Accelerating venture emergence</b>
<i>Strategic posture</i>	Adapting	Reserving the right to play
<i>Investment time horizon</i>	Short to medium term	Long term
<i>Focus</i>	Nurturing innovation and emergence of solutions related to business units' specific problems.	Nurturing high potential firms, making them grow with the objective of making an exit or acquiring them in the future.
<i>Venture identification</i>	Specific ventures, scouting by employees and senior corporate leaders	Broad messaging, product market fit as key selection criteria, experienced entrepreneurs and investors in the selection jury
<i>Equity exchange</i>	No	Yes (in some cases)
<i>Testing solutions</i>	Inside the corporation's business units	Inside and outside the corporation, testing with corporation clients.

Overall the findings suggest that Corporate Accelerator programs can be a good way for corporations to engage with entrepreneurial ventures and enhance their entrepreneurial capabilities. Depending on the particular objective, the strategic posture, and the investment time horizon corporations should choose one of the two types of corporate acceleration and should therefore make coherent choices in building the right management structure and involving the right type of human resources.

## 2.6 Entrepreneurship and Blended Value: Social impact and Social Incubators

Entrepreneurship is universally recognized as an engine of economic and technological development, and, as seen in Uribe and Leatherbee (2017), has a huge impact on a start-up's ability to grow and scale. But the impact of entrepreneurship on society is not always considered positive or productive. Dysfunctional forms of entrepreneurial activity can have massive negative impacts on society (Baumol, 1996), mainly because entrepreneurship can take an unproductive form (Shane, 2009) or, even take informal forms and is associated with illegal activities (Zahara, Pati, Zaho, 2013).

From a social point of view, entrepreneurship is believed to have an intrinsic “social multiplier”, as it produces financial wealth that fuels the creation of additional social and economic activities, in

particular, entrepreneurial activity is associated with the building or improvement of infrastructure that benefits other entrepreneurial activities, the development of business relationships and the creation of “role models” of entrepreneurship, the creation of entrepreneurial knowledge, and can incentivize employee spin-offs. The higher the investment of society in entrepreneurship, the higher the entrepreneurship social multiplier (Shaker A. Zahra and Mike Wright, 2016).

As suggested by Zahra and Wright (2016) the social value of entrepreneurial activity should be re-thought, and the focus should be shifted from the simple creation of economic value towards the creation of the so-called “blended value”, seen as a balance between gaining economic wealth and enhancing societal wealth (Nicholls, 2009).

Historically dysfunctional forms of entrepreneurship have happened in different forms such as:

1. Resisting technological change: using patents and company acquisitions to intentionally slow down innovation and technological change with the objective of retaining a privileged position.
2. Controlling and abusing power: abuse of a dominant wealth position to lobby and collude with political forces through the use of bribing.
3. Abusive use of natural resources: in the past entrepreneurs have contributed to misusing natural resources and public soil, pollution. However, the growing interest of entrepreneurs in sustainability issues could bring positive impacts in the field.
4. Hazardous work environment: Entrepreneurial companies can be extremely stressful environments for workers who might be forced to work long hours.

In order to understand Zahra and Wright's reasoning and methods to achieve blended value, it is important to specify some of the characteristics of entrepreneurship when it relates to society as a whole. The main questions are answered in Table 12 below.

Table 12: Understanding entrepreneurship's impact on society (from Zahra and Wright, 2016)

<b>Topic</b>	<b>Description</b>
<i>Who does entrepreneurship involve?</i>	Growing variety of stakeholders including the entrepreneur, institutions, other companies, and multiple stakeholders with different interests.
<i>What does entrepreneurial behavior involve?</i>	Concerns the activities of entrepreneurs which may be productive, unproductive, or dysfunctional.
<i>What form does entrepreneurship take?</i>	Both formal forms (startups, spin-offs, corporate entrepreneurship) and informal forms of entrepreneurship, sometimes illicit or illegal.
<i>Where is the impact of entrepreneurship felt?</i>	Impact on society, GDP, macro economics, social and environmental problems.
<i>How is the impact measured?</i>	Measurement of growth and financial performance, measures of social impact such as community development, happiness, social cohesion.

In order to switch the concept of entrepreneurship from an engine of simple economic and technological growth to a way to achieve blended value, the author suggests 5 pillars of social entrepreneurship that are summed up in the table below.

Table 13: 5 Pillars of Social Entrepreneurship (from Zahra and Wright, 2016)

<b>Pillar</b>	<b>Description</b>
1	Linking entrepreneurial efforts to other initiatives that strive to improve the quality of life and address wealth inequality among stakeholders
2	Finding ways to mitigate the negative effects of entrepreneurial activities on individuals, families, communities, and society
3	Re-examining entrepreneurship as a subject of academic study
4	Acknowledging social multiplier or the potential for entrepreneurship to create new opportunities and firms with economic, social, or mixed objectives
5	Seeking to balance financial, social, and environmental wealth for sustainable development at the organizational level, achieving blended value.

Social Entrepreneurship, with a focus on the creation and development of ventures centered around solving societal problems (poverty, health care, energy, private education, water purification) is one of the ways that can be used to achieve blended value. However, since the entrepreneurial activity is not limited to startups and new ventures, but is also related to established companies, two other ways of achieving blended value in established firms are analyzed: Corporate Social Responsibility programs and Bottom of the Pyramid techniques.

Corporate Social Responsibility programs represent those companies' efforts, investments, and activities that are aimed at improving relationships with stakeholders like customers, communities, or investors. Zahara and Wright critique the scope of these programs because, even if they are good to build a brand and company reputation, they are often too limited. CSR programs do not have any autonomy over the company's main profit goal, and there is often no relationship between corporate governance and CSR programs (Brammer and Pavelin,2013). A shift is suggested in developing programs that can incentivize the formation of corporate or independent social entrepreneurial activities, which might have a bigger impact on the proposed objectives of Corporate Social Responsibility programs.

Bottom of the Pyramid approach refers to addressing the needs of a group of customers that lives in poverty conditions (George, G., McGahan, A.M. and Prabhu, J. 2012), through collaborations with local organizations, and social and not-for-profit ventures.

Even if BOP approaches are seen as a more convincing approach to addressing social needs, the level of autonomy of these programs is significantly less than the one of Social Entrepreneurship. SE has

in fact substantial equality and balance between the profit and social goal (Zahra, Rawhauser et al., 2008) with the highest level of autonomy.

As the focus of entrepreneurship shifts from creating exclusively economic value towards a more balanced vision of generating social and environmental health, more and more start-ups will tend to focus their efforts on bringing a positive social impact.

The perspective of the social entrepreneur is fundamentally different, as the approach towards society shifts from “do not harm” to “do good”.

There are some forms of organizations that consider the creation of “blended value”, or the achievement of a balance between the profit goal and the achievement of social good as their main mission. Social Enterprises are pursuing the double objective of being financially sustainable and having a social purpose, not fitting into any of the sector categories of private, public, and not-for-profit organizations (Bob Doherty, Helen Haugh, and Fergus Lyon, 2014). Social Enterprises are, therefore, an example of a hybrid organizational form, born by bridging the different institutional fields, thanks to the work of entrepreneurs that are combining the logics of private, public, and not-for-profit organizations in order to develop a new institutionally hybrid logic (Paul Tracey, Nelson Phillips, Owen Jarvis, 2010).

In Doherty et al. (2014) a systematic review of this particular organizational form is performed, allowing to conceptualize Social Enterprises, understanding of the duality of the missions that come from the hybrid model adopted, and analyze some of the main tensions that arise due to the pursuit of both economic and social goals.

The paper stresses that Social Enterprises are hybrid organizations with different characteristics coming from all 3 sector categories of organizations, private, public, and not-for-profit. To better understand Social Enterprise, the main differences among the organizations are summarized in Table 14.

Table 14: Organization categories (from Doherty et al. 2014).

<b>Category</b>	<b>Description</b>	<b>Objective</b>	<b>Ownership</b>	<b>Governance</b>	<b>Revenue/Resources</b>
<i>Private</i>	Guided by market forces	Maximizing financial returns	Shareholders	Share ownership	Sales, fees
<i>Public</i>	Guided by principles of public benefit	Specified and of public interest	State and citizens	Often state representatives	Taxation
<i>Non-profit</i>	Guided by social principles and a purely social mission	Pursue socio-environmental goals	Members of the organization	Representatives elected from organization members	Membership fees, donations, legacies
<i>Social Enterprise</i>	Combination of private, public, and non-profit characteristics	Achieving financial sustainability and social purpose at the same time	Shareholders	Complex governance mechanisms involving different stakeholders	Both from commercial activity and philanthropic donations

Social Enterprises are characterized by the presence of a revenue model coming from commercial activity and the pursuit of a social goal. Some typical social goals could be reducing poverty, inequality, homelessness, carbon emissions, and unemployment of certain categories of people.

The presence of some kind of revenue model based on commercial activity is what makes social enterprises different from non-profit organizations, however often Social Enterprises are keen to accept donations and their resources are coming both from commercial activities and philanthropic donations. In Shaw and Carter (2007) no interviewed social entrepreneur identified “profitability” as a key objective, while they declared their willingness to answer unmet social needs by also generating income and turnover.

Doherty et al. (2014) underline how the hybridity of this type of organization is responsible for the creation of managerial tensions, as often, the pursuit of commercial opportunities and investing in the company’s social goal are placed in a trade-off position. The dual mission of such organizations might lead to the so-called “mission drift”, with organizations implicitly or explicitly giving up on reaching their main social objective because of the commercial goal.

SE’s social mission is a source of legitimacy for the organization, and can and is leveraged to attract capital and investments, coming both from philanthropic donations and more traditional investors, often through Social Investment Funds. This type of investor is willing to sacrifice financial returns in exchange for higher “Social Return” on Investment.

This source of legitimacy is often used to attract not only “ethical” investors but also “ethical customers”, which are a type of customer that is deeply touched or moved by the social mission of the company, so much that he is willing to buy company’s products over competitors ones.

The same legitimacy is very important also when this type of organization has to find employees, as often leads to an increased recruitment capacity for individuals that are motivated to pursue the company's social goal, and can attract very valuable volunteers, especially when certain skills are lacking inside the organization and acquiring them through employment contracts is too expensive. However, the tensions arising from the duality of this organization type, generate the need for complex organizational and control structures, strong enough to resist the urge of “mission drifting”, and effectively focus on the social objective.

The strength of this type of organization and the possible advantages in securing capital, customers, and skilled employees reside in the legitimacy of the social goal, meaning that, if the organization was to strive further and further from the original social goal because of the tensions arising among stakeholders, it would mean a loss in legitimacy, with detrimental effects for the group of stakeholders that believe in the organization because of its positive social impact.

We can summarize the highlighted advantages and risks of this organization's type in Table 15.

Table 15: Advantages and risks of Social Enterprises (Doherty et al. (2014))

<b>ADVANTAGES</b>	<b>RISKS</b>
Attract capital and investments from both philanthropic donations and traditional investors	Managerial tensions due to the hybridity of the organization and the trade-off between commercial opportunities and social goals
Potential for attracting “ethical investors” willing to achieve “Social Return on Investment”	Risk of "mission drift", where organizations may implicitly or explicitly give up on reaching their main social objective because of commercial goals
Attract "ethical" customers	Loss of legitimacy if the organization strays further from the original social goal, with detrimental effects on stakeholders who believe in the organization because of its positive social impact.
Increase recruitment capacity for individuals motivated by the company's social goal	
Attract valuable volunteers to fight skill gap in the organization	

James Phills, Kriss Deiglmeier, and Dale T. Miller (2008) propose an interesting approach to viewing and analyzing social change, by emphasizing the concept of Social Innovation as a way to

move past the concept of Social Entrepreneurship and Social Enterprises that was introduced previously. The main thesis is that the concept of Social Innovation could be a better way to understand and, as a consequence, create Social Value. As the authors underline, understanding social change through Innovation lenses has the advantage of being agnostic about the source of the Social Value, which could come from businesses, nonprofits, or the government.

The proposed definition of Social Innovation is “A novel solution to a social problem that is more effective, efficient, sustainable, or just than existing solutions and for which the value created accrues primarily to society as a whole rather than private individuals.”

This definition of Social Innovation purposely doesn't refer to the classification of Radical and Incremental innovation (Ettlie, Bridges, and O'Keefe, 1984), which is seen by the authors as too much subjective and useless to the discussion regarding Social Innovation. It also purposely avoids linking innovation with the concept of diffusion, because, even if many scholars define something as innovation only when it achieves diffusion and traction, there are examples of unsuccessful diffusion of an effective innovation (E.M. Rogers, 2003). The reason why the concept of diffusion is put apart is that, especially in the context of Social activity and social change, there might be a tremendous amount of reasons why a Social Innovation does not reach diffusion, including factors that are external to the innovation itself.

The first part of the definition is derived from the concept of Innovation, analyzed both as the process of creating innovative products, services, methods, or models and as the outcome itself of the innovation process, manifesting itself in innovative goods, features, or methods. To define something as an innovation, it should meet 2 criteria: novelty and improvement.

In particular, the concept of Social Innovation and its definition emphasizes the different ways in which innovation can represent an improvement, not just in the classical sense of being more efficient or effective in solving a given problem, but also in being more sustainable or just than an existing solution.

The second part of the definition relates to the concept of “social problem” and “social value”. In order to understand Social Innovation, the concept of “Social” should be clear, however, there is confusion in definitions and scholars have been referring to multiple things with the same term, including social motivations or intentions of entrepreneurial activity, the social sector as a legal category, social problems, and social impact or Value.

One of the ways that the term "social" is used is to describe the intention or motivation of the innovator or entrepreneur, for example, in Gregory Dees's (2011) definition of social entrepreneurship as "adopting a mission to create and sustain social value (not just private value)". Similarly, Christensen et al. (2006) view social change as the "primary objective" rather than a "largely unintended ...

byproduct". However, motivations can't be directly measured and observed, and introduce too much subjectivity and bias in defining what is social and what is not.

Another way that the term "social" is used is to describe a class of problems on which there is a large consensus about their "social" aspects, like justice, fairness, environmental preservation, improved health, arts and culture, and education. This is the way the term is used in the definition of Social Innovation, referring to social problems.

A final way that people use the word "social" is to describe a kind of value that is distinct from financial or economic value, for example, defining Social Value as the creation of benefits or reductions of costs for society through efforts to address social needs and problems (Miller et al., 2008).

Miller et al. (2008) solve the dispute about what should be considered social in the definition by claiming that Social Innovation creates value that accrues primarily to society as a whole rather than private individuals. This definition excludes the activities that create both Social Value and Economic Value with economic value destined mostly for private individuals. An example, it excludes innovation happening in the pharmaceutical industry, which creates Social Value because of the improvement of general health, but creates mainly Economic Value for shareholders and does not assure the coverage of medicines to the group of people who are not able to buy them.

This definition is not inconsistent with the previously analyzed concept of Social Entrepreneurship as an engine of Blended Value proposed by Zahara et al. (2016) and of Social Enterprises (Doherty 2014) as hybrid organizations pursuing the double objective of achieving commercial success together with a predefined social goal. However, the concept of Social Innovation is agnostic with respect to the actors pursuing Social Change and does not exclude the role of Government and non-profits in creating Social Value.

The paper does indeed claim that it is the cross-sector attention to the creation of Social Value that could be one of the main reasons behind the increasing number of Social Innovations. With the ongoing devolution of public services to the private and nonprofit sectors, the role of Government has shifted from a controlling and antagonistical role to a more supportive role, partnering with the private and the non-profit sector to develop Social Innovation. With the increased attention of classic businesses toward Social Impact, and of the nonprofit sector toward commercial and business activities, the boundaries between the 3 sectors have progressively been eroded, and this erosion has allowed for increased collaboration in tackling social problems.

The three factors contributing to encouraging the happening of Social Innovation at the crossroad of the Private, Public and Non-Profit sectors are the free exchange of ideas and values between sectors, the shifts in respective roles and relationships, and the integration of private capital with public and

philanthropic support. Thanks to these mechanisms many Social Innovations like SRI (Social Responsible Investment), Emission Trading, and BOT (Bottom Of the Pyramid) techniques arose and created significant Social Value.

The same erosion of sector boundaries might be one of the reasons behind the establishment of Social Enterprises, which, as previously explained, can be seen as hybrid forms of organization, with characteristics coming from both private and nonprofit sectors.

## **2.7 Social incubators and their results**

After having extensively analyzed the concept of Blended Value, Social Entrepreneurship, and Social Innovation, some emphasis can and should be posed on a particular type of incubator that mostly supports Social Enterprises or startups that have both socio-environmental and financial goals. Questions arise about whether Social Incubators are as efficient as other types of incubators in enhancing the economic and financial performances of their tenants, and if they are effective in helping social startups in achieving their social goals.

In Sansone et al. (2020) Social Incubators are defined as Incubators that support more than 50% of tenants that have the aim of introducing a social impact. The paper defines and analyzes incubators through a survey of 162 incubators in Italy and data from 88 responses. Incubators were classified according to Sansone's taxonomy (Table 2) as Business, Mixed, and Social incubators. The impact of these different types on the growth of their tenants was analyzed through regression techniques.

The results showed that social incubators are as efficient as other incubators in terms of tenants' economic growth, despite focusing on start-ups that do not solely pursue economic objectives. The paper also notes that social incubators place a greater emphasis on services such as measuring social impact and training/consulting on business ethics and corporate social responsibility.

It concludes by stating that policymakers can foster the creation of social incubators to support social entrepreneurship and the creation of social enterprises. Indeed, social incubators can become a source of knowledge related to Social Innovation, according to the definition by Phills et al (2008).

Building on the concept of traditional incubators that can and should become hubs for creating and spreading entrepreneurial capital in a given region, as underlined previously in this thesis, Social Incubator could and should become hubs for building and spreading Social Entrepreneurial Capital, that should be defined as the knowledge, resources, and skills needed to start and grow a Social Enterprise, with emphasis on the social goal and on the knowledge needed to build organizations that can stick to their social mission and avoid "mission drifting".

## *Literature Review*

Providing this knowledge might be as important as providing entrepreneurial schooling for traditional startups (Uribe and Leatherbee, 2017) and could have an impact on the social performances of tenants. Analyzing whether Social Incubators can improve the social performances of incubated startups could be an interesting future research theme.

### **3. Methodology**

In the following part of this Thesis, the results of a data analysis work made in collaboration with SIM (Social Innovation Monitor) are presented. This analysis work has led to the redaction of the Annual Report of Italian Incubators and Accelerators.

SIM is a collective of professors and researchers from different Italian universities, that want to contribute to scientific research in fields that are related to innovation, entrepreneurship, and the social impact of entrepreneurial organizations. Among the other SIM's objectives, is the creation of a community and the identification of best practices through data collection and analysis of phenomena related to these important topics.

The Annual Report of Italian Incubators and Accelerators is one of the 3 reports that are redacted, together with a report related to Business Angels in Italy and Social Startups.

The report is drawn up every year since 2017 and it represents a snapshot of the Italian incubators ecosystem, representing a source of valuable information to different types of stakeholders like incubators, entrepreneurs, investors, and policymakers. The data that was analyzed come from a sample of 94 incubators that have answered a survey, and was integrated with financial and organizational data coming from the AIDA database. The report's main objectives are the following:

1. To realize an updated mapping of incubation and acceleration activities in Italy, analyzing regional differences in the presence of such organizations, to present a quantification of the number and different types of incubation activities, based on specific classifications and characteristics.
2. To analyze the differences in business models and services offered and the difference in typology and characteristics
3. To present and highlight the peculiarities and challenges of Social Incubators in developing Social Enterprises in Italy
4. To verify the effectiveness of programs and their impact on tenants.

The report's objectives are grounded in the overall Literature objectives and try to answer emerging literature questions or validate theoretical statements with an experimental and practical approach. In particular, as evidenced in the Literature Review, there is still a lack of research regarding the analysis of different types of incubators and their peculiarities (Mian, 2016), and there is room to make advanced research on the different business models of incubators and the relative importance of the services that are provided to tenants (Vanderstraeten and Matthyssens 2012). Particularly important

is the research on Social Incubators, their effectiveness, and the differences from other types of incubators.

In the following paragraphs, the research methodology used to collect and analyze data regarding a sample of 94 Italian incubators and accelerators is presented, in particular referring to 3 different phases of the research activity, which are the scouting for the identified incubator's population, the data gathering and integration process and, finally, the data analysis, which results are presented in this Thesis in the part related to Results and the Discussion.

### **3.1 Identifying and selecting Incubators**

The first phase of the work regards the identification of Italian Incubators to include in the Population. This is a delicate phase in which different decisions need to be taken since, as broadly underlined in the literature review, there is not a clear definition of Incubation activities and there are many different types of organizations providing overlapping services to the ones provided by incubators and accelerators. The following assumptions and restrictions were made in the selection process:

The definition used to identify an incubator is the one proposed by Arneodt (2004), according to which an incubator is an organization that actively supports the creation and development process of new innovative businesses through a series of services and resources offered directly and through a network of partners.

The following have been excluded from the population:

- Organizations that are solely offering entrepreneurial training, such as those offered by individuals or groups of university professors as part of academic or dissemination activities, since they lack the prerequisite of being organizations and their objectives are mainly educational.
- Prizes/grants/calls for startups that do not include incubation programs and those that outsource the incubation process to another existing incubator in the analysis were excluded. For example, if a company, municipality, or other organization launches a call/grant for startups and one of the prizes includes an incubation program managed independently by incubator X, only incubator X (is considered in the research and not the company, municipality, or other organization that launched the call/grant.

No distinction is made between incubators and accelerators since, even if there are important differences in characteristics and objectives of the two types of programs as highlighted in the Literature Review, there is no agreement on the definitions and confusion might arise between

incubation programs, that are unaware of the definitions and characteristics that were assigned in the proposed taxonomy.

## **3.2 Data cleaning**

Given that a large part of the selection and identification work has been made in the previous years, the largest effort in this phase is the one related to the data cleaning phase, consisting in analyzing the entirety of the SIM Database of Italian Incubator and in adding new incubators to the database, in order to define the final version of the 2022 version of the database.

The data cleaning part consisted in verifying if all the incubators in the database were still active, an activity that was performed by looking at every incubator's webpage and social page. In case of doubt, the incubators were directly contacted via email or phone calls.

Newly identified incubators, through the use of regional databases, associations, web search, and LinkedIn, were analyzed carefully and included in the database.

At the end of the data cleaning and selection work, the identified incubators in the population were a total of 237, 8 more than last year's version of the population, with a 3% increase in the database dimension.

## **3.3 Data update and AIDA integration**

Once all the incubators were identified, a second phase of the work consisted in updating data referring to the list of incubators. In particular, fiscal data like the Italian Partita Iva (VAT number), Fiscal Code, and Business name were identified using mostly the Incubator's webpage or, in absence of a webpage, their LinkedIn page. These fiscal data are extremely important as they are needed to identify the different Incubators on the AIDA database, which is an online portal, containing updated registry and fiscal data of Italian companies in the last 10 years.

Using the company's websites and social pages, also contact data were registered such as e-mail and phone, as well as the location of the headquarters and other offices. In this phase, Corporate and university incubators are identified.

From the AIDA database, financial information such as 2021 revenues, net income, employee number, and EBITDA, as well as registry information such as the year of establishment and the institutional nature of the incubators (public, public-private, or private) were extracted.

### **3.4 Survey design and creation**

For the creation of the questionnaire, the questions that made up the SIM incubator questionnaire of the previous year were analyzed and relevant issues that emerged were faced through the addition of new questions or little modification through old questions. It was very important to maintain the same questions as last year as it allows us to compare the results of 2021 with those of 2020. For the creation and completion of the questionnaire, the online software SurveyMonkey was used, and a Microsoft Word version was saved. The survey's questions can be divided into 6 subsections, namely:

1. General information regarding the company name, the year of foundation, and the number of employees, measured with the full-time equivalent (FTE) method.
2. Incubation characteristics section, where incubators are asked whether they perform other activities in addition to the incubation activity, information about the average incubation time, the number of tenants incubated and the number of requests, information regarding the selection process, and strategic choices.
3. "Social" section where incubators are asked about their social impact and whether they incubate social startups, whether they have and offer services aimed at social startups, and measuring social impact.
4. Financial data related to the division of costs and revenues, and information regarding equity acquisition in the tenants.
5. Activities and services offered to the incubated. The list, made up of ten possible alternatives, was derived from the information present in the literature regarding the services traditionally offered by incubators. Respondents were asked to declare if they provided these services and, if so, if they offered them to all the incubated, many or only some of them;
6. Information related to the funding obtained by the incubated companies and the request to provide the list of incubated startups and their VAT numbers.

### **3.5 Data analysis**

After the closure of the time given to incubators to answer the survey, a total of 94 incubators answered the questionnaire, with a response rate of 40%. The data analysis phase started in October and ended in December, consisted in analyzing the data gathered from the questionnaire, linking them with the SIM Incubators database and the respective Financial data coming from AIDA, with the objective of providing a complete analysis of the state of the Italian Incubation Industry, with emphasis on the creation of a map of Italian incubator and their regional distribution, the analysis of the services provided and the impact on the performances on the incubated startup, and the differences between Social and other incubators. All the data analysis and the graphs that were produced have been made through the use of Microsoft Excel.

## 4. Analysis and Results

In the following section of the thesis, the main results and findings of the previously described data analysis activity are illustrated. The analyzed sample of 94 Incubators is representative of the totality of the population of 247 incubators. All the data refers to the year 2021, if not expressed otherwise. The findings are presented in 5 paragraphs, namely:

- 4.1 Complete Overview of Italian Incubators: In this paragraph, it is possible to find the main findings related to the geographic distribution and different typologies of incubators.
- 4.2 Incubators' economics: balance sheet, economic, and financial data related to Italian Incubators are presented in such a way as to present a snapshot of the financial situation of these organizations
- 4.3 Characteristics of Italian Incubators: Characteristics like age, number of requests, selection process and competitive scope choices.
- 4.4 Services and Impact of Italian Incubators: Analysis of the services provided and the impact of incubators on the tenants, measured as funding received by the incubated organizations
- 4.5 Supporting Social Startup: Detailed overview of incubators supporting Social Enterprises, the involved sectors, the peculiarities and the use of metrics of Social Impact

### 4.1 Complete Overview of Italian Incubators.

#### 4.1.1 Geographic Distribution of Italian Incubators

Table 16: Geographic distribution of Italian incubators

<i>Area</i>	<i>% of Population</i>	<i>% of Sample</i>
<i>North-West of Italy</i>	<i>34%</i>	<i>30%</i>
<i>North-East of Italy</i>	<i>21%</i>	<i>32%</i>
<i>Center of Italy</i>	<i>23%</i>	<i>20%</i>
<i>South of Italy</i>	<i>22%</i>	<i>18%</i>

*N = 237 incubators – Data Source: Database Incubatori SIM 2022 e Database AIDA*

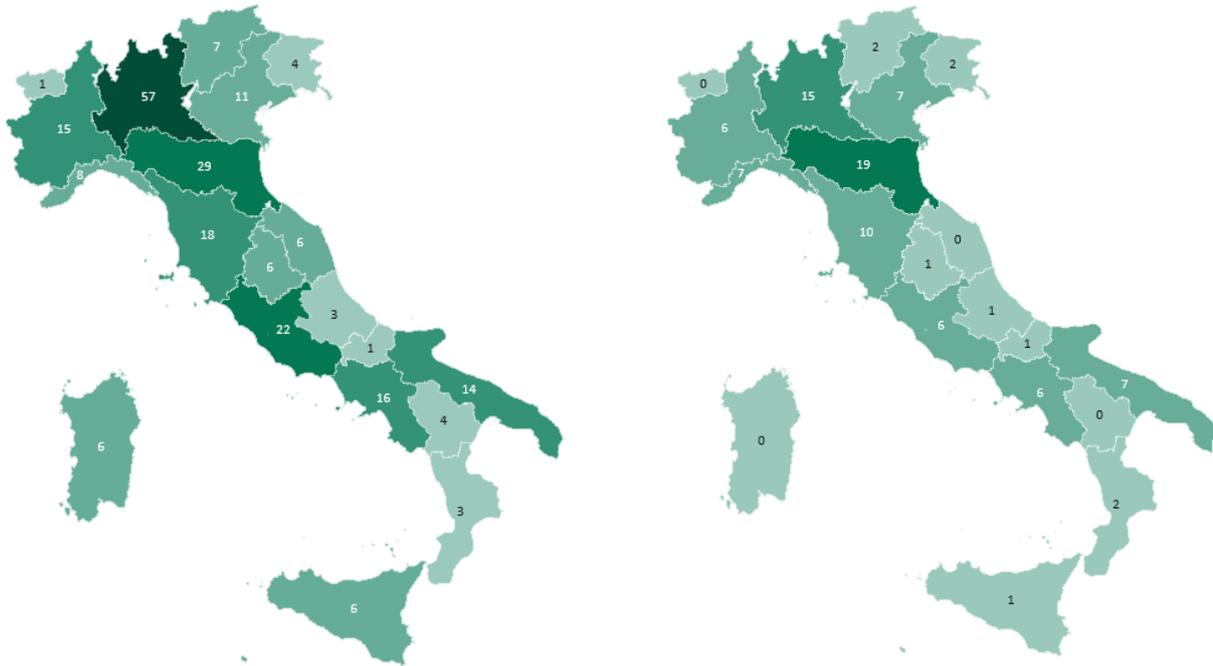
Table 16 represents the geographic distribution of Italian Incubators in the 4 zones North-West, North-East, Center, and South of Italy, both for the totality of the population in the Database and the Sample of incubators that have answered the survey. It's important to notice how more than half of the Incubators are located in the North of Italy (55% of the population), while the Center and South of Italy have a similar number of incubators. Below, In figures 1 and 2, one can appreciate with a higher

## Analysis and Results

level of detail the regional differences in the number of incubators. Notice how Lombardia is the first region, accounting for 24% of the total number of incubators, followed by Emilia Romagna and Lazio.

Figure 1: Regional Distribution Incubators (Population)

Figure 2: Regional Distribution Incubators (Sample)



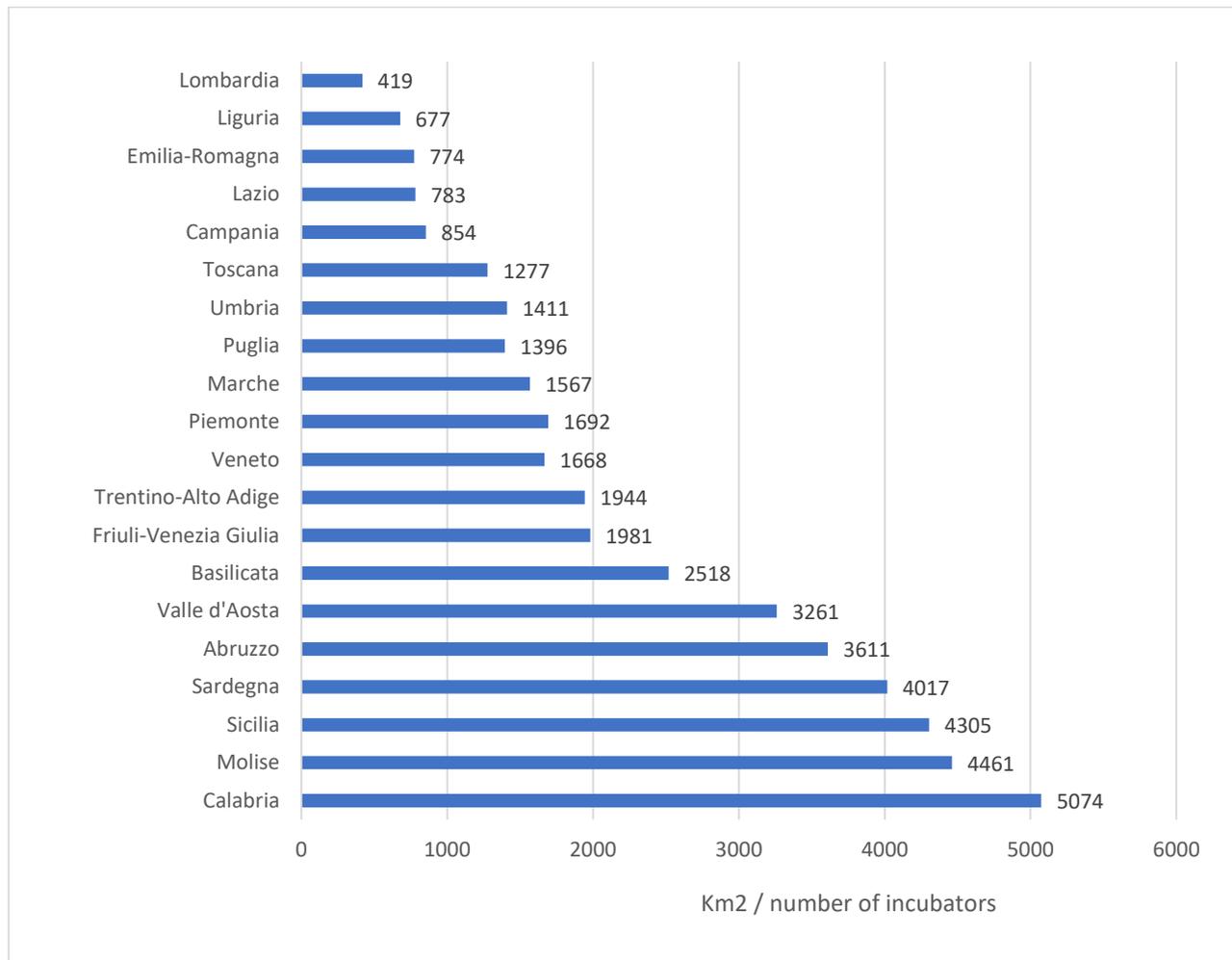
In order to have a more in-depth approach to the regional distribution of incubators, it can be insightful to take into account two other indicators, the density of the number of incubators for square kilometers, and the number of incubators over the total population of a given region. In general, in Italy, there is one incubator every 1275 square kilometers, and one every 249 thousand people. However, also for these 2 indicators, many regional differences can be appreciated in Graphs 1 and 2. Notice how Valle d'Aosta, Basilicata, and Umbria have a very high number of incubators for every inhabitant. Two regions of the South of Italy, Calabria and Sicilia, have very low scores according to both indicators, being relatively big regions with a relatively high population but a very low number of incubators. Even taking into account these indicators, it is clear that North Italy has more incubators, probably because of the higher demand for services requested by startups and an overall more developed entrepreneurial environment.

Analyzing and mapping the presence of incubators in a given region can be extremely useful for the Italian Government or regional public heads, both because it is a significant indicator of the development of a healthy entrepreneurial ecosystem and because, as seen in the Analysis of the

## Analysis and Results

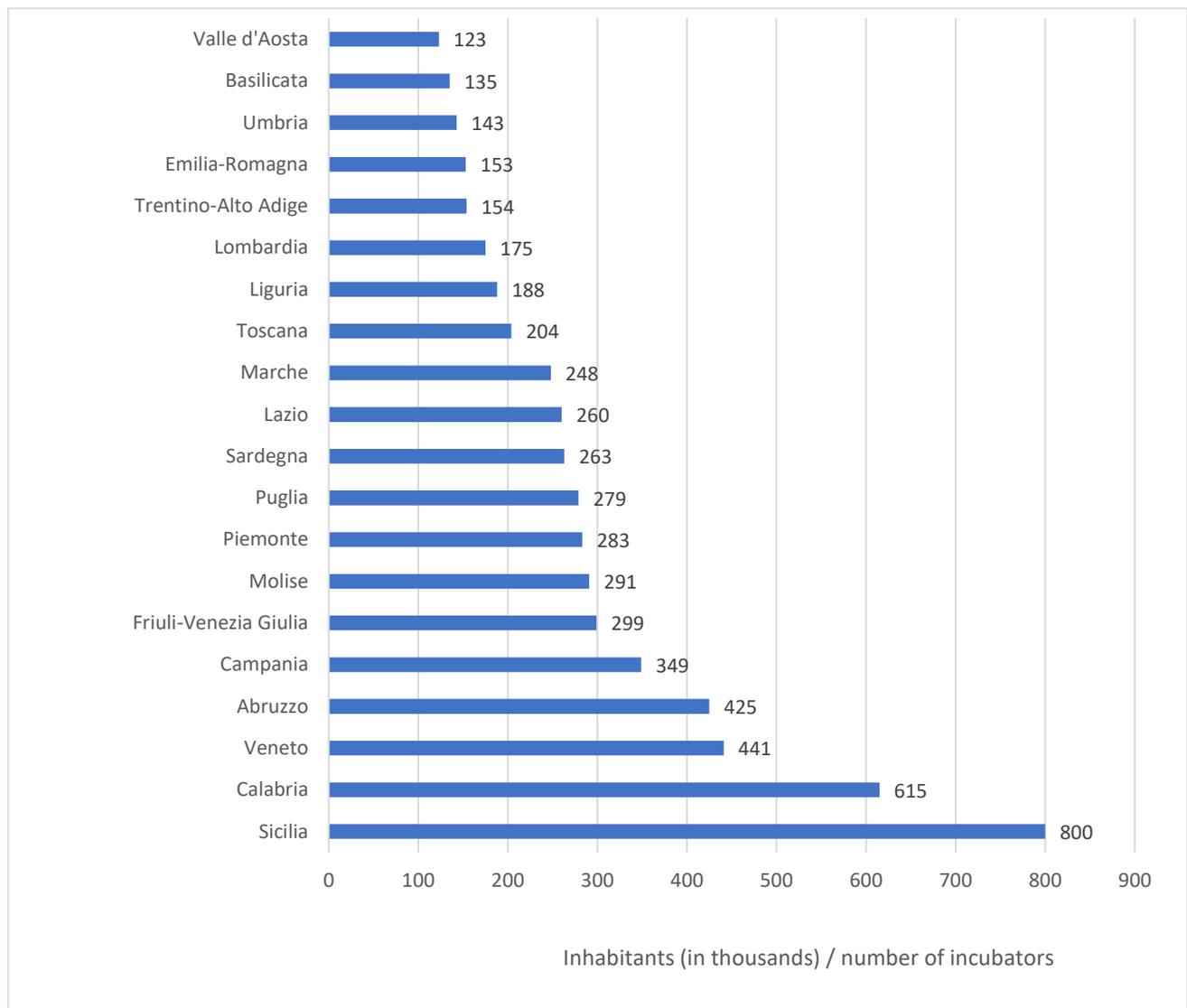
Literature, incentivizing the formation and development of incubation programs (especially accelerators) can have a tangible effect on the development of startups in a target region, especially as it increases spontaneous fundings activity (Fehder and Hochberg, 2014).

Graph 1: km<sup>2</sup> for every incubator



N = 237 incubators – Data Source: Database Incubatori SIM 2022 e Database AIDA

Graph 2: Number of Persons for every incubator



N = 237 incubators – Data Source: Database Incubatori SIM 2022 e Database AIDA

### 4.1.2 Incubator's typologies

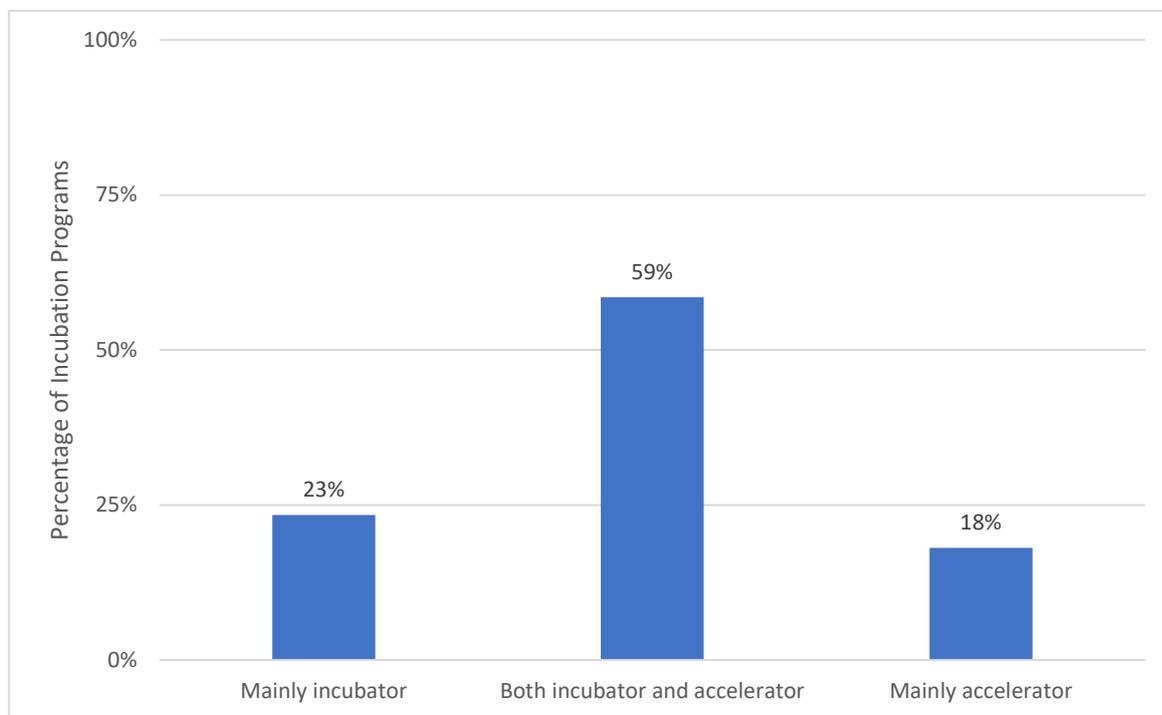
As previously seen in the Analysis of the Literature, talking about the taxonomy of incubators and the different types of incubators is very important as it allows to grasp differences in characteristics and objectives. In the study, an attempt is made to distinguish incubation programs according to the program's characteristics (incubators and accelerators), control from external entities, and Sansone's taxonomy in Table 2.

#### 4.1.2.1 The distinction between incubators and accelerators

In the survey that was sent to incubation programs, a question asked whether the organization considered themselves more an incubator or an accelerator, considering an incubator mainly an organization that sustains and develop for the most newly created tenants and an accelerator mainly an organization that focuses on more mature startups.

Even though this distinction is not completely accurate (a more detailed description can be found in the taxonomy section of the Analysis of the Literature), it is still interesting to have an outlook of the self-perception of these Incubation programs on their nature. Most incubation programs consider themselves both incubators and accelerators according to the previous definition.

Graph 3: Percentage of Incubators and Accelerators



*N = 94 incubators – Data Source: Database Incubatori SIM 2022 e Database AIDA*

It is important to underline how these data are related to the perception of each incubation program with respect to their nature, and can not be fully reliable in identifying correctly the number of incubators or accelerators in Italy according to the definition previously given in the taxonomy. A more reliable distinction between incubators and accelerators could be made by focusing on the defining characteristics of acceleration programs, trying to identify exclusively the programs that have those defining characteristics. Although interesting, this distinction wasn't made in this study and could be an interesting point to deepen in future research.

**4.1.2.2 Incubator’s legal status and control**

Another important distinction, as highlighted in the taxonomy part of this Literature, is related to the incubator’s control and legal status, as it directly influences the program’s objectives and characteristics. In particular, highlighting whether control over the incubator is in the public or the private sector hand is extremely important, as it can signal meaningful information to the ecosystem. A strong private presence is important as it means that incubators are able to generate profitable business models, but also a strong public presence might be important as it is a consequence of an increased interest of Public Heads in the field of entrepreneurship with an objective of helping the development of innovative startups. Also, the number of programs that are both private and public is important, given the possibility for collaboration between the two sectors, mostly because the private benefit of incubators’ profitability can reflect itself into a public benefit in the form of increased employment and economic development.

The following data, mostly taken from the AIDA database, are related to the number of incubators that are fully private, fully public, or that are the result of a collaboration between the private and public sectors.

It is also interesting to look at the number of two particular typologies of incubators, University incubators, and Corporate Incubators. These two peculiar incubators, their objective, and their characteristics have been discussed in the Literature.

*Table 17: Number of Public, Private, and Public-Private incubation programs in Italy*

<b>Typology</b>	<b>N in Population</b>	<b>% of Population</b>	<b>N in Sample</b>	<b>% of Sample</b>
<i>Fully Public</i>	32	14%	19	20%
<i>Public-Private</i>	47	20%	23	25%
<i>Fully Private</i>	158	67%	52	55%

*Table 18: Number of University and Corporate incubation programs in Italy*

<b>Typology</b>	<b>N in Population</b>	<b>% of Population</b>	<b>N in Sample</b>	<b>% of Sample</b>
<i>University</i>	33	14%	15	16%
<i>Corporate</i>	15	6.3%	7	7.4%

*N population= 237 N Sample= 94 incubators – Data Source: Database Incubatori SIM 2022 e Database AIDA*

As it is possible to observe from Table 17, most of the Italian incubators have private control, there is space and possibility for the growth of Italian Public Incubators in the ecosystem.

**4.1.2.3 Number of Incubators according to Sansone’s Taxonomy**

Given the nature of the study, that have the particular objective to analyse also the state of Social Incubators, it is very important to quantify the number of incubators according to Sansone’s taxonomy presented in the taxonomy part of the Literature Review, in Table 2. The taxonomy distinguishes between Business, Mixed, and Social incubators according to the number of Social Startups incubated.

*Table 19: Italian Incubators according to Sansone’s Taxonomy*

<b>Typology</b>	<b>Meaning</b>	<b>Nin Sample</b>	<b>% of Sample</b>
<i>Business</i>	Do not support any start-up with a positive social goal	42	48%
<i>Mixed</i>	Less than 50% of supported start-ups do have a positive social goal	33	37%
<i>Social</i>	More than 50% of supported start-ups have a positive social goal	13	15%

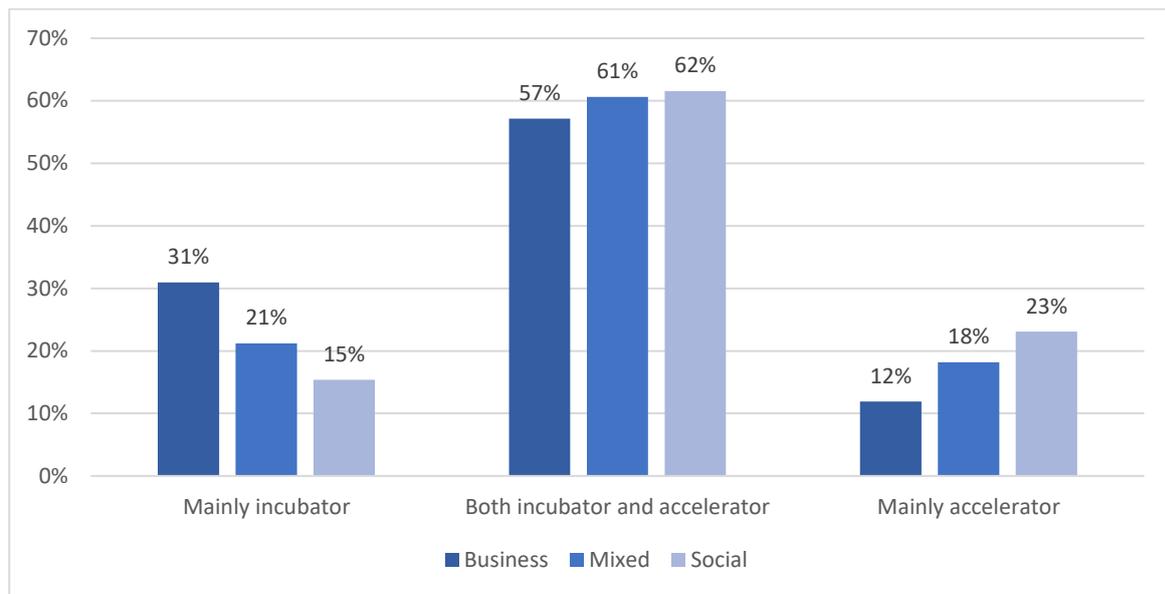
*N Sample= 88 incubators – Data Source: Database Incubatori SIM 2022 e Database AIDA*

The results are very similar to the previous year, meaning that there was not a significant change in this aspect of the ecosystem. More than 50% of incubators support startups with a positive social goal. It is interesting to notice how Social Incubators are mostly private (85%), a clear signal that incubating Social Startups in Italy is not in contrast with the profitability goal, but also a sign that public stakeholders are underusing the incubation tool to impact social public goals. Given that this classification is used heavily in the following analysis I will refer to this classification as “typology classification”.

**4.1.2.4 The distinction between incubators and accelerators according to the Legal Status and Typology of incubation programs.**

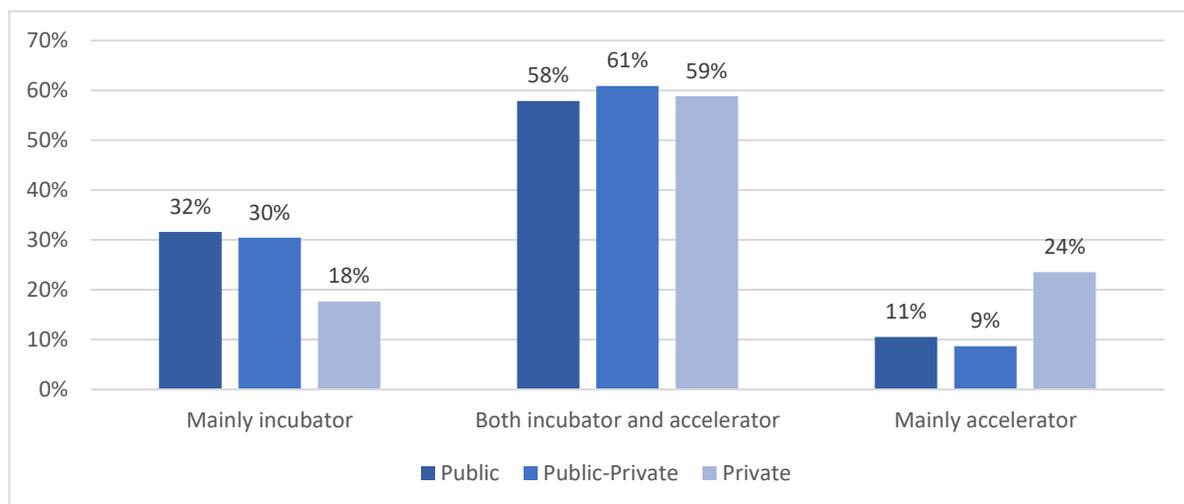
It can be interesting to analyze whether a given typology of incubation program, according to the previous classifications, is more or less interested in structuring the program as an incubator or an accelerator. The following analysis can help us investigate this issue.

Graph 4: Incubators and accelerators according to the typology of the incubation program



N Sample= 88 incubators – Data Source: Database Incubatori SIM 2022 e Database AIDA

Graph 5: Incubators and accelerators according to the legal status of the incubation program



N Sample= 93 incubators – Data Source: Database Incubatori SIM 2022 e Database AIDA

As can be appreciated in Graph 4, all three types of organizations tend to consider themselves both incubators and accelerators. Among the organizations that are mainly incubators, there is a higher percentage of Business Incubators, meanwhile, among the organizations performing mainly as accelerators, there are more Social Incubators.

In Graph 5, all three types of incubators, Public, Public-Private, and fully Private tend to perform both incubators and accelerators activities. Among the organizations that are mainly incubators, there is a higher percentage of Public Incubators, meanwhile, among the organizations performing mainly as accelerators, there are more Private Incubators.

This pattern seems to suggest that public incubators are more interested in early-stage start-ups than more developed ready to accelerate tenants. However, given the role that Ecosystem Accelerators can play in the development of a strong entrepreneurial system and in the growth of seed investments, as analyzed previously in the Literature Review, Public Accelerators could be an increasingly powerful instrument for Public Heads that are willing to push for start-ups growth in a given target region. In this sense, participation and collaboration with Private Accelerators that have the knowledge and resources to run an effective Acceleration Program could be even more impactful, especially with the creation of Public-Private Accelerators where control is divided between a Public entity and private organizations.

## **4.2 Incubator's economics**

In this section, balance sheet, economic, and financial data related to Italian Incubators are presented in such a way as to present a snapshot of the financial situation of these organizations. Data related to Incubators' turnover, number of employees, and sources of Costs and Revenues for this type of organization are presented.

### **4.2.1 Italian Incubators Turnover**

The following data about the turnover of Italian Incubators are mainly taken from the AIDA database, containing the balance sheets of almost the totality of Italian Companies. In order to propose a meaningful analysis, only incubators with turnovers coming mostly from incubation activity have been taken into consideration, and many organizations have been left out of the analysis, especially Corporate and University Incubators that didn't have a separate balance sheet from the one of the main company or organization. The sample totality for the Turnover analysis is 119 incubators.

*Table 20: Average and Median of Italian incubators' Turnover*

	<b>Population</b>	<b>Sample</b>
<i>Average of Incubators' Turnover</i>	2,33 M€	2,79 M€
<i>Median of Incubators' Turnover</i>	0,6 M€	0,73 M€

*N Population= 119, N Sample=52 incubators – Data Source: Database Incubatori SIM 2022 e Database AIDA*

The average Turnover of 2,33 M€ is much higher than the median, this is due to the presence of a very small number of hyper-successful incubators that have a much higher Turnover than the rest of the population. Evidence of this small number of successful incubation programs can be found in most of the economic data that was gathered in the analysis and will be presented later in the Thesis. The total estimated combined Turnover of the Italian incubators in the year 2021, calculated as a projection of the Average Incubators' Turnover times the totality of the population (237 incubators) is 552 M€. This is the highest estimation for the market in the last years and it represents almost a 37% increase over the 2020 estimation (348 M€) This was due both to the increase in the population number and the increase in the Average Turnover.

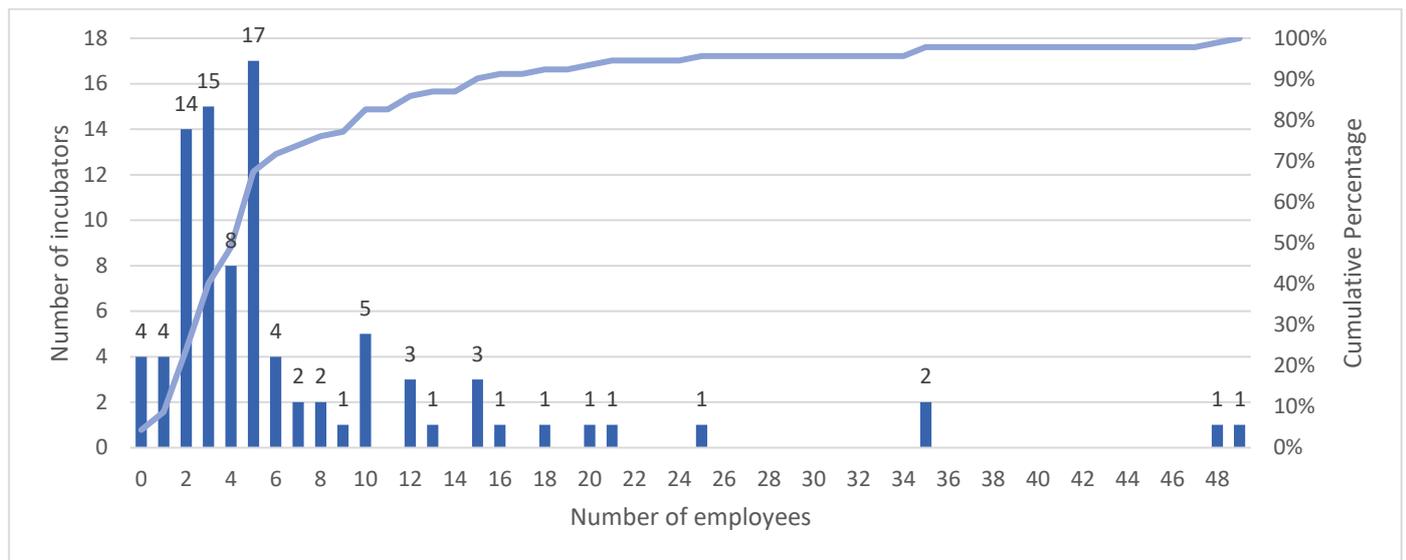
### **4.2.2 Number of employees of Italian Incubator**

Incubators are generally small organizations with a reduced number of employees. Differently from the previous year, where a question was introduced in the survey, asking for the number of employees related only to the incubation activities, this year the number of employees has also been retrieved on the AIDA database. Employees are considered to be exclusively individuals that receive compensation in exchange for their services, excluding voluntary activities or employees that are not participating in incubation activities.

In graph 18 below, the distribution of the number of employees for incubators in Italy, is coherent with the expectation, as it highlights how most of the incubators have between 2 to 5 employees with 67% of the incubators that have less than 5 employees. Just a few big incubators have more than 10-12 employees.

It can be noticed that in 2021 the sample average is 7,3 employees and the median is 5 employees, an increase compared to data related to 2020, where the average was 7 and the median was 5 employees.

Graph 6: Number of employees of Italian Incubators



N Sample=92 incubators – Data Source: Database Incubatori SIM 2022 e Database AIDA

Data in Graph 6 are obtained from the survey and consider only the employees that are directly involved in incubation activities.

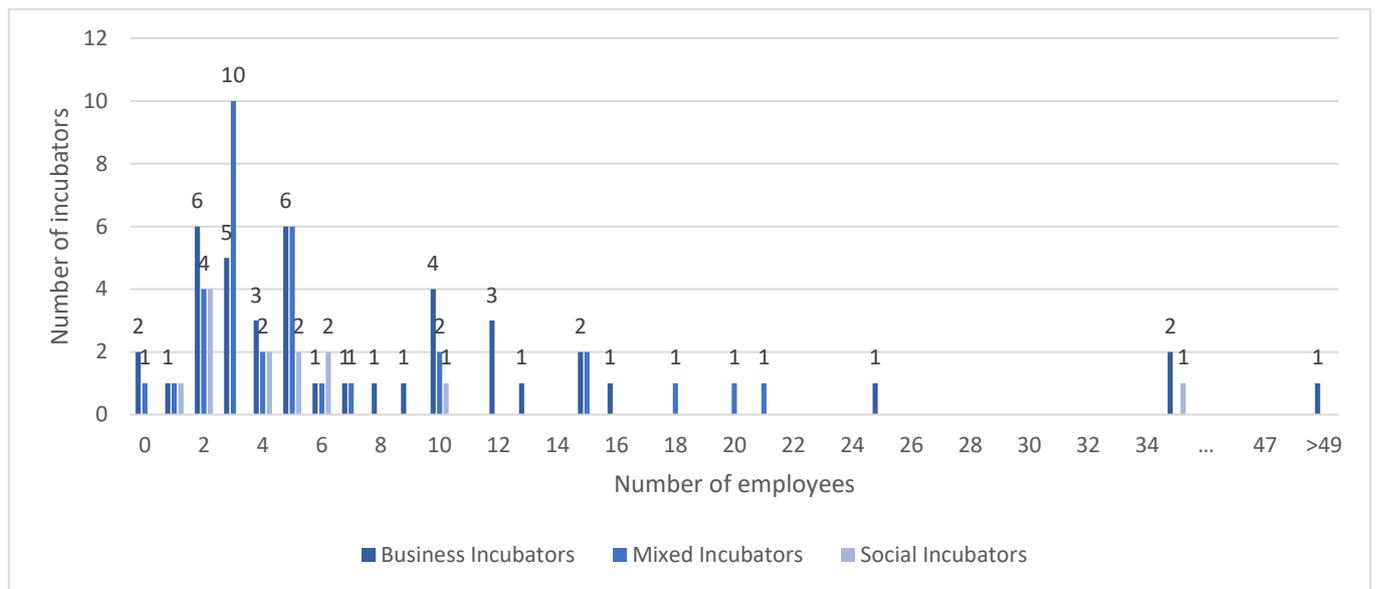
The estimation for the total number of employees of Italian Incubators in 2021, calculated as a projection of the average number of employees (taken from the AIDA database) over the totality of the population is 3295 employees distributed across 237 incubators. However, excluding the employees that are not directly involved only in incubation activities, the totality of employees gets down to 1730 employees. This is because most incubators perform other activities that are not related to incubation, data about this phenomenon will be presented later.

#### 4.2.2.1 Number of employees divided by Incubator typology and legal status

As it is common in the analysis, also the incubator typology and legal status have been considered in the analysis of the number of employees, in order to observe potential changes in the statistics that could be attributed to one or the other typology or the legal nature of the incubation programs.

In the graph below, the distribution related to the number of employees is highlighted with respect to the incubators' typology.

Graph 7: Number of employees of Italian Incubators divided by Incubator typology

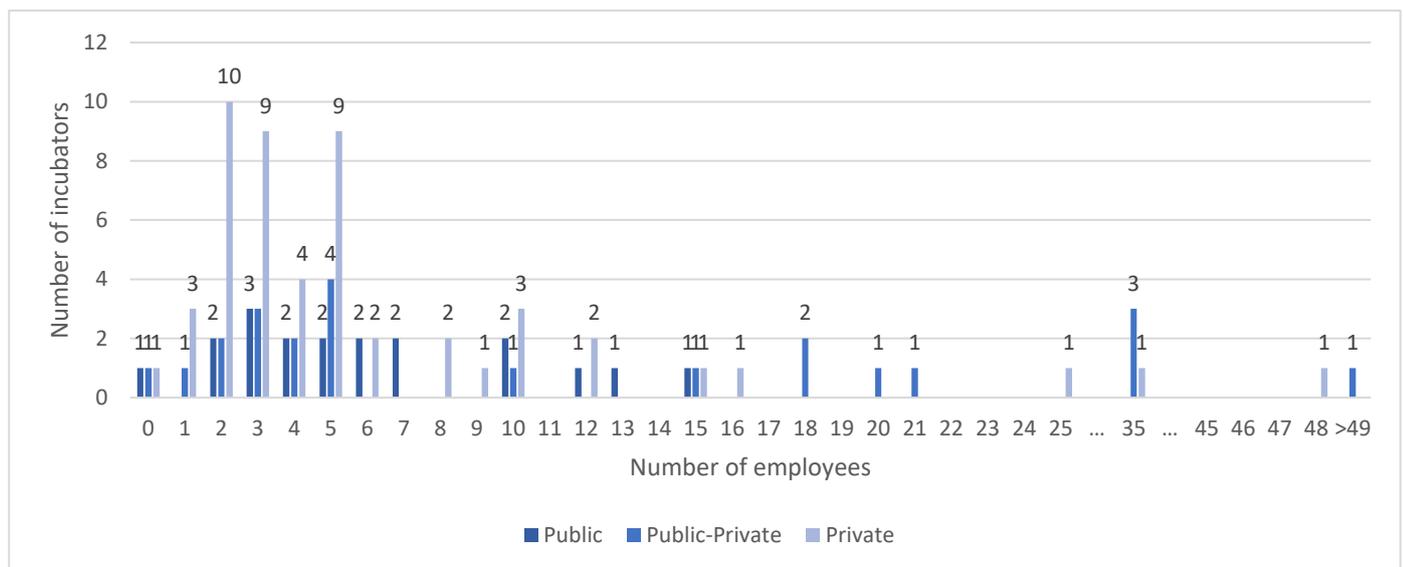


N Sample=88 incubators – Data Source: Database Incubatori SIM 2022 e Database AIDA

Mixed incubators are the type of incubator that have the highest average number of employees (9) and Social incubators are the smallest organizations with 5 employees on average. Business Incubators have an average of 7 employees.

In the graph below, the distribution related to the number of employees is highlighted for incubators' legal status.

Graph 8: Number of employees of Italian Incubators divided by Incubator typology



N Sample=93 incubators – Data Source: Database Incubatori SIM 2022 e Database AIDA

Public-Private incubators have the highest average (8 employees), followed by Private incubators (7 employees) and Public incubators (6 employees). Also in terms of median Public-Private and Private incubators have more employees than Public incubators.

Although differences exist between the different types of incubators in terms of the number of employees, those small differences might be due to the particular data analyzed and a causal correlation between the number of employees and the incubator's typology may not exist.

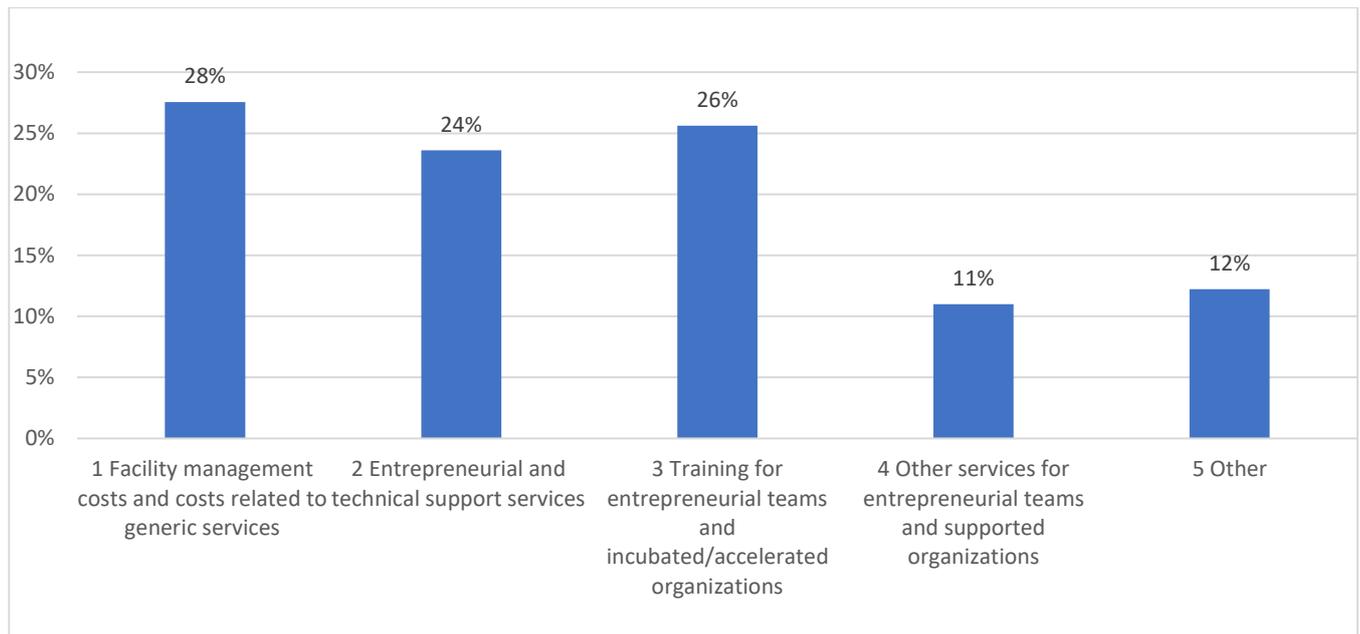
### **4.2.3 Operating costs of Italian Incubators**

An important part of the survey that was sent to the population of incubators included a question related to how different typical incubators' costs are distributed in percentage value. The considered cost items were:

1. Facility management costs and costs related to generic services (e.g. utilities, equipment, stationery)
2. Entrepreneurial and technical support services (e.g. legal, administrative, accounting, marketing, intellectual property, technology transfer)
3. Training for entrepreneurial teams and incubated/accelerated organizations
4. Other services for entrepreneurial teams and incubated organizations
5. Other, for example, costs related to the Management of a science park; Paid scouting and open innovation activities for Corporate Companies and/or other entities; Paid training for third parties (not incubated/accelerated); Paid consultancy for public entities, SMEs and large enterprises; coworking activities

The results of the investigation can be found in graph 9 below.

Graph 9: Average of the percentual division of operating costs for Italian incubators



N Sample=82 incubators – Data Source: Database Incubatori SIM 2022 e Database AIDA

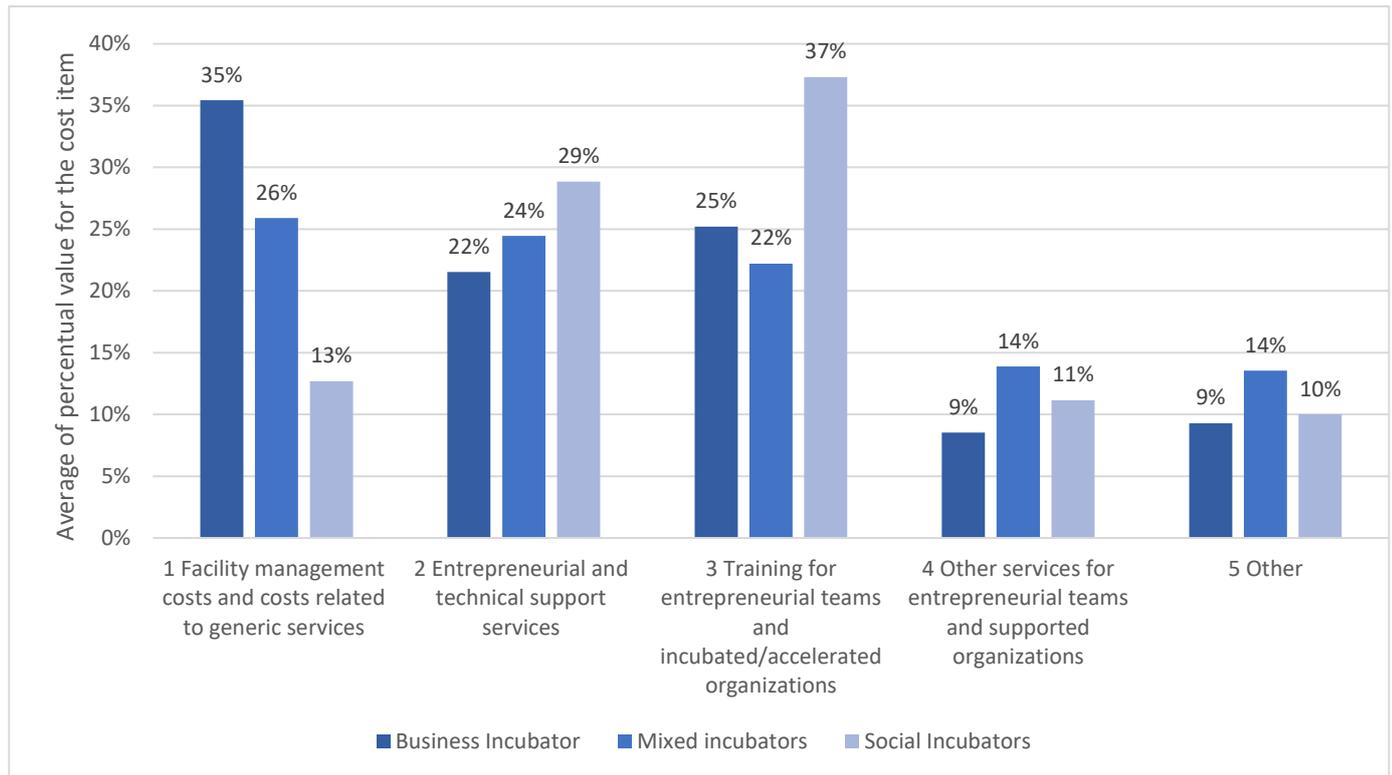
The most impactful cost items are the ones related to Facility Management costs and generic services, entrepreneurial and technical services, and training for entrepreneurial teams. It is interesting to notice how the cost distribution is similar among these three cost items, and how the cost of entrepreneurial training is higher than the cost of support services. Last year's data suggest a change in the relative position of the cost items distribution because the cost of support services in 2020 was higher than the cost of entrepreneurial training (31% against 19%).

The data is particularly interesting also because, as highlighted in the Literature Review, Gonzalez-Uribe and Leatherbee (2017) found out that, especially in countries with a low entrepreneurial culture, the provision of entrepreneurial capital is more important than the provision of basic services, capital, and coworking space. Greater attention from incubators to the provision of training and the distribution of entrepreneurial capital is therefore justified by the recent findings and reflected in the 2021 cost item distribution.

#### 4.2.3.1 Operating Costs of Italian Incubators by Incubator Typology and Legal Status

The data analysis also helps us understand whether different types of programs have the same cost distribution and the main differences in terms of costs among Business, Mixed, and Social Incubators (graph 10 below) and between Public, Public-Private, and fully Private incubators (graph 11).

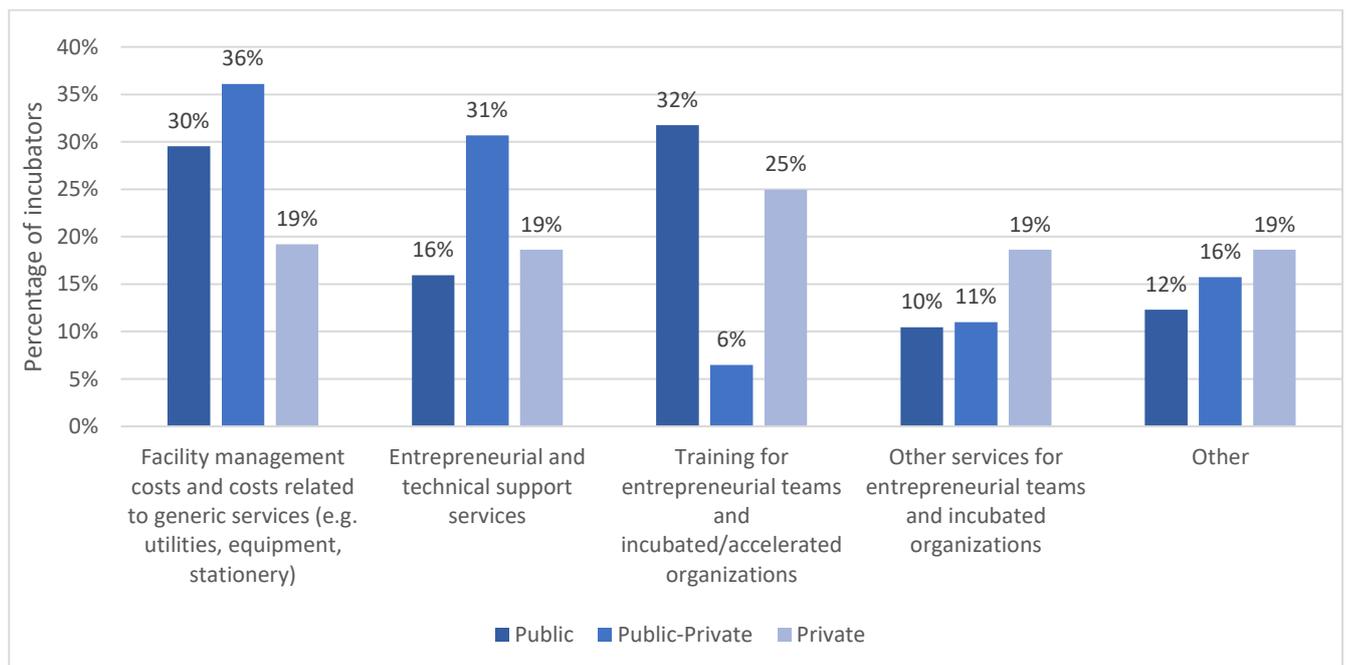
Graph 10: Average of the percentual division of operating costs for Italian incubators (divided by Incubator Typology)



N Sample=81 incubators – Data Source: Database Incubatori SIM 2022 e Database AIDA

It is noticeable how Social Incubators have much higher training costs and much lower facility management costs with respect to the other two categories. Social Incubators also rank first for the cost of entrepreneurial and technical support services. Business Incubators are the ones incurring the higher facility management expenditures.

Graph 11: Average of the percentual division of operating costs for Italian incubators (divided by Legal Status)



N Sample=81 incubators – Data Source: Database Incubatori SIM 2022 e Database AIDA

Private incubators are incurring more costs related to training for entrepreneurial teams and fewer facility management costs compared to the other two categories. Public-Private data regarding the cost of entrepreneurial training is particularly low, and this category is also the one incurring more “other” costs, facility management costs, and costs for the provision of entrepreneurial and technical services.

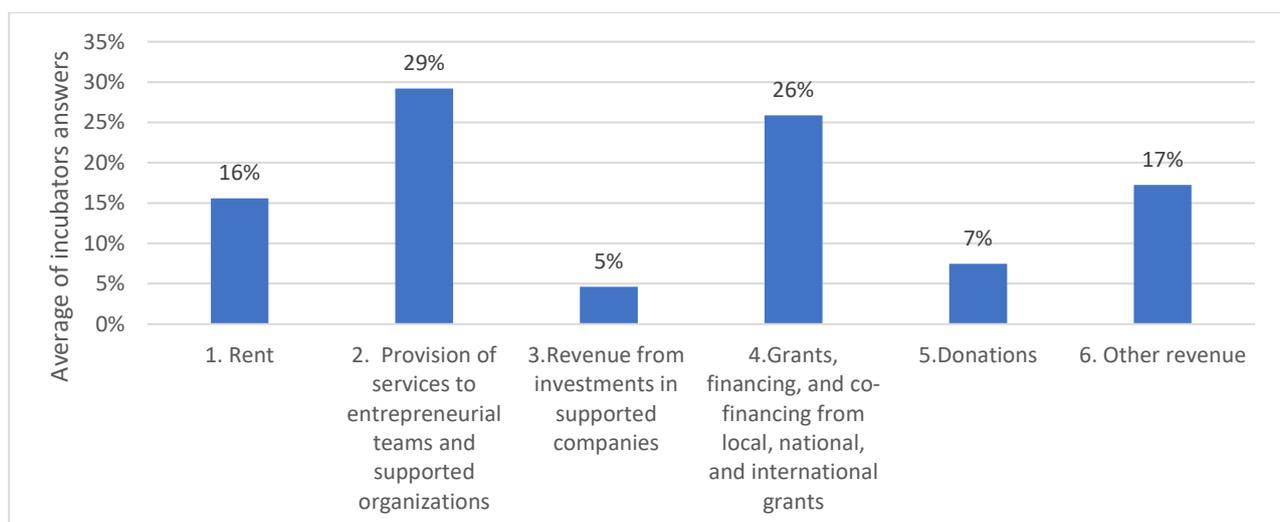
#### 4.2.4 Revenues of Italian Incubators

In a similar way as it was done for the cost distribution of Italian incubators, incubators were also asked to divide in percentual value their main sources of income. The following income streams were identified:

1. Rent
2. Provision of services to entrepreneurial teams and incubated organizations
3. Revenue from investments in supported companies (e.g. from holding equity - dividends - or selling equity - exit)
4. Grants, financing, and co-financing from local, national, and international grants
5. Donations
6. Other revenue, for example, revenue related to:
  - Management of a science park
  - Paid scouting and open innovation activities for Corporate Companies and/or other entities
  - Paid training for third parties (not incubated/accelerated)
  - Paid consultancy for public entities, SMEs, and large enterprises
  - Coworking activities

The main findings can be found in graph 12 below.

Graph 12: Average of the percentual division of income stream for Italian incubators



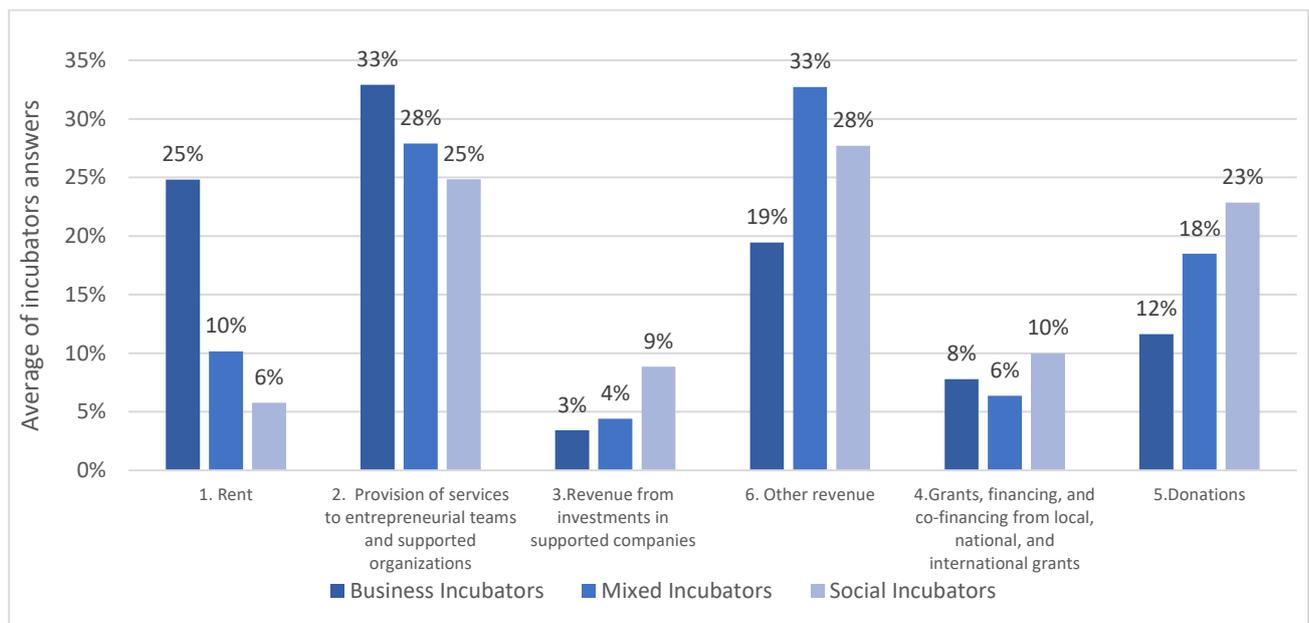
N Sample=82 incubators – Data Source: Database Incubatori SIM 2022 e Database AIDA

The main income streams for incubators come from the Provision of services to entrepreneurial teams and incubated organizations and from national or international grants. Compared to the 2020 results, the income coming from rent and other revenues has diminished and the one coming from grants has increased. The dependence on public help and grants is not something unusual and is in line with Aernoudt's (2004) results, which found out how most of the successful American incubators wouldn't be able to operate without state financing and public grants.

#### 4.2.4.1 Revenues of Italian Incubators by Incubator typology and Legal Status

The data analysis also helps us understand whether different types of programs have the same revenues and income stream distribution and the main differences in terms of revenues among Business, Mixed, and Social Incubators (graph 13 below) and between Public, Public-Private, and fully Private incubators (graph 14).

Graph 13: Average of the percentual division of income stream for Italian incubators (divided by Incubator Typology)

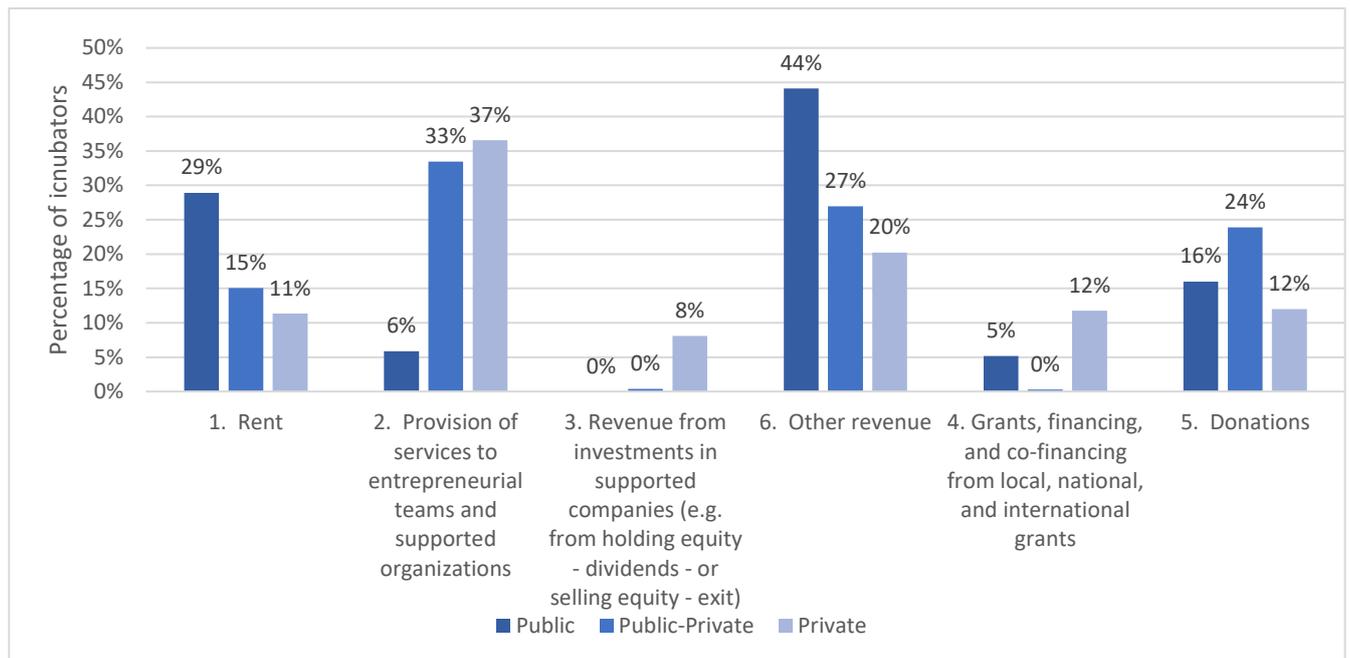


N Sample=81 incubators – Data Source: Database Incubatori SIM 2022 e Database AIDA

Business incubators' main income streams are related to the provision of services to entrepreneurial teams and renting. Business Incubators are also the last type of incubator when it comes to revenue from donations and from investments in the tenants.

Social Incubators are the ones that are more dependent on donations and local, national, and international grants. It is interesting to notice how Social Incubators are the first incubator typology when it comes to revenues from investment in the incubated startups and the last for renting revenues.

Graph 14: Average of the percentual division of income stream for Italian incubators (divided by Legal Status)



N Sample=82 incubators – Data Source: Database Incubatori SIM 2022 e Database AIDA

Public incubators are the ones that are more reliant on income coming from rent and other sources of revenue. They are the last for revenues from the provision of services and do not have any revenue coming from investment in the incubated tenants, mainly because, being public, they hardly take any equity from the incubated organizations.

Private incubators are more reliant on income streams coming from the provision of services and financing from grants. They are the only category that has revenues from investment in the supported startups and are less reliant on rent revenues and other income streams.

Public-Private incubators in this analysis have almost 0 reliance on public grants and rank first in terms of income stream coming from donations.

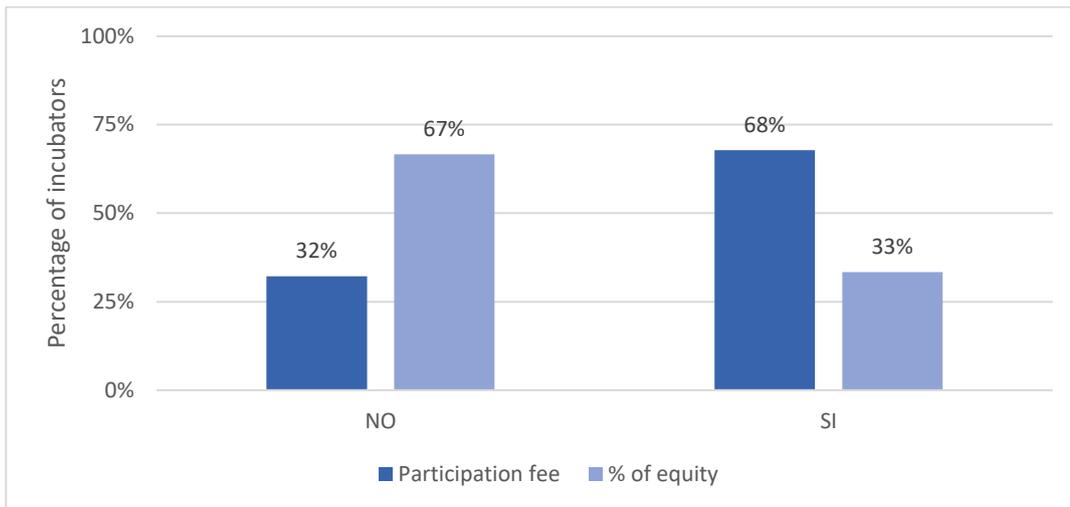
#### 4.2.5 Conditions for accessing incubation programs

Generally, most of the incubation programs ask tenants one of the two following conditions in order to access the incubator, a participation fee or equity participation in the tenants. These two conditions are not mutually exclusive, and sometimes incubation programs ask for both. The following two questions were asked incubators regarding access conditions to incubation programs:

1. Do you ask for a participation fee in order to access the incubation program?
2. Do you ask for equity participation in the tenants as a condition for accessing the incubation program?

The following analysis comes from incubators' answers to these two questions.

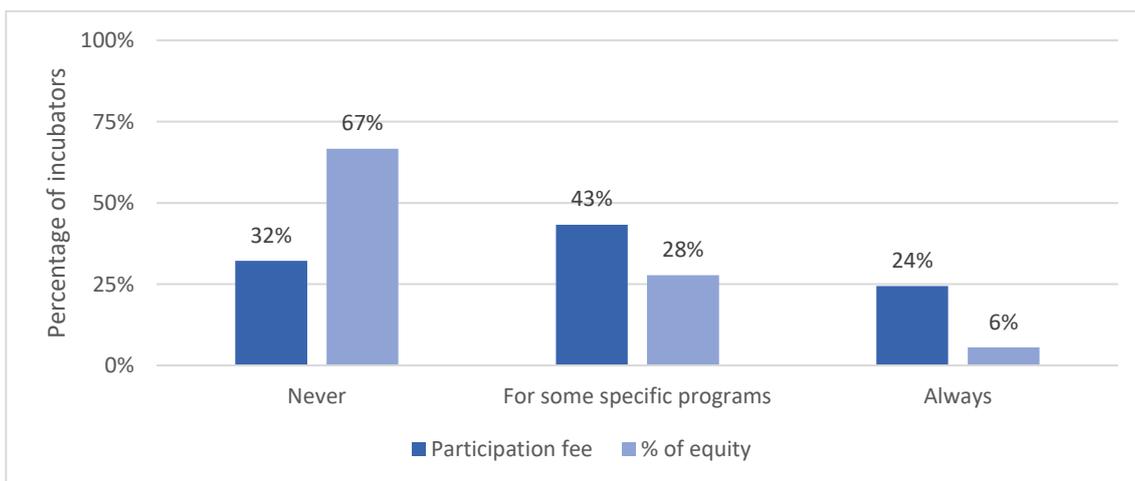
Graph 15: Access conditions to incubation programs



N Sample=90 incubators – Data Source: Database Incubatori SIM 2022 e Database AIDA

68% of incubators require a participation fee from tenants to grant access to the program, and 33% require a percentage of the equity of the incubated startups. It is interesting to notice that the percentage of incubators asking for a participation fee in 2021 is significantly higher than the same data in 2020 (56%). As noticeable in the graph below (28) 43% of incubators ask for a participation fee only to access specific programs and 32% never ask for a participation fee. 28% of incubators ask for an equity stake only for specific programs, and the majority (67%) of incubators never ask for an equity stake in the tenants.

Graph 16: access conditions to incubation programs\_specific



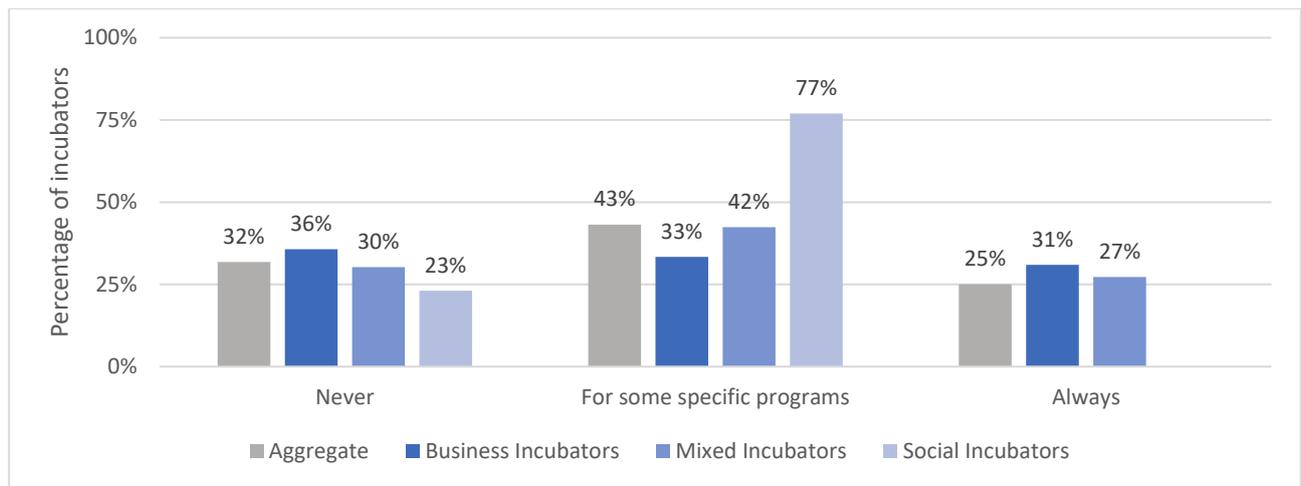
N Sample=90 incubators – Data Source: Database Incubatori SIM 2022 e Database AIDA

#### 4.2.5.1 Conditions for accessing incubation programs by Incubator Typology and Legal Status

As usual, the analysis focuses on the differences between Business, Mixed and Social incubators concerning access conditions (graphs 17 and 19 below) and between Public, Public-Private, and Private incubators (graphs 19 and 20).

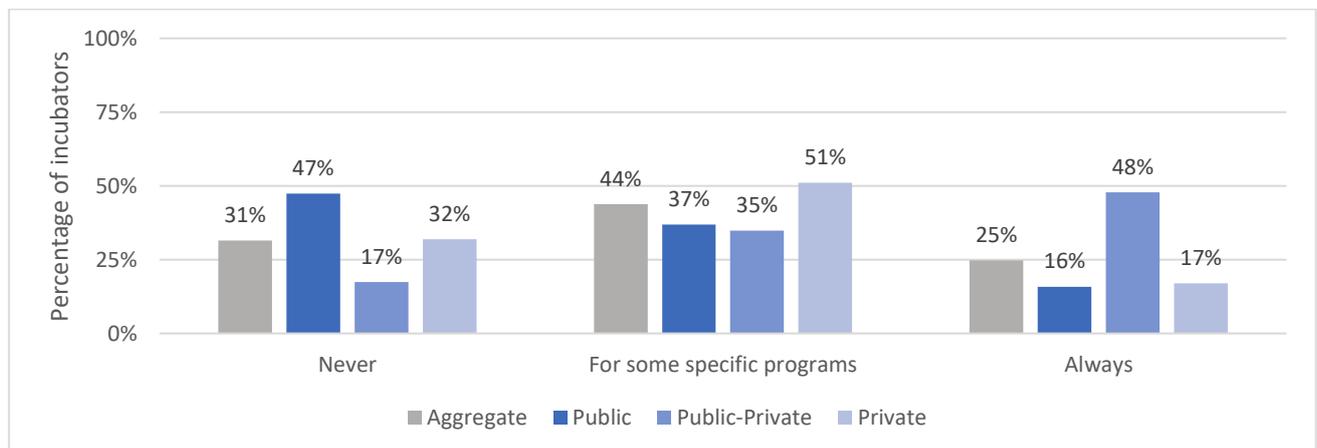
The two following graphs refer to the request for a participation fee as an access condition.

Graph 17: Participation fee required, divided by Incubator Typology



N Sample=88 incubators – Data Source: Database Incubatori SIM 2022 e Database AIDA

Graph 18: Participation fee required, divided by Legal Status



N Sample=89 incubators – Data Source: Database Incubatori SIM 2022 e Database AIDA

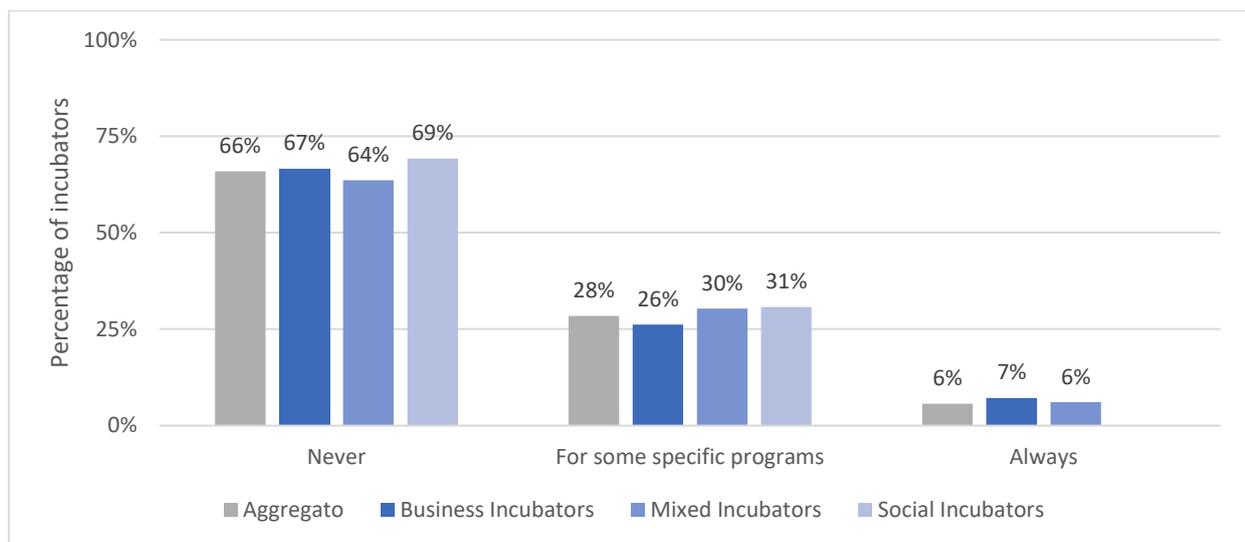
Social incubators are the ones that are most inclined in asking for a participation fee for some specific programs, however, none of the Social incubators have declared to always ask for a participation fee. Business incubators are, at the same time, the category that more often never asks for a participation fee and that more often always asks for a participation fee. This is evidence of how the internal

characteristics and rules of incubation programs are extremely variable and could be due to the lack of agreed-upon best practices, as evidenced in the literature review.

Public incubators are the ones that are most likely not to ask for any participation fee, and Private incubators are the ones that are most likely to ask for participation fees only for specific programs, meaning that they are probably offering different incubation plans.

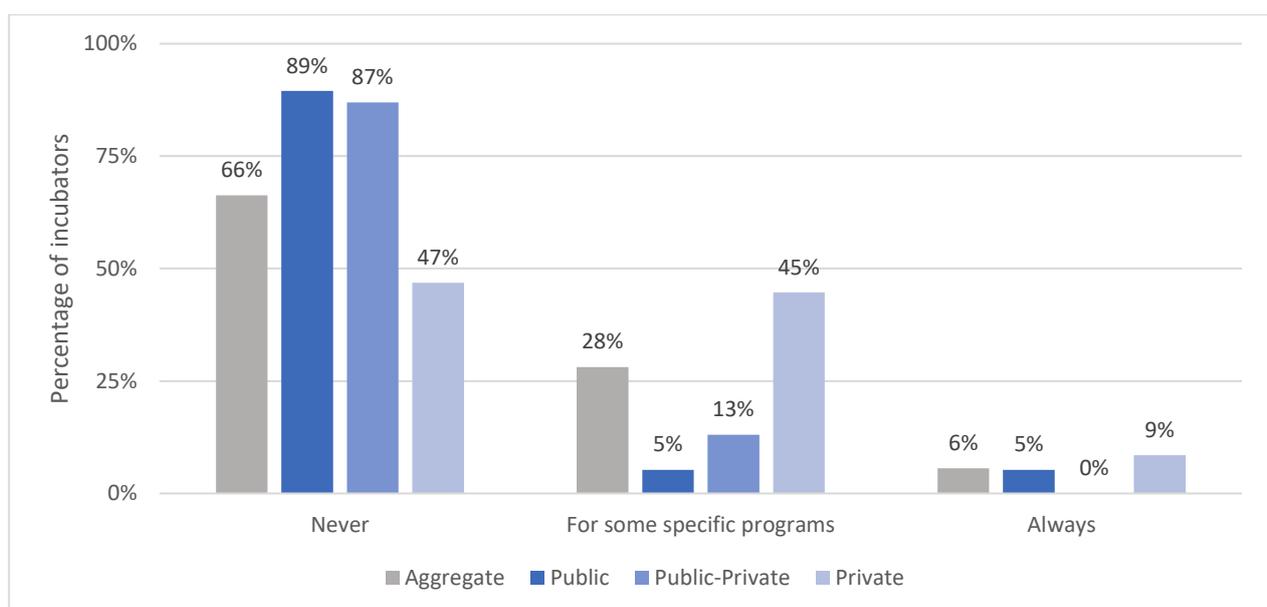
The two following graphs instead refer to the request for equity participation in the tenants as an access condition, dividing the incubators by Typology and Legal Status.

Graph 19: Equity participation required, divided by Incubator Typology



N Sample=88 incubators – Data Source: Database Incubatori SIM 2022 e Database AIDA

Graph 20: Equity participation required, divided by Legal Status



N Sample=89 incubators – Data Source: Database Incubatori SIM 2022 e Database AIDA

There doesn't seem to be evidence of significant differences in the typology of incubators that ask for participation in the equity of tenants as an access condition. The percentage related to each Incubator Typology in Graph 19 are all, in fact, similar. The only exception is represented by the fact that no Social Incubator in our sample always asks for equity participation as an access condition.

In terms of legal status instead, there are some significant differences between public or public-private incubators and exclusively private incubators. Indeed, private incubators are much more likely to ask for equity participation than public or public-private incubators. Private incubators asking for equity participation generally ask for it only for some specific programs, however also the percentage of private incubators always asking for this access requirement is significantly higher than the aggregate average.

### **4.3 Characteristics of Italian Incubators**

The following section presents the study findings regarding the different characteristics of Italian incubators, spanning from an overview of the age of such incubators, the number of requests to access the program, the structure of the selection process of the tenants, the average incubation time for the incubated startups, the competitive scope choice of being focused or diversified incubator and the choice of doing other activities not directly linked to the incubation activities.

This section is particularly important especially for incubator managers and administrators as many of these characteristics derive directly from the strategic choices of the incubators. Deeply analyzing which choices are coherent with the strategic stance of a given incubator can be a step further in defining a set of best practices for incubators.

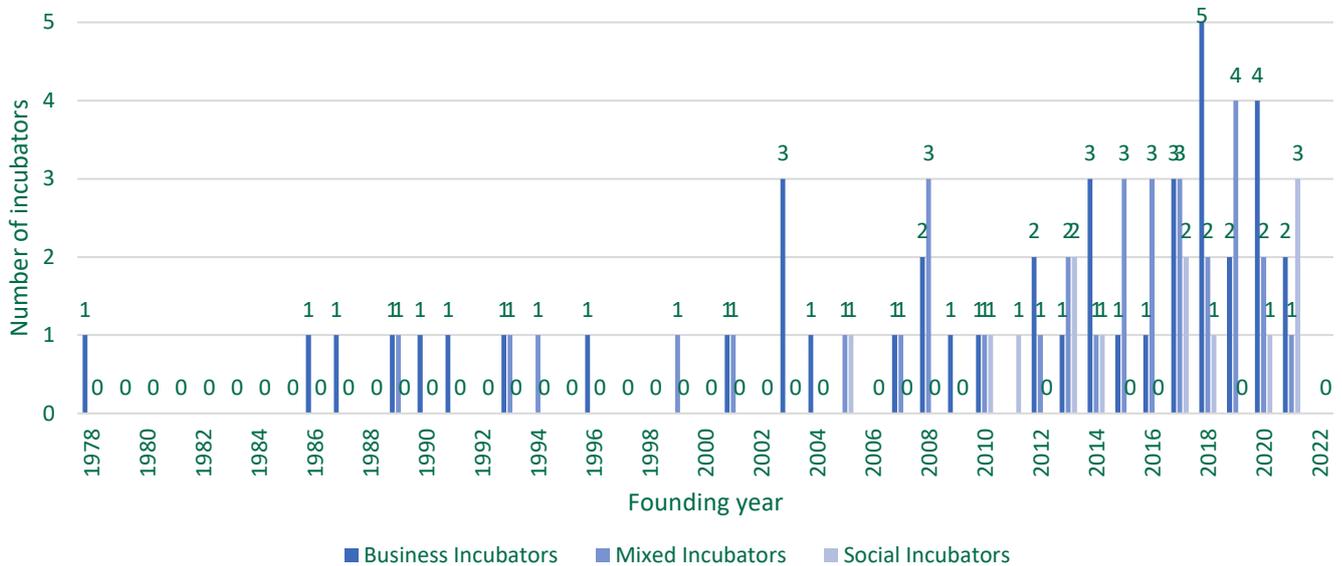
#### **4.3.1 Incubator's age**

To analyze the year of establishment, a sample that included the data collected over the course of 6 years (2017, 2018, 2019, 2020, 2021, and 2022 SIM Questionnaires) was utilized, with currently inactive incubators that were removed from the sample. This data was then combined with information from the AIDA database and the Italian Business Register. Whenever possible, the data from the SIM Questionnaires was preferred as it was more accurate. This is because incubators might have started their incubation activities several years after their foundation. The incubators for which the year of establishment could not be determined were excluded from the sample.

The resulting sample consisted of 231 incubators.

The following graphs represent the year of foundation or start of incubation activities of Italian incubators, divided for typology (graph 21) and legal status (graph 22) differences.

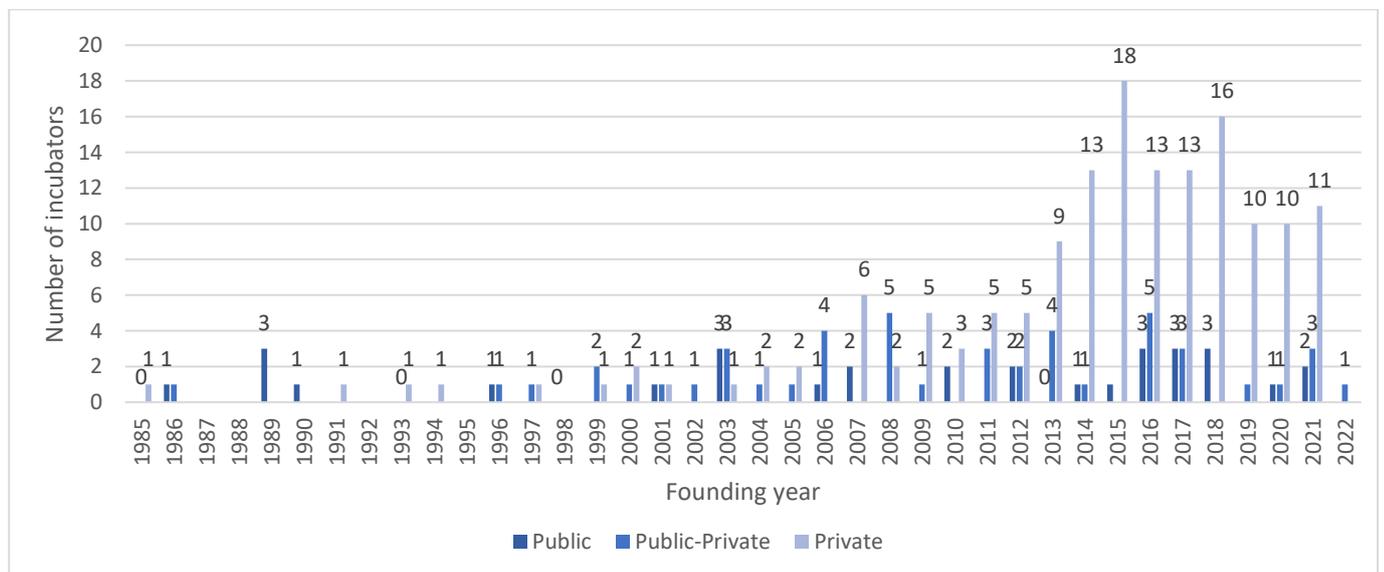
Graph 21: Number of incubators for founding year, division by Typology of incubators



N Sample=88 incubators – Data Source: Database Incubatori SIM 2022 e Database AIDA

For the analysis related to the starting year of activity of Business, Mixed, and Social incubators, the data are taken directly from the questionnaire. It can be immediately noted how 85% of Social Incubators were founded in the last 10 years, proving how this typology is the one of most recent diffusion. Business Incubators are the oldest, with an average age of 13 years against a 6-year average for Social Incubators and a 10-year average for Mixed Incubators.

Graph 22: Number of incubators for founding year, division by Legal Status



N Sample=230 incubators – Data Source: Database Incubatori SIM 2022 e Database AIDA

For the analysis related to the founding year of Public, Public-Private, and Private incubators, the data source is mainly the AIDA database. It is immediately clear how in the last 10 years the majority of incubators founded are Private, demonstrating increasing attention from the private sector towards the incubation phenomenon.

Private incubators are younger with an average age of 8 years against Public incubators’ average of 13,7 years.

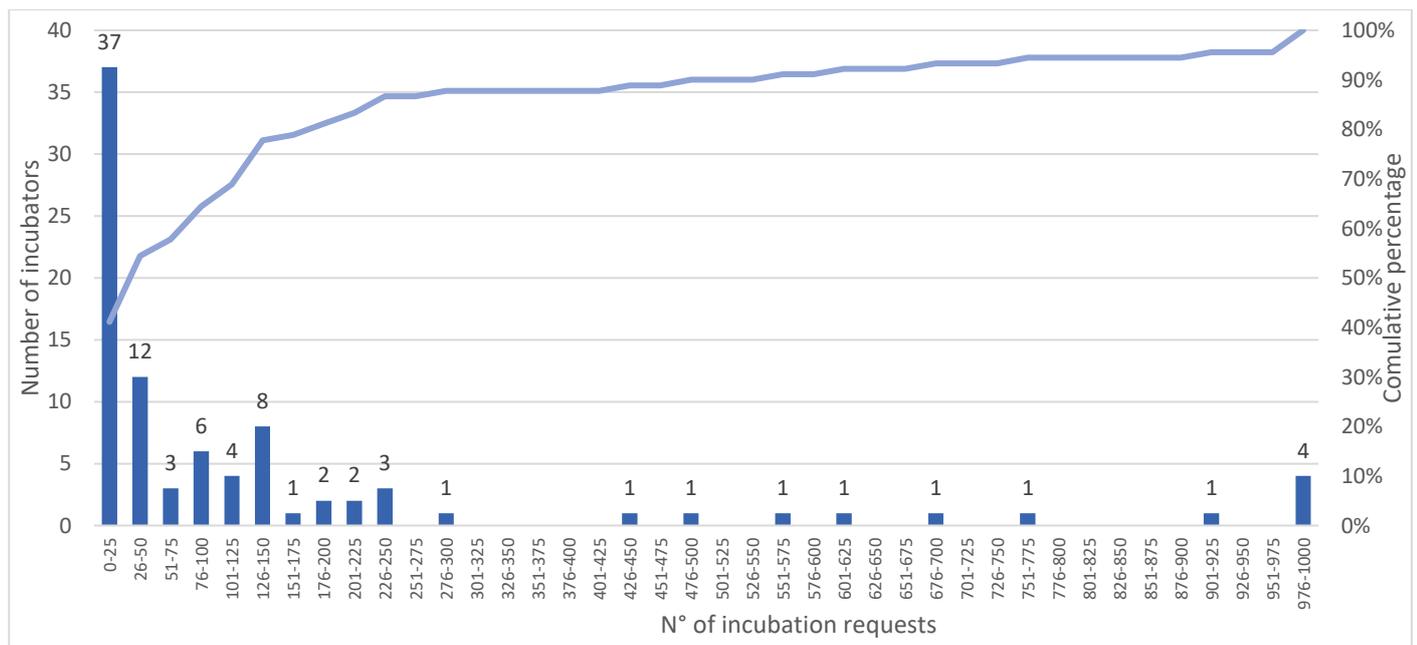
### 4.3.2 Number of Incubation requests

It is interesting to look at the number of incubation requests and compare it to last year’s numbers to properly quantify the demand for incubation services from startups in Italy.

In graph 23 below, responses to the question related to how many incubations requests the incubators have received during the last year were analyzed.

The total number of incubation requests this year was 13494, with an average of 149,9 requests for each incubator and a median of 40 requests. The average much larger than the median is due to a very small number of incubators that are receiving a very high number of requests, because particularly famous and successful. This is again evidence of the presence of few and highly successful cases of incubators. In particular, only 9 incubators are receiving more than 500 incubation requests, while almost 80% of the total number of incubators are receiving less than 100 requests every year.

Graph 23: Number of Incubators that have received N incubation requests



N Sample=90 incubators – Data Source: Database Incubatori SIM 2022 e Database AIDA

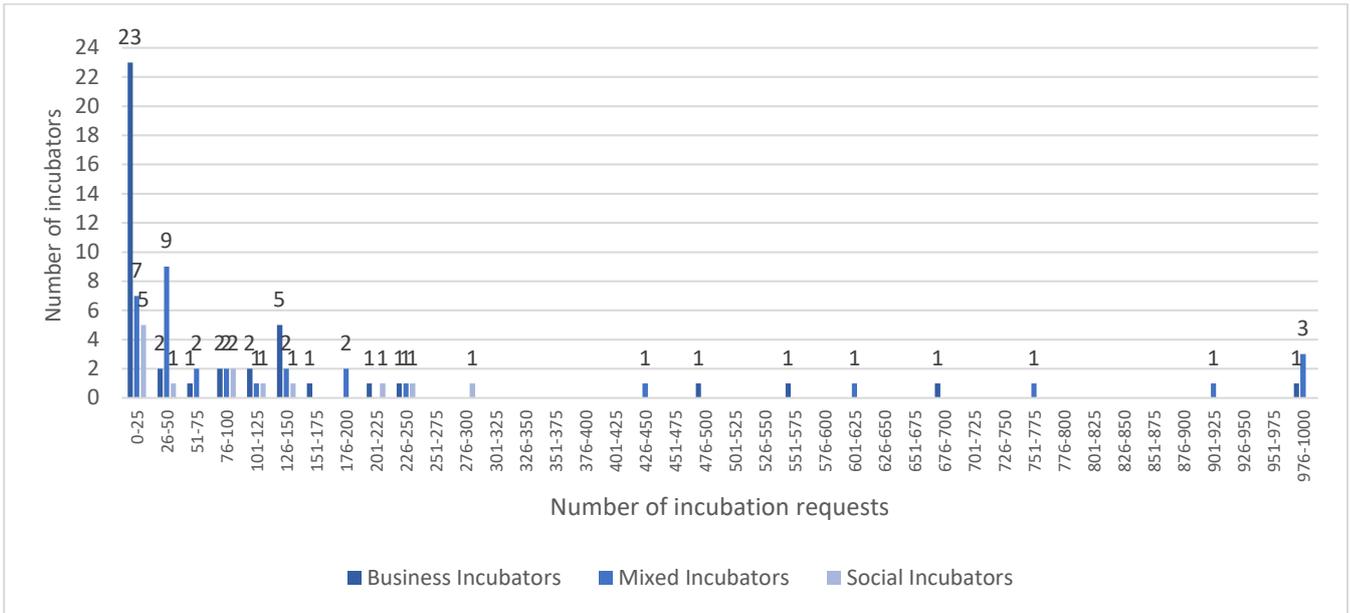
#### ***4.3.2.1 Number of Incubation requests differentiating for typology and legal status of Incubators***

Data that refers to the number of incubation requests received is an interesting proxy to evaluate the relative success of a particular type of incubator over another one. It is interesting therefore to present the differences between Business, Mixed, and Social incubators (Graph 24) and between Public, Public-Private, and Private incubators (Graph 25) in terms of incubation requests received during the year.

Mixed Incubators are the typology with the highest average of incubation requests received (226) against the average of Business Incubators (113) and Social Incubators (98). However, the value of the average of Mixed Incubators is influenced by the fact that 3 out of the 4 incubators that received more than 950 requests belong to this category. Indeed, when considering the median, Social Incubators are first with a median of 80 requests, followed by Mixed Incubators (60) and Business Incubators (21 requests).

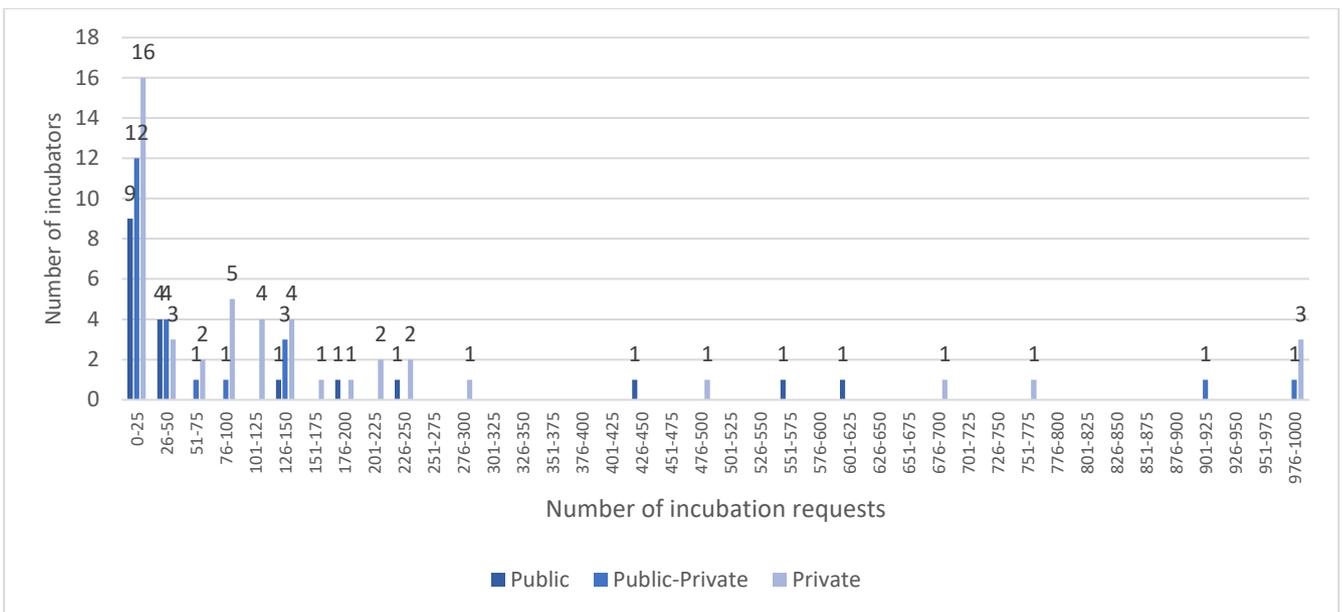
Private incubators are the typology of incubator with the highest average of incubation requests received (179) followed by Public incubators (126) and Public-Private incubators (115). This ranking does not change even considering the median. From the results, it is possible to claim that Private Incubators are on average having more success or at least are more attractive to startups than the other two categories. Instead, it is not possible to make the same statement regarding the categorization of Business, Mixed, and Social incubators, with very successful incubators that seem more likely to belong to the Mixed typology but with Social Incubators having a higher median of the number of requests received.

Graph 24: Number of Incubators that have received N incubation requests, by Incubator Typology



N Sample=88 incubators – Data Source: Database Incubatori SIM 2022 e Database AIDA

Graph 25: Number of Incubators that have received N incubation requests, by Legal Status



N Sample=88 incubators – Data Source: Database Incubatori SIM 2022 e Database AIDA

### 4.3.3 Selection Process

One of the main defining strategic choices of incubation programs is the way they decide to select and grant access to the tenants. As previously seen in the Literature Review, Accelerators tend to organize their program based on a cohort model, building classes of startups each year that, at the end

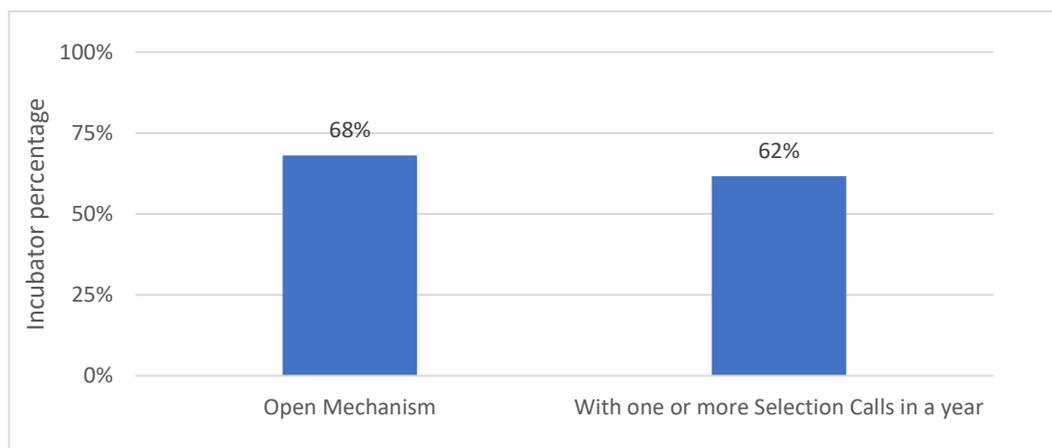
## Analysis and Results

of the acceleration program, graduate together on a specific date. The cohort model requires startups to be selected at the same time, meaning that startups willing to participate need to apply to a specific call organized by the incubator. The alternative selection mechanism is here called “open”, and consists of granting the possibility for startups to apply and be accepted to the program at any time during the year. This selection mechanism makes it harder to organize the incubation program as a cohort model because startups enter and exit the program at different times and do not share the same path in the incubation program.

However, these two mechanisms are not mutually exclusive, since incubation programs sometimes use both mechanisms, organizing specific calls to attract startups but leaving the option of entering the program at any time.

A question related to which selection mechanism the program use was inserted in the survey and the following graph (26) is the result of the data elaboration related to the question.

Graph 26: Percentage of incubators using the given Selection Mechanism

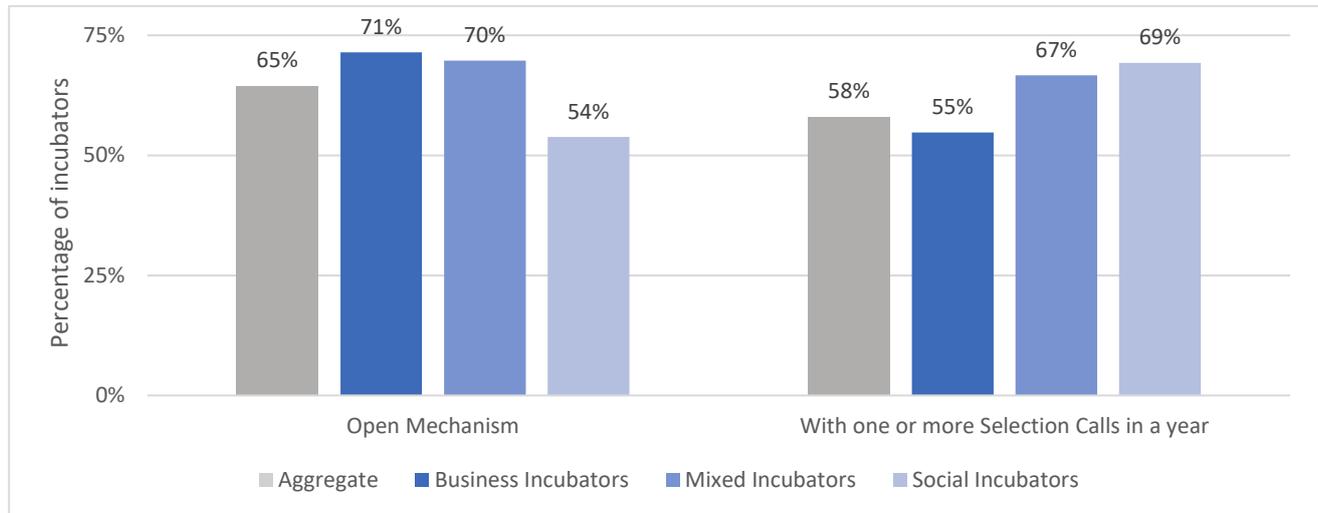


N Sample=93 incubators – Data Source: Database Incubatori SIM 2022 e Database AIDA

It can be noted that the percentage of incubators that choose the “Open” selection mechanism is slightly higher than the one of incubators choosing the “Selection Call” method. The two percentages do not sum up at 100%, since, as previously stated, there is a part of the sample that is using both selection mechanisms.

The two following graphs (27 and 28) can help us in spotting differences in terms of selection mechanisms between different incubator typologies and legal statuses.

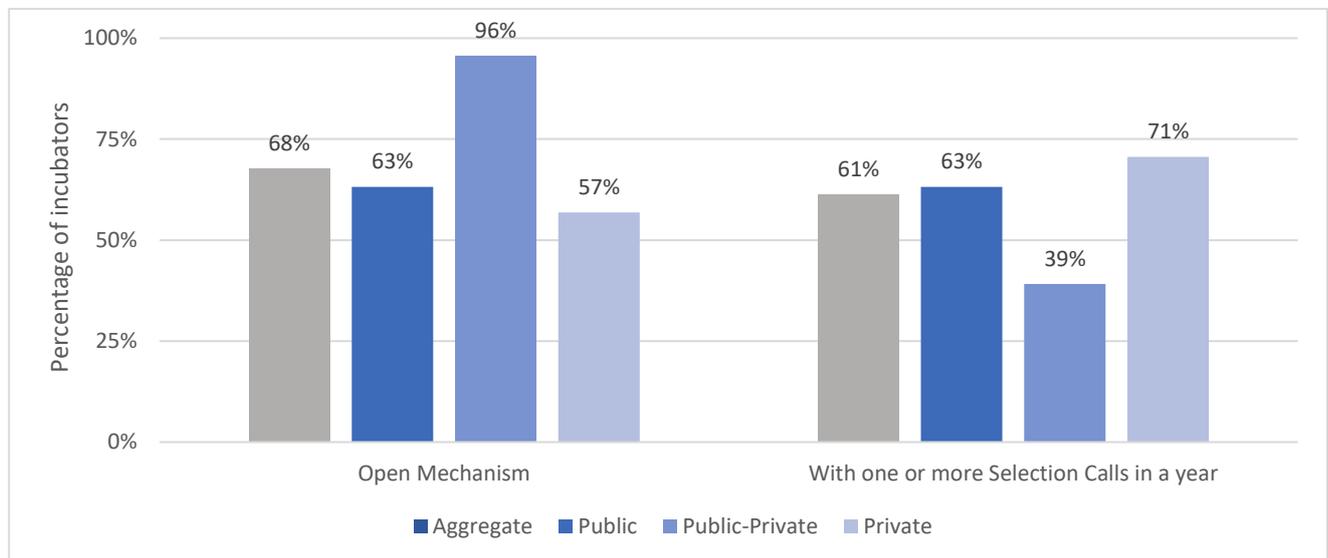
Graph 27: Percentage of incubators using the given Selection Mechanism, by Typology



N Sample=88 incubators – Data Source: Database Incubatori SIM 2022 e Database AIDA

Social Incubators appear to be more inclined in using Selection Calls and less inclined to use the Open Selection mechanism compared to the other categories of incubators. Business incubators are instead less inclined in using Selection Calls and more inclined in using the Open Selection mechanism.

Graph 28: Percentage of incubators using given Selection Mechanism, by Typology



N Sample=93 incubators – Data Source: Database Incubatori SIM 2022 e Database AIDA

Public - Private incubators appear to be much more inclined to use the “Open” selection mechanism compared to the other categories. On average Private incubators are using the Selection Call mechanism more than the other categories. The selection Call is the typical selection mechanism of

accelerators, according to Literature, and these results are also coherent with the results presented in table 16, which showed how Private Incubators are more likely to identify themselves as accelerators compared to the other legal categories.

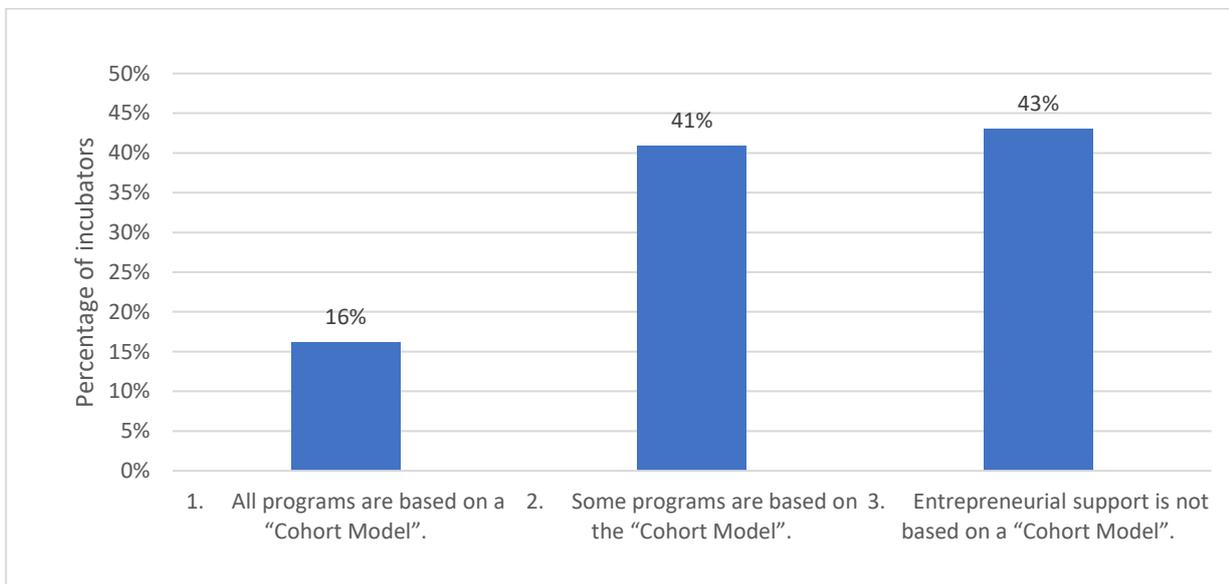
### **4.3.4 Cohort model**

In the previous chapter, it was highlighted how using a Selection Call mechanism allows incubators to structure their program using a “Cohort Model”, where entrepreneurial teams or the incubated startups start at the same time and follow for a defined period the same incubation path. A question in the survey was included that allowed the 3 followings answers:

1. All programs are based on a “Cohort Model”.
2. Some programs are based on the “Cohort Model”.
3. Entrepreneurial support is not based on a “Cohort Model”.

The following graph (29) summarizes the answers given from incubators to that question in the survey.

*Graph 29: Percentage of incubators adopting the Cohort Model*

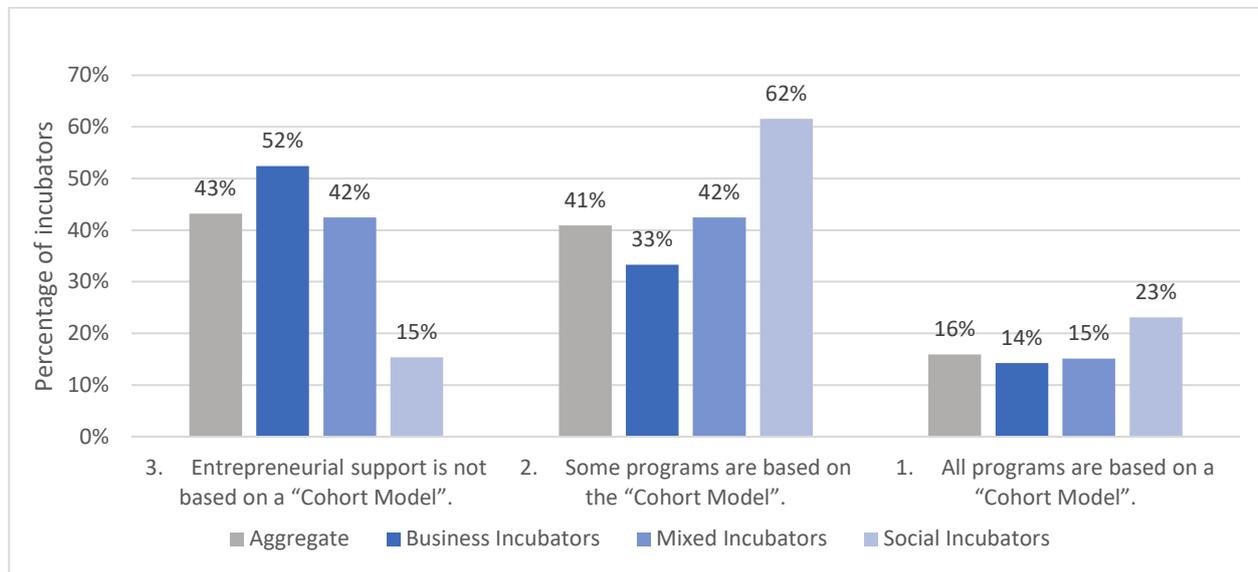


*N Sample=93 incubators – Data Source: Database Incubatori SIM 2022 e Database AIDA*

As noticeable, very few incubators always use the “Cohort Model”, while most incubators either don’t use the model at all or use it only for particular programs. The results are in line with the expectation that it is harder to organize entrepreneurial support with classes (Cohort model) when one of the main selection mechanisms used is the “Open” mechanism.

Differences in the adoption of the cohort method for different typologies of incubators according to Sansone’s taxonomy and legal status are analyzed in the following graphs 30 and 31.

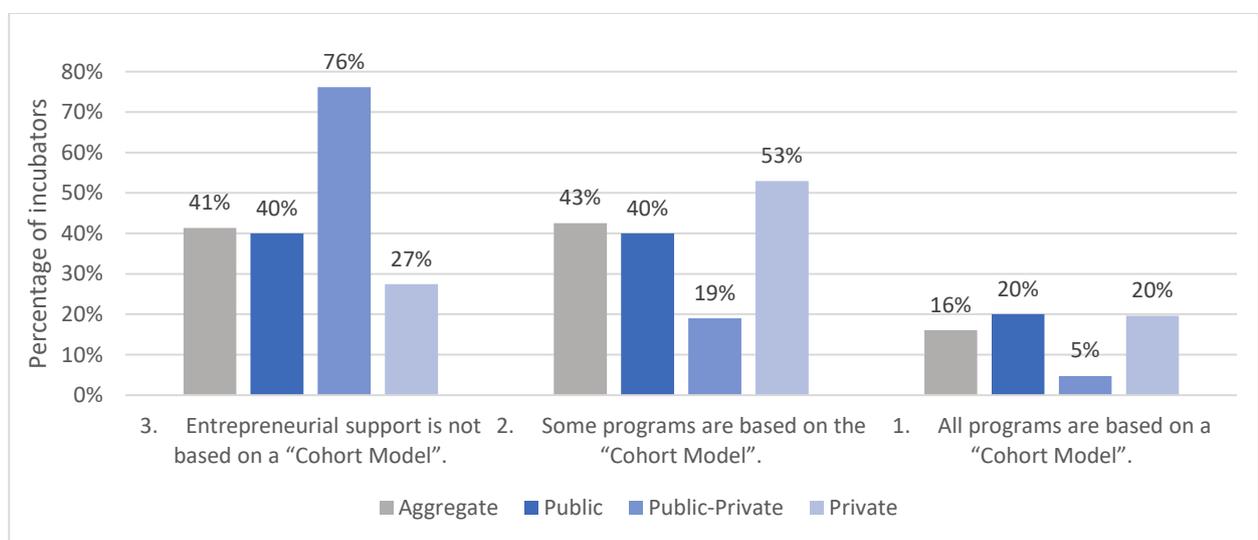
Graph 30: Percentage of incubators adopting the Cohort Model, by Typology



N Sample=93 incubators – Data Source: Database Incubatori SIM 2022 e Database AIDA

Social incubators appear to be more willing to adopt the “Cohort model” compared to the other categories, ranking first both as the typology that applies the model to some of their incubation programs and first as the typology that applies the model to every incubation program. Notice how there is coherency with the results in Graph 27, with evidence of the fact that the Call Selection mechanism and the Cohort Model are often two linked characteristics of the same incubation model.

Graph 31: Percentage of incubators adopting the Cohort Model, by Legal Status



N Sample=87 incubators – Data Source: Database Incubatori SIM 2022 e Database AIDA

Private incubators appear to be more willing to adopt the “Cohort model” compared to the other categories, ranking first both as the typology that applies the model to some of their incubation programs and first as the typology that applies the model to every incubation program. Also in this case the coherency with Graph 28 is clear and is even more obvious when looking at the data of Public-Private incubators are the category of incubators that is less likely to use the Selection Call mechanism and less likely to organize the incubation path according to the “Cohort” method.

### **4.3.5 Other activities**

Incubators often declare to carry out activities other than incubation or acceleration activities. Based on last year's analyses, a list of potential other activities was drafted and incubators were asked if they performed any other activity other than incubation activities and to select the activities carried out during the year. The identified activities are:

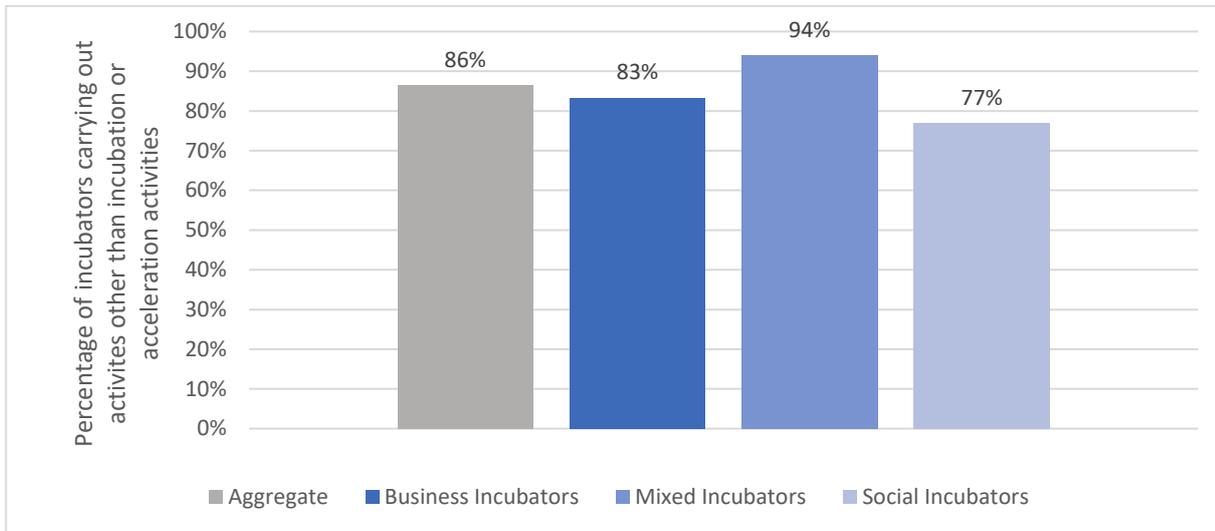
- Coworking activity
- Administration of a Science Park
- Scouting and Open Innovation activities for other organizations
- Organization and management of events
- Training and educating non-incubated organizations for consideration
- Internationalization support
- Projects and calls
- Other

86% of incubators have declared to perform one or more of the activities in the list in addition to incubation activities.

The results of the investigation related to differences between Business, Mixed, and Social incubators and between Public, Public-Private, and Private incubators regarding other activities carried out can be found respectively in the below graphs 32 and 33.

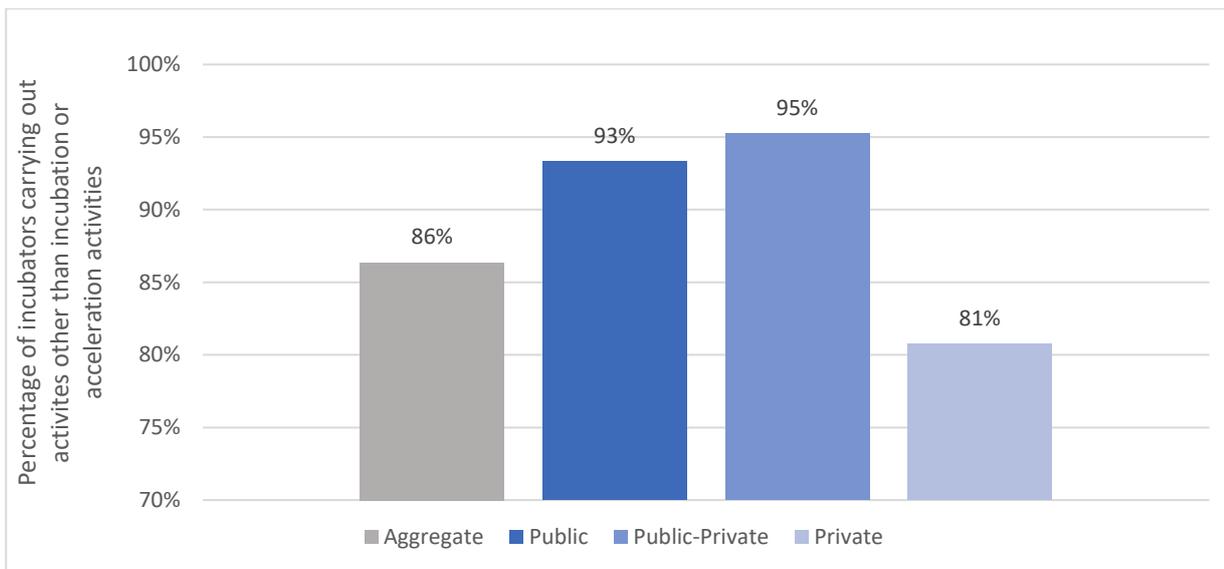
Almost the totality of Mixed Incubators and Public-Private incubators carry out activities other than the incubation/acceleration ones. Social Incubators and Private incubators are on average less likely to perform other activities compared to the other types of incubators.

Graph 32: Percentage of incubators carrying out other activities, by Typology



N Sample=88 incubators – Data Source: Database Incubatori SIM 2022 e Database AIDA

Graph 33: Percentage of incubators carrying out other activities, by Legal Status



N Sample=94 incubators – Data Source: Database Incubatori SIM 2022 e Database AIDA

### 4.3.6 Incubation time

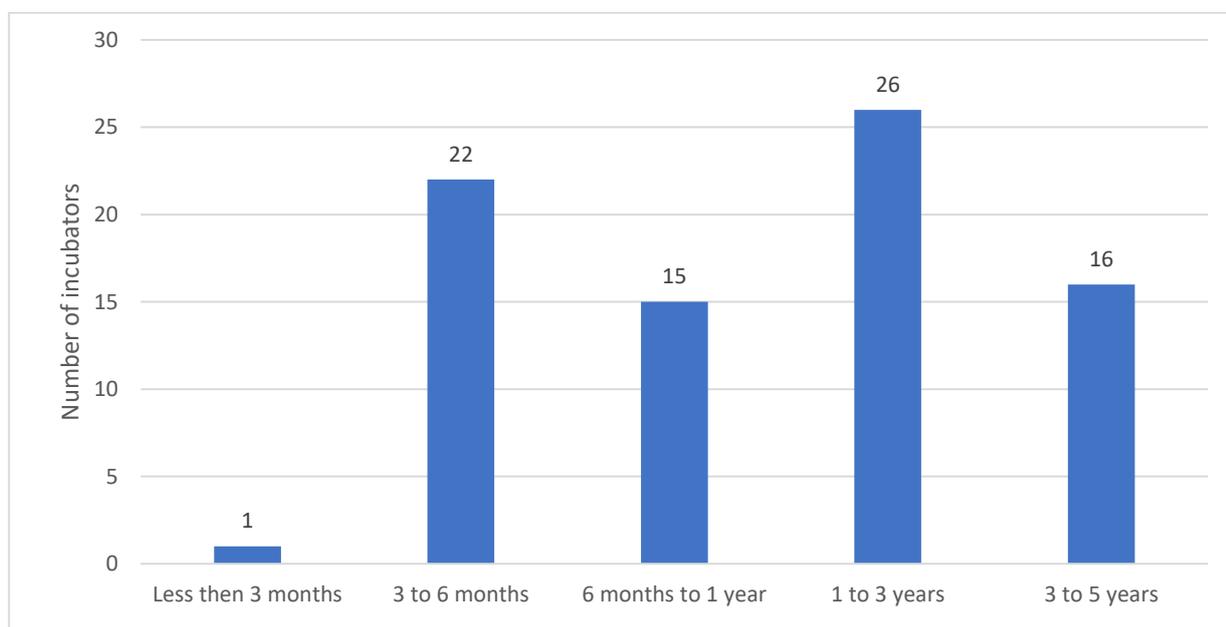
The average incubation time of the tenants is a very important variable as it represents an important strategic and differentiation choice. It also plays a very important role in the distinction between Incubators and Accelerators, because, as seen in the taxonomy part of the Literature Review, Accelerators tend to have a much lower acceleration time than Incubators, with an average of 1 to 4 months for Accelerators compared to 1 to 5 years for Incubators, as reported by Fehder and Hochberg, 2015. A very long incubation time is also one of the reasons why Fehder and Hochberg consider

## Analysis and Results

incubators to have less of an effect on tenants and the entrepreneurial ecosystem compared to Accelerators, given that Incubators are more incentivized in providing mainly co-working services to startups and not in actually trying to improve the company. Therefore, the analysis of the incubation time of tenants can reveal very important aspects of the incubation ecosystem in Italy.

In the below graph (34) it is noticeable how only 1 incubator has declared to have an incubation time lower than 3 months. 38 incubators have declared to have an incubation time lower than 1 year, and 55 have a higher than 1 year average incubation time. 13 incubators declared to have a highly variable incubation time due to different program typologies.

Graph 34: Number of incubators with average tenants' incubation time

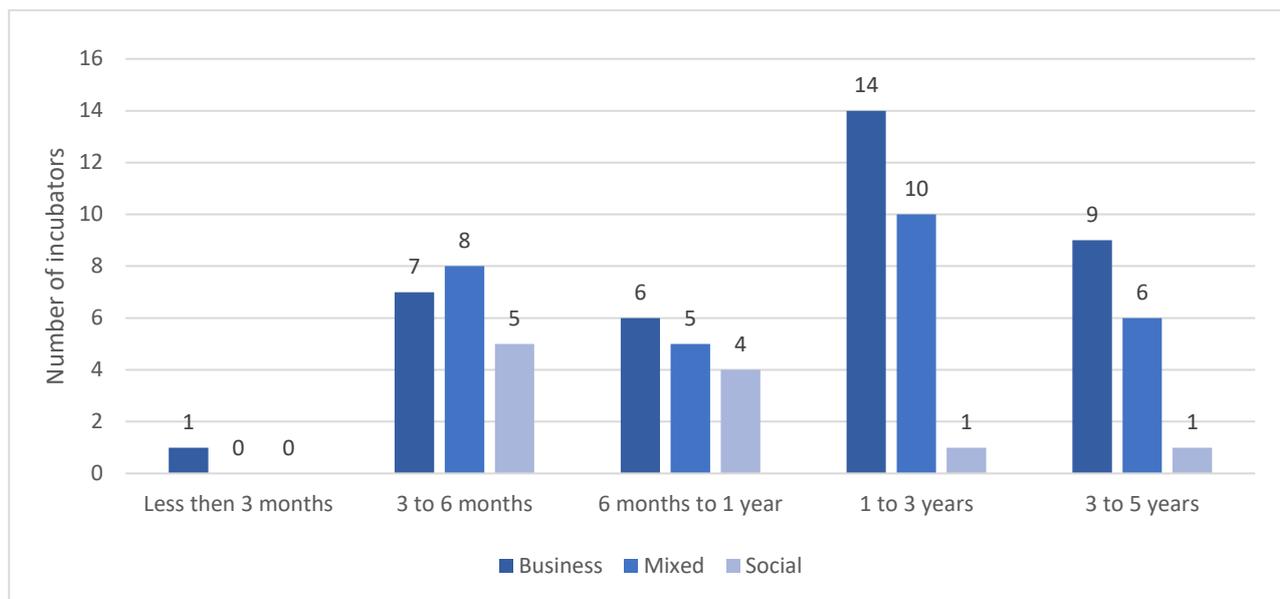


*N Sample=93 incubators – Data Source: Database Incubatori SIM 2022 e Database AIDA*

It is important to notice that, according to Fehder and Hocberg's definition of an acceleration program as an organization with an incubation time that is lower than 4 months, even enlarging the definition to 6 months, only 23 incubators in the sample could be considered accelerators, around 25% of the sample. It's interesting to notice how, as highlighted in graph 14, around 59% of the sample consider themselves as both incubator and accelerators, evidence of how the literature definitions are not commonly accepted even from the incubators themselves.

In the following graphs, the differences regarding average tenants' incubation time for the different typologies of incubators are highlighted.

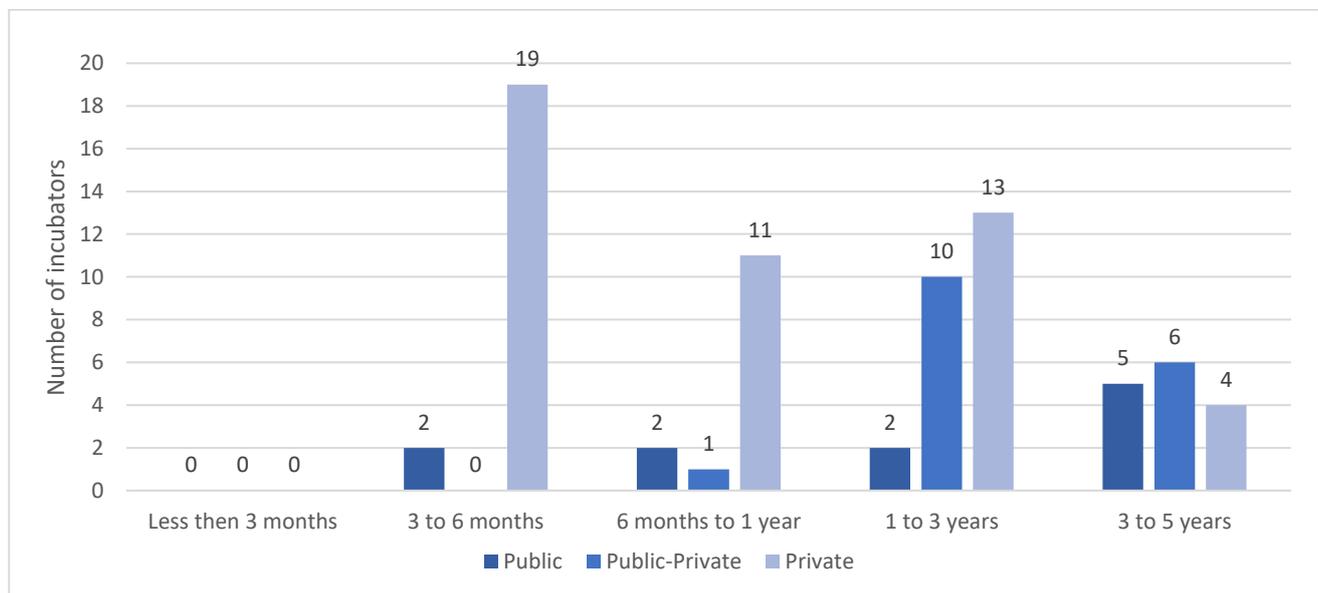
Graph 35: Number of incubators with average tenants' incubation time, by Typology



N Sample=88 incubators – Data Source: Database Incubatori SIM 2022 e Database AIDA

Business and Mixed incubators mostly declare to have an average incubation time of 1 to 3 years. Most Social Incubators have instead an incubation time of 3 to 6 months.

Graph 36: Number of incubators with average tenants' incubation time, by Legal Status



N Sample=87 incubators – Data Source: Database Incubatori SIM 2022 e Database AIDA

Private incubators tend to offer a much lower incubation time compared to Public and Public-Private incubators. In particular, Public-Private incubators mostly tend to offer an incubation time of between 1 and 3 years, and fully Public incubators are mostly declaring an average incubation time higher than 3 years.

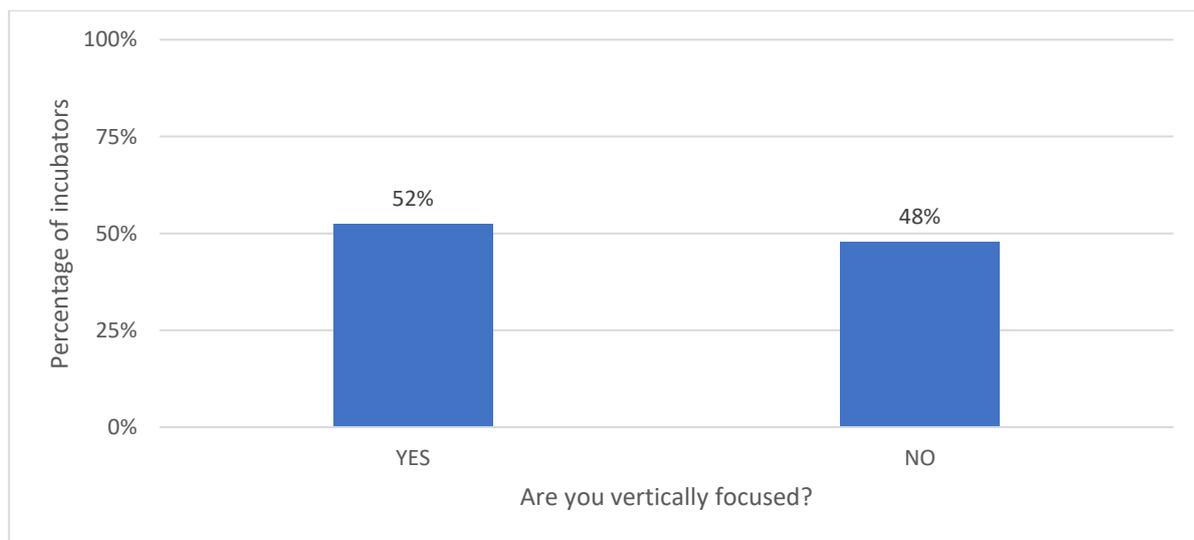
### 4.3.7 Competitive Scope: Focused and Diversified incubators.

As highlighted in the Literature Review, especially when talking about the work of Vanderstraeten and Matthyssens (2012) it is of particular importance the strategic choice of each incubator regarding their competitive scope. Incubation programs must choose whether to be focused on a given area or technology, allowing entrance only to startups belonging to the specified area, or be diversified, allowing entrance to startups active in a big variety of technological areas and markets.

As seen in the Literature Review, this single choice is extremely important as it directly influences the way incubators work and the services provided to the tenants.

In the questionnaire, a question asking whether the incubator is vertically focused (meaning it is focused) or not (meaning it is diversified) was included and the following graph represents the percentage of incubators answering yes or no to the question.

Graph 37: Percentage of incubators that are vertically focused



N Sample=93 incubators – Data Source: Database Incubatori SIM 2022 e Database AIDA

The sample is almost divided equally into focused and diversified incubators, with slightly more incubators that are vertically focused.

## **4.4 Services and Impact of Italian Incubators**

This paragraph summarizes the main results and observations coming from the data analysis of the questionnaire answers regarding services provided by Italian Incubators and the impact of incubators on tenants, measured, as commonly done in the Literature, through the amount of funding received by the incubated organizations. All the results are also analyzed through the lenses of the different typologies of incubators, as usual referring to Sansone's taxonomy and the different legal status of incubators.

### **4.4.1 Relevance of provided Services**

As previously seen in the Literature Review, and especially in section 2.4 when talking about Vanderstraeten and Matthyssens (2012), the way an incubator structure the provision of its services, creating and maintaining coherence with the other defining characteristic, is crucial in achieving competitive advantage. In the paper, the authors distinguished a set of services into failure preventers and success creators for focused and diversified incubators. Building on their work and Sansone et al. (2020), a list of the main services provided by incubation programs was drafted, and incubators in the population were asked whether they offered these services to their tenants. In particular, incubators answered one of the following:

- No (if they don't offer the service at all)
- Only to some specific tenants
- To most of the tenants
- To all the tenants

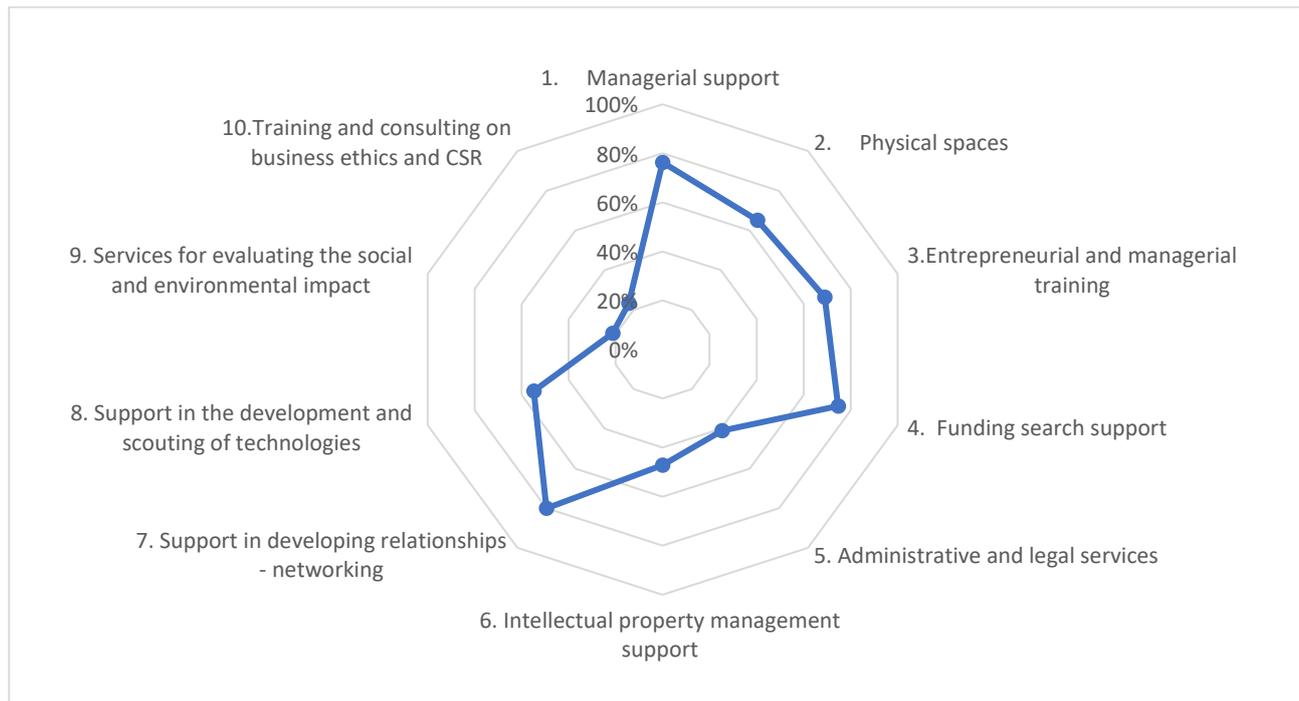
Based on a scoring system attributed to their answer it was possible to analyze the relevance of a specific service to a given incubator, and, averaging answers for every incubator, it was possible to understand how much a given service is relevant to the entire sample of incubators on a percentage scale (0 to 100%). The complete list of services that were used in the survey is the following:

1. Managerial support (e.g. business plan drafting, incorporation, business model development, mentoring, marketing and sales support, internationalization)
2. Physical spaces (including shared services)
3. Entrepreneurial and managerial training
4. Funding search support (including assistance in communicating with investors)
5. Administrative and legal services
6. Intellectual property management support
7. Support in developing relationships - networking (for example, with research centers, universities, government entities, companies, and other incubated businesses)

8. Support in the development and scouting of technologies
9. Services for evaluating the social and environmental impact of incubated businesses
10. Training and consulting on business ethics and Corporate Social Responsibility (CSR)

An overview of the average relevance of the service for the entire sample of incubators answering that question can be found in the graph below (38) where services are ranked on a percentage scale.

Graph 38: Relevance of services offered by Italian Incubators.



N Sample=81 incubators – Data Source: Database Incubatori SIM 2022 e Database AIDA

Incubators consider it very important to offer Managerial support, Support in developing relationships – Networking, and Funding Search support, since these services have a relevance close to 80%. They consider it important to offer Physical spaces, Entrepreneurial and managerial training, with a relevance score between 60% and 80%. Less relevant are Administrative and legal services and IP management support, and support in technology development and scouting, with a relevance of 40% to 60%. Incubators do not consider it relevant to offer Services for evaluating the social and environmental impact and training for business ethics and Corporate Social Responsibility (CSR).

It is interesting to see how the three most relevant services that Italian Incubators believe to be most relevant are considered, in the paper by Vanderstraeten and Matthyssens (2012). Managerial Support or what is called in the paper “Business support services”, is considered to be a “Failure Preventer”,

meaning that, being one of the basic services provided by the totality of incubators, not providing it would lead to failure. Also the two other most relevant services to Italian Incubators, namely support in relationship development or networking, and Funding search support are considered to be Failure Preventers (in the paper they can be mapped to the “Access to high-quality partners” service).

The less relevant services in the analysis, namely Administrative and legal services and IP management support, and support in technology development and scouting can be mapped instead to “Success Providers” services in the paper analysis.

The main implication of this reasoning is that there seems to be a certain coherency in the way incubators and startups see and consider the services that are offered, and there is the possibility of producing an analysis that is more accurate and detailed on the services provided and expected by the tenants that could have transnational value to incubators all around the world, and not only in a specific region, since the needs of startups, apart from particular cases and small regional differences, can be considered universally uniform.

The complete distinction between Failure Preventers and Success Providers' services from Vanderstraeten and Matthyssens (2012) was inserted in tables 8 and 9 of the Literature Review.

### **4.4.2 Differences in the Relevance of provided Services for different incubators' typologies**

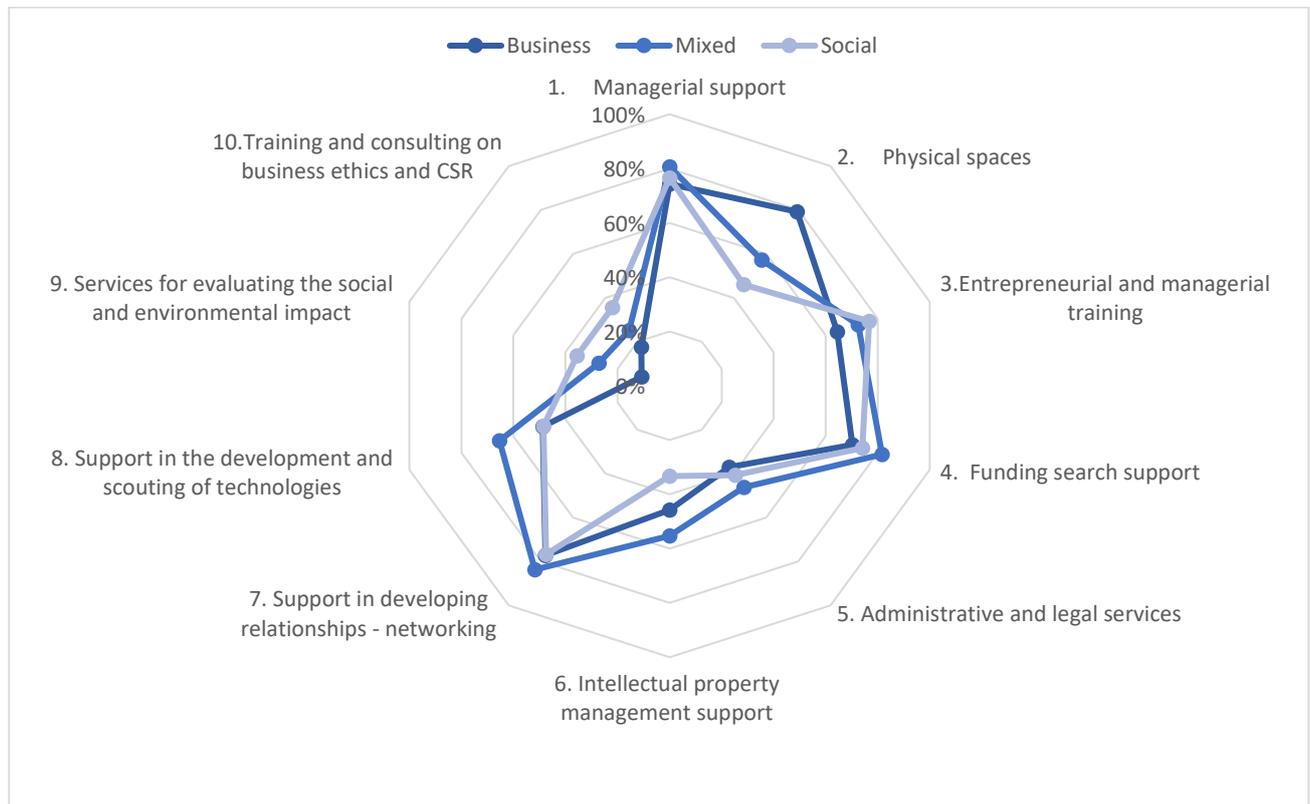
As extensively described in the Literature Review, the choice of provision of a given service is an extremely strategic decision that should be thought through on the basis of the incubator's competitive scope, overall strategy, and reference market. For this reason, it is important to analyze if differences in the relevance of services arise for different typologies and legal categories of incubators. As usual in the analysis, the results presented in graph 38 are further investigated to observe these differences. In Graph 39, the differences between Business, Mixed and Social incubators in the services provided while in Graph 40 the differences between Public, Public-Private, and Private incubators are presented.

Compared to other typologies of incubators, Business Incubators prioritize offering physical spaces. Mixed Incubators place greater importance on funding search support, technology development and scouting support, intellectual property management services, and administrative and legal services. Social Incubators place greater emphasis on services for evaluating social and environmental impact, entrepreneurial and managerial training, and training and consultation on business ethics and CSR.

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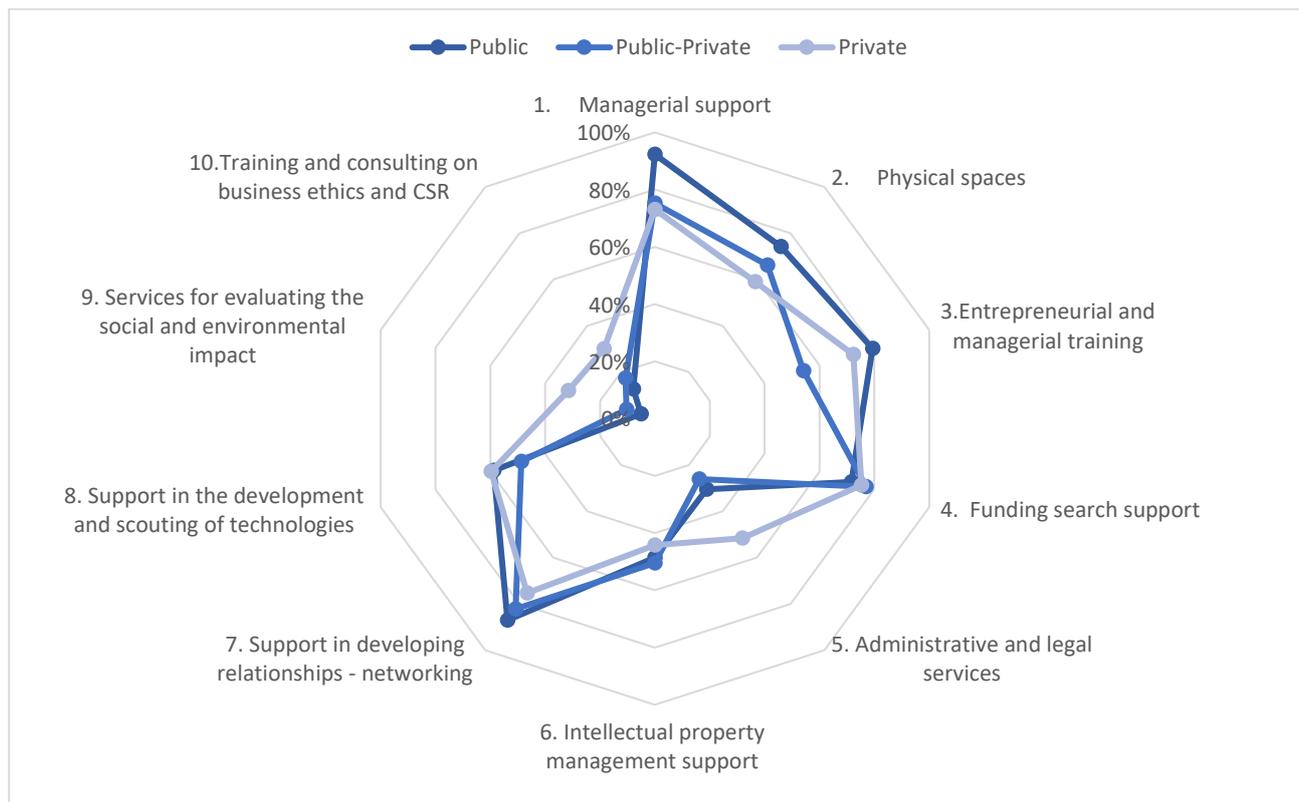
Compared to last year, Social Incubators have decreased their focus on services for evaluating the social or environmental impact of incubated businesses. Additionally, Business Incubators have greatly increased their emphasis on offering physical spaces (including shared spaces).

Graph 39: Relevance of services offered by Italian Incubators, by Incubator Typology



N Sample=80 incubators – Data Source: Database Incubatori SIM 2022 e Database AIDA

Graph 40: Relevance of services offered by Italian Incubators, by Incubator Typology



N Sample=80 incubators – Data Source: Database Incubatori SIM 2022 e Database AIDA

Compared to other categories of incubators, Public Incubators consider less relevant to offer Services for evaluating social and environmental impact and training and consulting on business ethics and CSR. With respect to these services, Private incubators are the ones that consider these more important. Public incubators are also the ones considering more relevant the provision of Physical spaces, Managerial support, and Entrepreneurial and managerial training.

Public-Private incubators tend to assume intermediate positions in the relevance of services, except for Entrepreneurial and managerial training, which is considered less relevant together with Administrative and Legal services.

Apart from Services from evaluating social impact and training on business ethics and CSR, Private incubators also focus much more on Administrative and legal services compared to the other categories and less on offering Physical Spaces and Managerial Support.

It can be interesting to compare the data presented here regarding the relevance of services to data presented in graphs 10 and 11 regarding averages of cost items of Italian Incubators.

We can see how Social Incubators have the lowest cost regarding facility management and generic services and are indeed the last typology for services related to physical space provision. Similarly, Business Incubators have the highest expenditure for facility management while also ranking first in

the provision of physical spaces. Something similar also happens when taking into consideration the relevance and cost of entrepreneurial training for Social and Business incubators.

Notice also how, as the relevance of training for Public-Private incubators is so low, also their expenditure for the provision of this service is low. The only incoherency between the 2 graphs is related to Public-Private incubators spending more than Private incubators in facility management when their relevance in the provision of Physical Spaces is lower.

However, from a generic point of view, this coherency is proof of how much the decision of providing a given service is strategic given its direct effect on the incubator expenses. The structuring of a Service Portfolio has to be performed in accordance with the expressed or tacit needs of startups, trying to grant those services that are "Failure Preventers", and as such must be provided independently of their cost impact, and choosing to enlarge their service pool with "Success Providers" services that have the lowest possible impact on the cost structure.

In light of the reasoning, the need for specific analyses related to Service perception and their cost impact is very much needed and extremely helpful to Incubators.

#### **4.4.3 Impact: Funding received by incubated startups**

One of the main indicators and proxies of the effect or impact of Incubators on their tenants is the funding received by the incubated organizations. This is particularly true for accelerators, the indicator is used indeed in the cited papers Gonzalez-Uribe and Leatherbee (2017) and Fehder, Hochberg (2014) as a proxy for accelerators' impact because one of the main objectives of accelerator programs is to prepare the tenants for receiving funding and capital and to act as facilitators, creating connections between tenants and the right investors. However, this indicator is meaningful also with organizations that act on early-stage startups like typical incubators and is vastly used in the Literature regarding incubators.

The survey sent to the incubator population contained the following question:

*"What is the total amount of funding received in 2021 by the organizations that you incubated/accelerated in 2021 (considering equity investments, grants, public grants, etc)? Please consider both organizations that you already supported and continued to support in 2021, as well as organizations that you started supporting in 2021."*

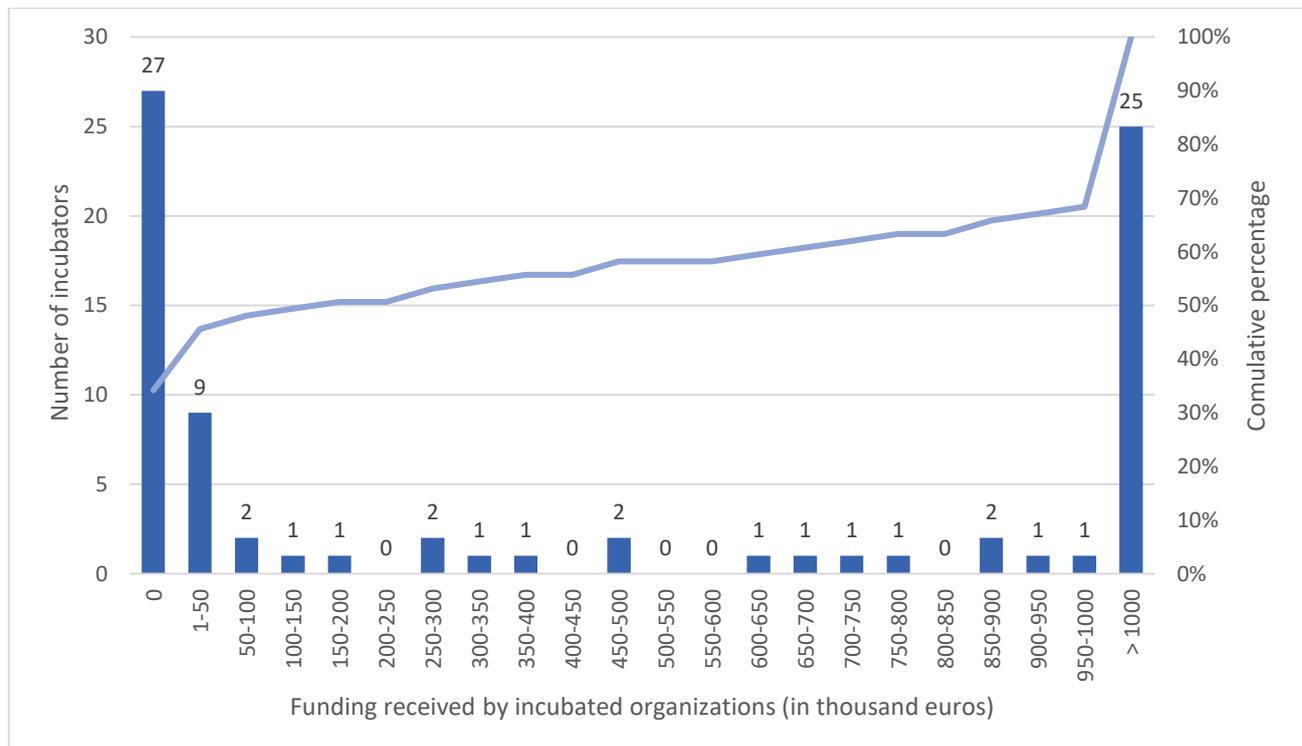
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As evident from the question, the funding considered is not only in equity investments but also considers private or public grants. Including public grants in the question is done with intention because, as also evidenced in Colombo-Delmastro (2001), access to public subsidies for incubated organizations is one of the aspects on which incubators in Italy usually have a strong impact.

The main findings related to funding received by incubated organizations can be found in Graphs 41 and 42 below.

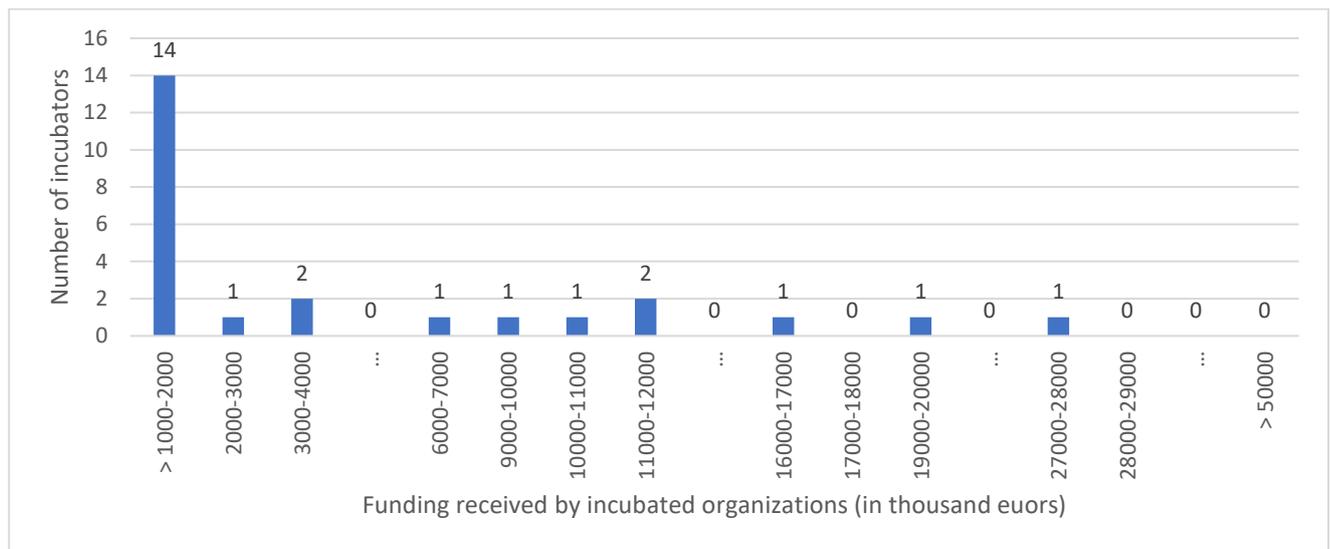
The total amount of funding for the sample of incubators answering the question is 155 M€. The average funding for incubators is 1,97 M€ and the median is 0,2 M€. Similar to what was previously seen in the analysis related to incubators turnover and the number of Incubation requests, the average being much higher than the median is an indication of the presence of a very small subset of highly successful and, in this case, also highly impactful incubators. This is particularly evident when looking at Graph 41, indeed the sample appears almost separated into two smaller sub-samples, one of which with incubators that declared the total amount of funding received by their tenants is either 0 or is inferior to 50 thousand euros and another one, made of highly impactful and successful incubators that declared the total amount of funding received by their tenants is above 1 M€. Graph 42 focuses on incubators with total funding above 1M€, to have a more clear view of the second sub-sample.

Graph 41: Funding received by incubated organizations (general)



N Sample=79 incubators – Data Source: Database Incubatori SIM 2022 e Database AIDA

Graph 42: Funding received by incubated organizations (above 1M euros)



N Sample=25 incubators – Data Source: Database Incubatori SIM 2022 e Database AIDA

As evident from Graph 42, the majority of incubators that declared total funding received by incubated organizations to be higher than 1M€, have declared a number between 1M€ and 2M€.

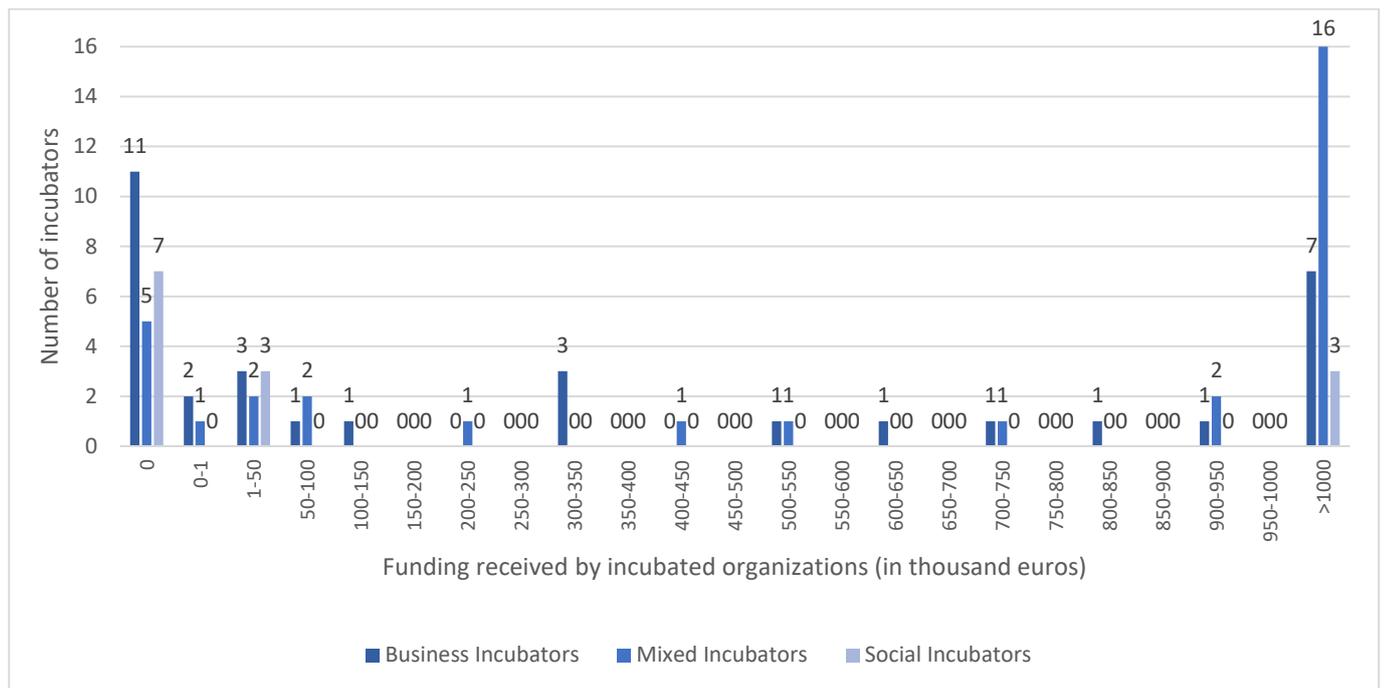
#### 4.4.4 Impact: Funding received by incubated startups, differences between typologies of incubators.

As usual in the data analysis process, and with the objective to identify the differences related to funding received by incubated startups between different typologies and legal categories of incubators, the data is further analyzed to reflect those differences.

In Graph 43 the total amount of funding received by incubated tenants is divided according to Incubator typologies Business, Mixed, and Social Incubators.

The majority of incubators that declared total funding higher than 1M€ belong to the “Mixed Incubator” category, as such this typology presents the highest average (3,45M€) and highest median (0,96M€). Social incubators have, on the contrary, the lowest average (0,373M€) and median (0M€).

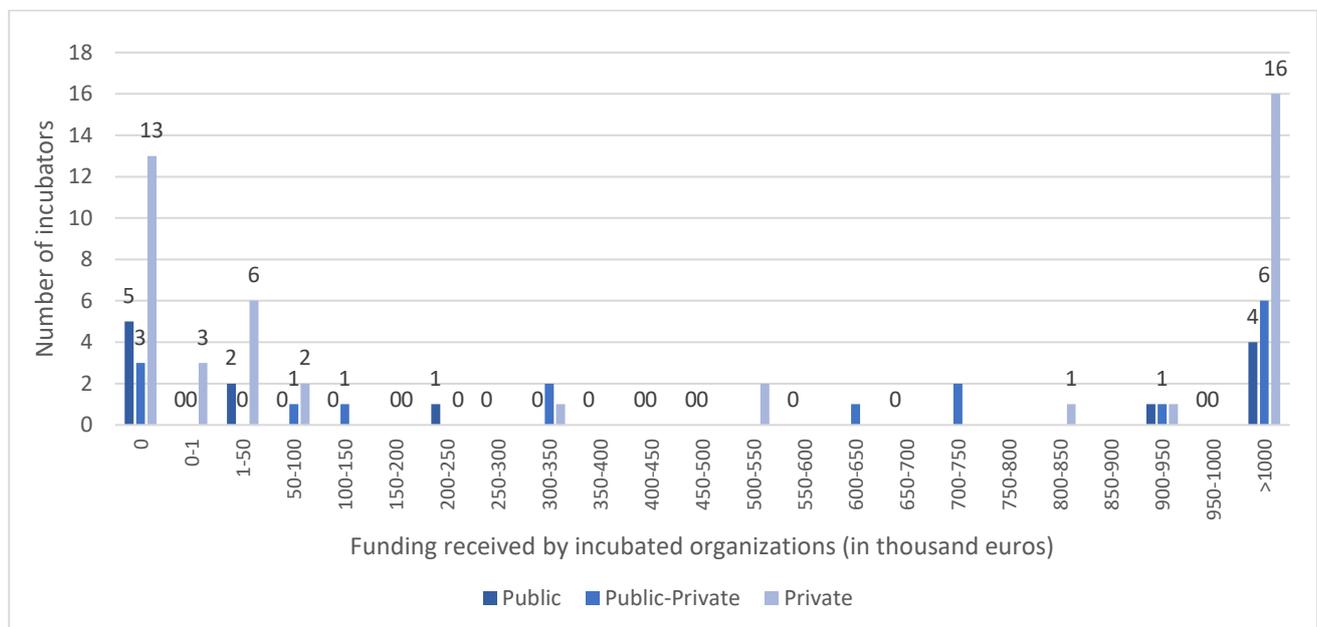
Graph 43: Funding received by incubated organizations, by Typology



N Sample=78 incubators – Data Source: Database Incubatori SIM 2022 e Database AIDA

In Graph 44 below, indications regarding the differences between Public, Public-Private, and Private incubators regarding this aspect can be appreciated.

Graph 44: Funding received by incubated organizations, by Typology



N Sample=75 incubators – Data Source: Database Incubatori SIM 2022 e Database AIDA

Public-Private incubators are the category that presents the highest average (4,6 M€) and median (0,7 M€), followed by Private incubators with an average of 1,5M€ and a median of 0,5M€ and Public incubators with an average of 0,7M€ and a median of 0,28M€.

The data presented suggest that Public-Private incubators are highly impactful to their tenants, proving that the collaboration between the public and private sectors can be particularly effective in the incubation ecosystem.

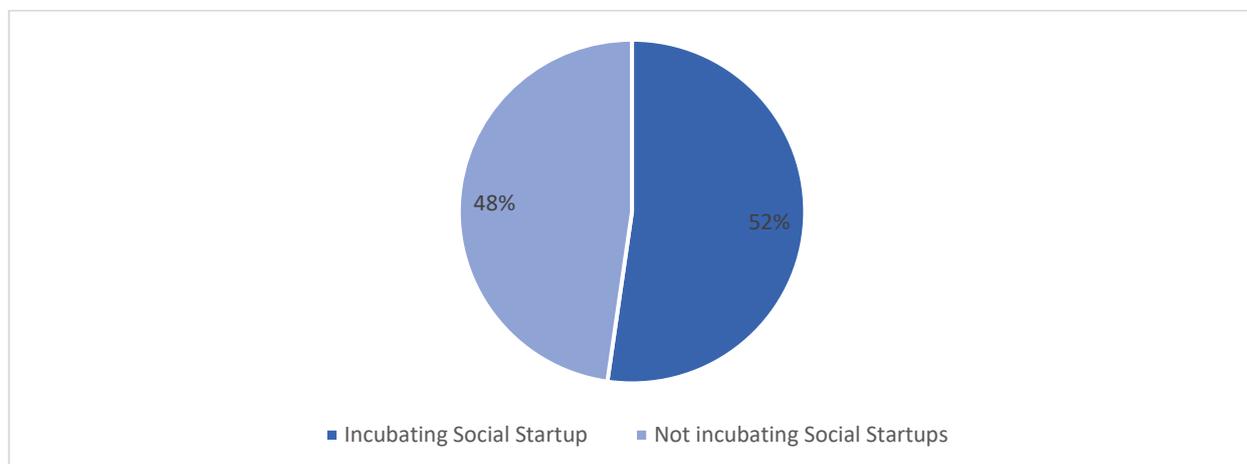
## **4.5 Supporting Social Startups**

In the Literature Review, after having introduced the concept of Social Entrepreneurship and Social Innovation, much work was dedicated to the concept of Social Enterprises, considered to be companies with a strong social objective, willing to achieve the so-called “blended value” through the use of a hybrid business model, mixing elements of a classical commercial or for-profit enterprise with elements of a non-profit enterprise.

The analysis performed during these months poses a strong accent on the Social aspect of incubators, from the identification of incubators according to Sansone’s taxonomy, which distinguishes incubators according to the amount of Social Startups (or startups with a strong social aim) incubated, to the analysis of the differences or peculiarities that these kinds of incubators need to face when incubating Social Startups. In this paragraph, a more in-depth view of the results related to Incubators that are incubating Social Enterprises is given, with a focus on Social Sectors, difficulties, and measurement of Social Impact.

This type of analysis is extremely relevant, not only because of the increasing attention toward the creation of sustainable models of enterprises and entrepreneurship that take into account the creation of “Social Value”, but also because the phenomenon of incubation of Social Enterprise is extremely real and evident from the number of incubators that declare to incubate Social Startups. In Graph 45, it is noticeable how more than half of the incubators in the sample have declared to incubate Social Startups.

*Graph 45: Incubators declaring to support at least one Social Startup*



*N Sample=86 incubators – Data Source: Database Incubatori SIM 2022 e Database AIDA*

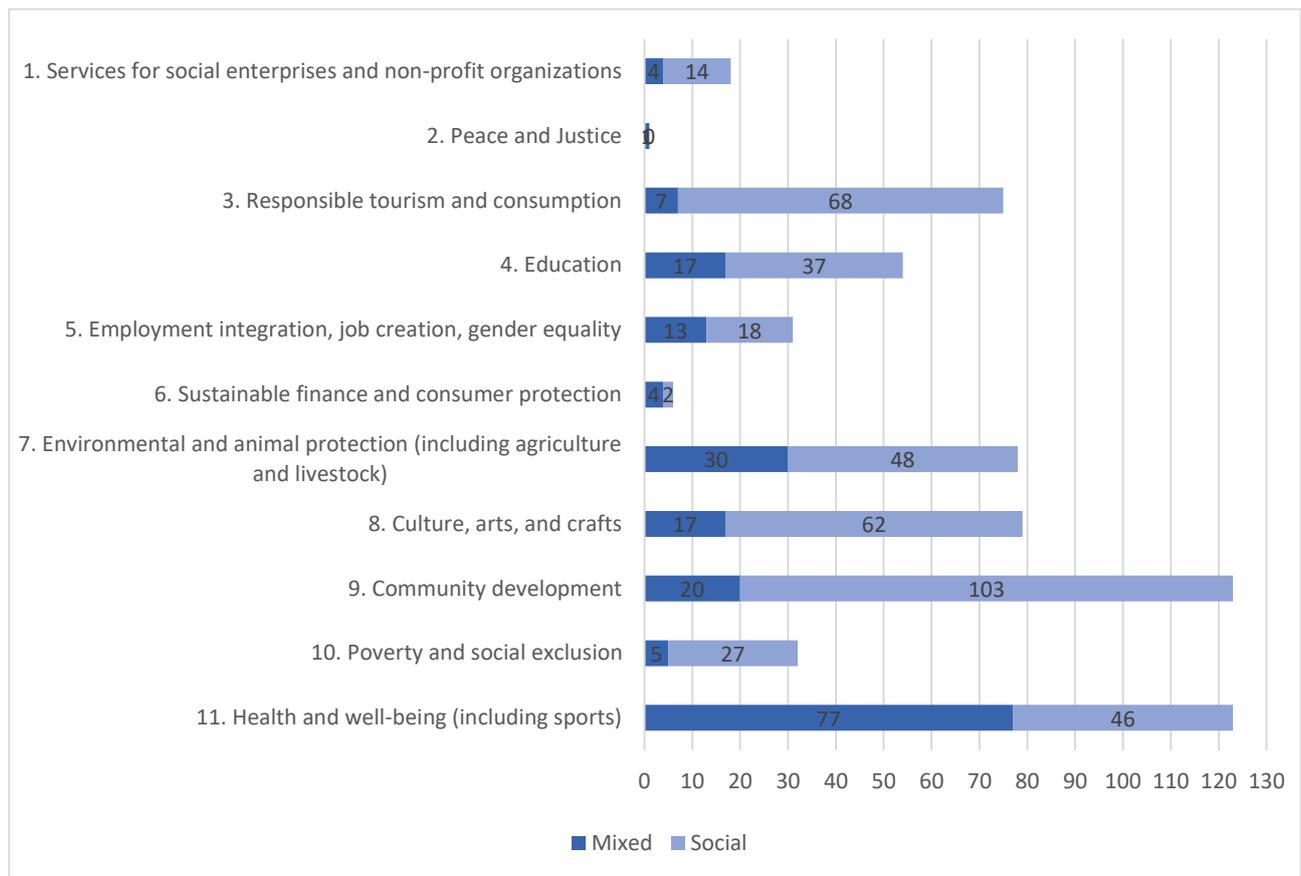
### **4.5.1 Sectors of incubated Social Startups**

The population that declares to support Social Startups, which is composed only of Mixed and Social Incubators according to the taxonomy widely used in this Thesis, was asked to indicate the number of incubated organizations active in the social sectors in the following list:

1. Services for social enterprises and non-profit organizations
2. Peace and Justice
3. Responsible tourism and consumption
4. Education
5. Employment integration, job creation, gender equality
6. Sustainable finance and consumer protection
7. Environmental and animal protection (including agriculture and livestock)
8. Culture, arts, and crafts
9. Community development
10. Poverty and social exclusion
11. Health and well-being (including sports)

The results gathered are summarized in Graph 46 below, counting the total number of incubated organizations active in a given sector and dividing the ones incubated by Mixed and by Social Incubators.

Graph 46: Sectors of incubated Social Startups, by Typology of incubator



N Mixed Incubators =33 incubators – Data Source: Database Incubatori SIM 2022 e Database AIDA

N Social Incubators=13 incubators – Data Source: Database Incubatori SIM 2022 e Database AIDA

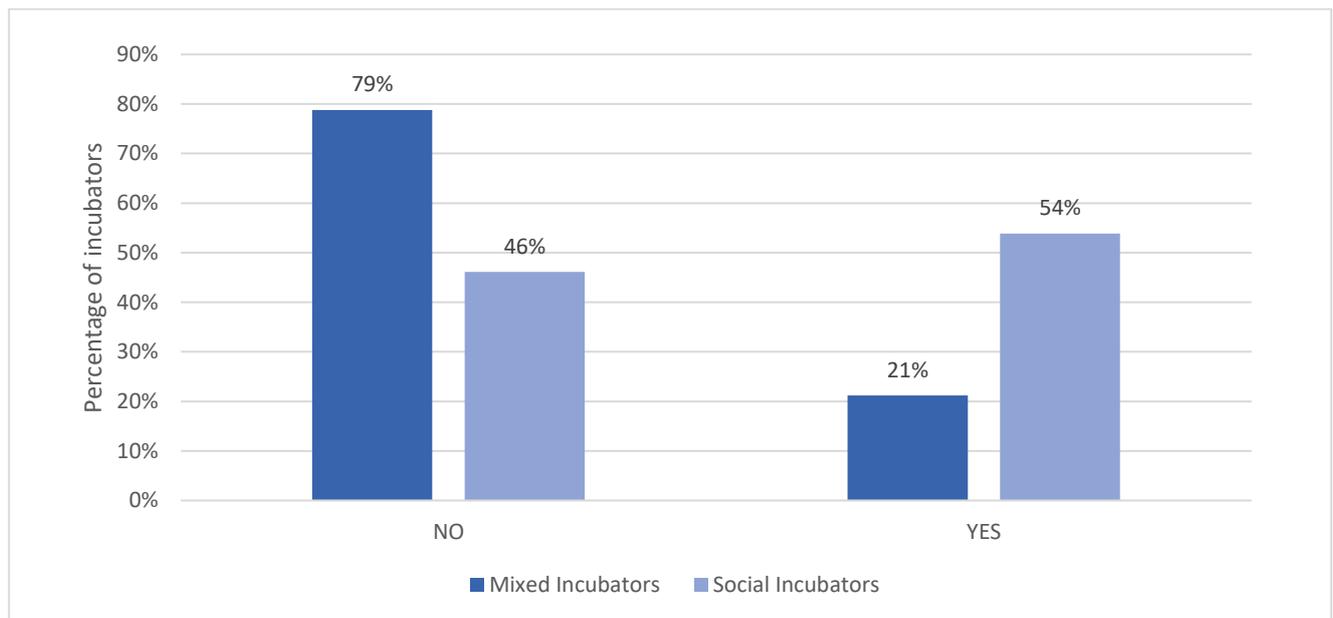
The sectors with the highest number of incubated startups are sector 9 Community Development and sector 11 Health and well-being (including sports). The least represented sectors in the sample are 2 Peace and Justice and 6 Sustainable finance and consumer protection.

#### 4.5.2 Measuring the Social Impact of incubated Startups

As highlighted in Literature Review, and in particular in the analysis of Zahra and Wright (2016), to shift the entrepreneurial mindset from the simple view of entrepreneurship as a creator of economic value to the modern and more sustainable view of entrepreneurship as an engine of “blended value” it is necessary to think and use measurements of the Social Value component of the desired “blended value”.

Mixed and Social incubators were asked whether they use measurements of the Social Impact of their incubated startups, and answers to the question were processed and are presented in Graph 47 below.

Graph 47: Incubators answer whether they use measurements of Social Impact for their tenants



*N Mixed Incubators =33 incubators – Data Source: Database Incubatori SIM 2022 e Database AIDA*

*N Social Incubators=13 incubators – Data Source: Database Incubatori SIM 2022 e Database AIDA*

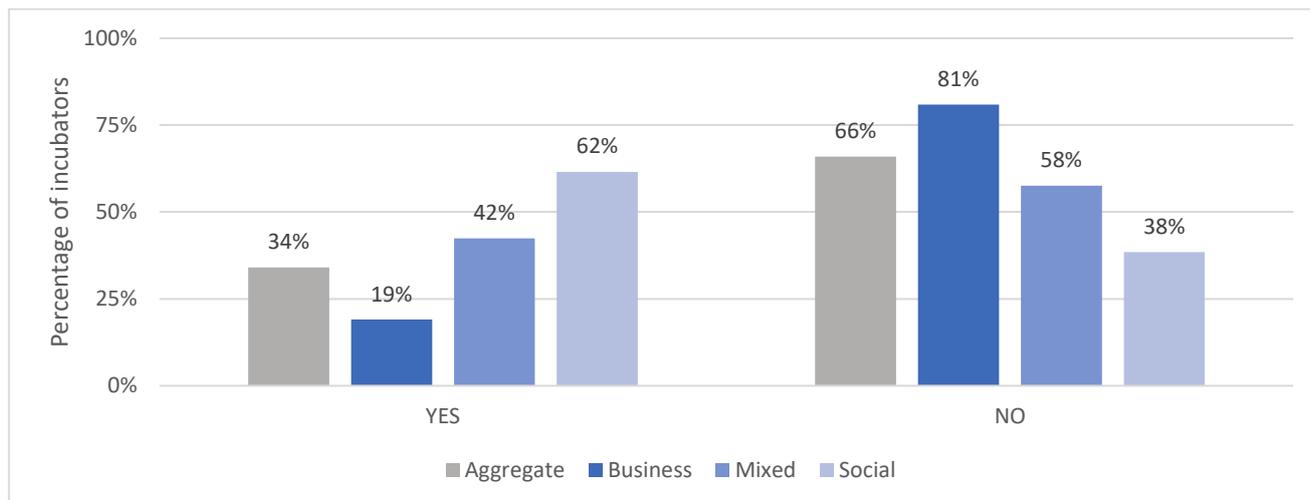
As can be noted in the Graph, 79% of Mixed Incubators have declared that they don't use measurements of Social Impact. The majority of Social Incubators instead declare that they are using measurements of Social Impact. The use of shared metrics for the creation of Social Value is necessary and could be helpful to incubation programs supporting Social Startups as it would help them in assessing with more precision Social and Environmental Impact and could facilitate the provision of specific services to Social Enterprises.

### 4.5.3 Measuring the Social Impact of the Incubator

In paragraph 4.5.2, it is highlighted the importance of adopting metrics of Social Impact for measuring the creation of Social Value from the incubated tenants. However, it is equally important that incubators apply Social Impact metrics to themselves, to measure whether they are producing Social Value and try to quantify their impact on society as a whole.

A question was asked to the entire population of Italian Incubators asking whether they use Social Impact measures to quantify their social impact. Results are shown in Graph 48 below for the different incubators' typologies and in Graph 49 for the different incubators' legal statuses.

Graph 48: Incubators answer whether they use measurements of Social Impact for themselves, by Typology

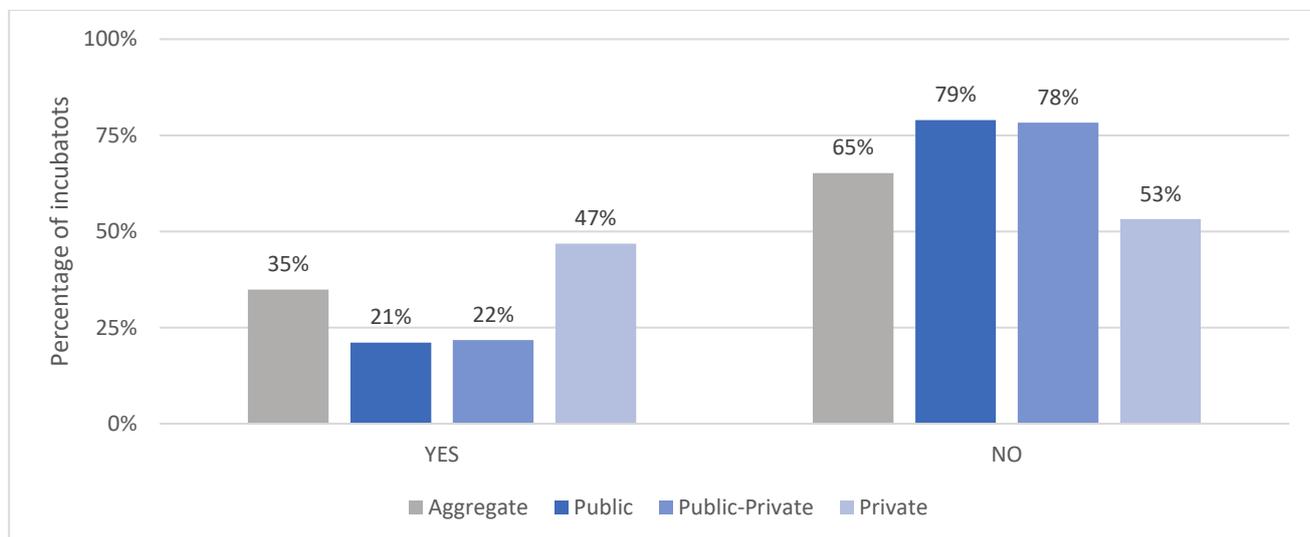


N Incubators =89 incubators – Data Source: Database Incubatori SIM 2022 e Database AIDA

Social Incubators are the typology of incubators that is more attentive to measuring their own Social Impact, with more than half of Social Incubators declaring to use Social Impact measures. It is interesting to see how Social Incubators use more Social Impact metrics to measure their own Social Impact than the one produced by their incubated Social Startups.

Business incubators are the typology of incubator that is less likely to use Social Impact metrics.

Graph 49: Incubators answer whether they use measurements of Social Impact for themselves, by Legal Status



N Incubators =89 incubators – Data Source: Database Incubatori SIM 2022 e Database AIDA

Private incubators are more likely to apply metrics of Social Impact to themselves compared to the other categories of incubators. However, no category of incubators according to their legal status has more than half of their members using Social Impact metrics. Public and Public-Private incubators have similar numbers in the adoption of Social Impact metrics.

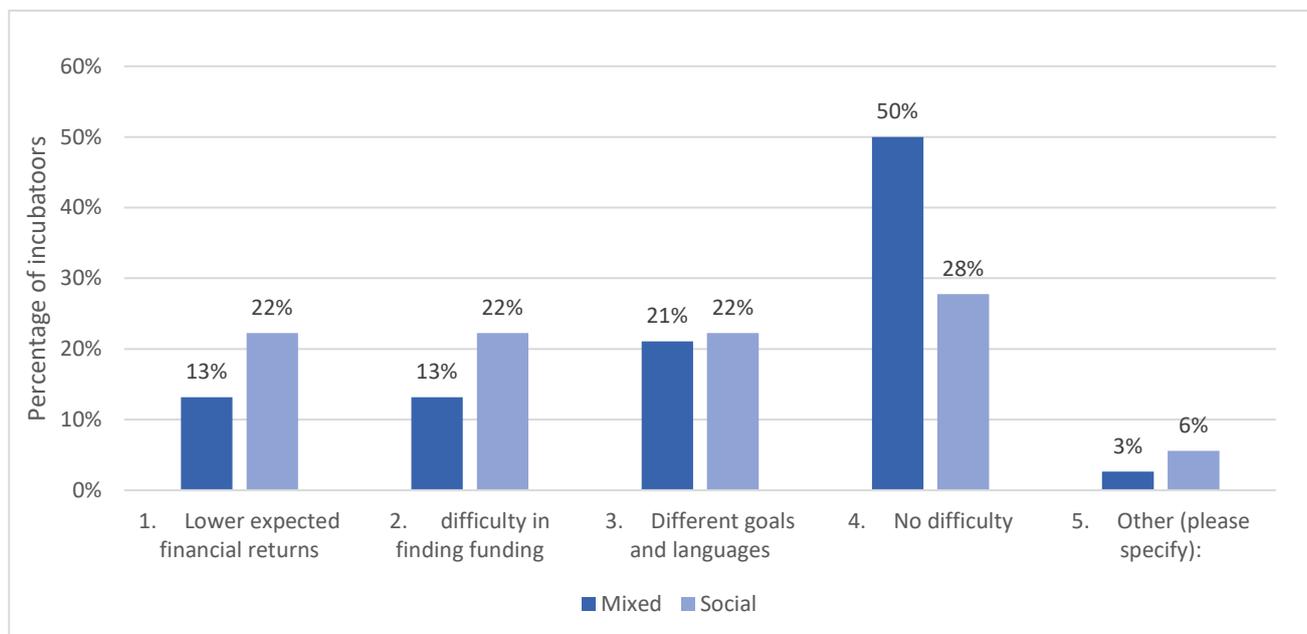
#### 4.5.4 Difficulties of incubating Social Startups and Specific Services

Mixed and Social Incubators were asked whether incubating Social Startups presented more difficulties than incubating classical for-profit enterprises. In particular, the population of Italian Incubators was asked to answer the question “What difficulties have you encountered in supporting entrepreneurial teams and organizations with significant social impact?”. Possible answers were:

1. Lower expected financial returns
2. difficulty in finding funding
3. Different goals and languages
4. No difficulty
5. Other (please specify):

Results, divided by Mixed and Social Incubators, are presented in Graph 50 below.

Graph 50: Difficulties in supporting Social Startups



N Mixed Incubators =33 incubators – Data Source: Database Incubatori SIM 2022 e Database AIDA

N Social Incubators=13 incubators – Data Source: Database Incubatori SIM 2022 e Database AIDA

50% of Mixed Incubators have declared that they don’t encounter any difficulties in incubating Social Startups and the main difficulty for Mixed Incubators is the diversity of goals and languages. Only 28% of Social Incubators have declared that they don’t encounter any difficulties in incubating Social Startups, with the encountered difficulties equally spread between lower expected financial returns, difficulty in finding funding, and different goals and languages.

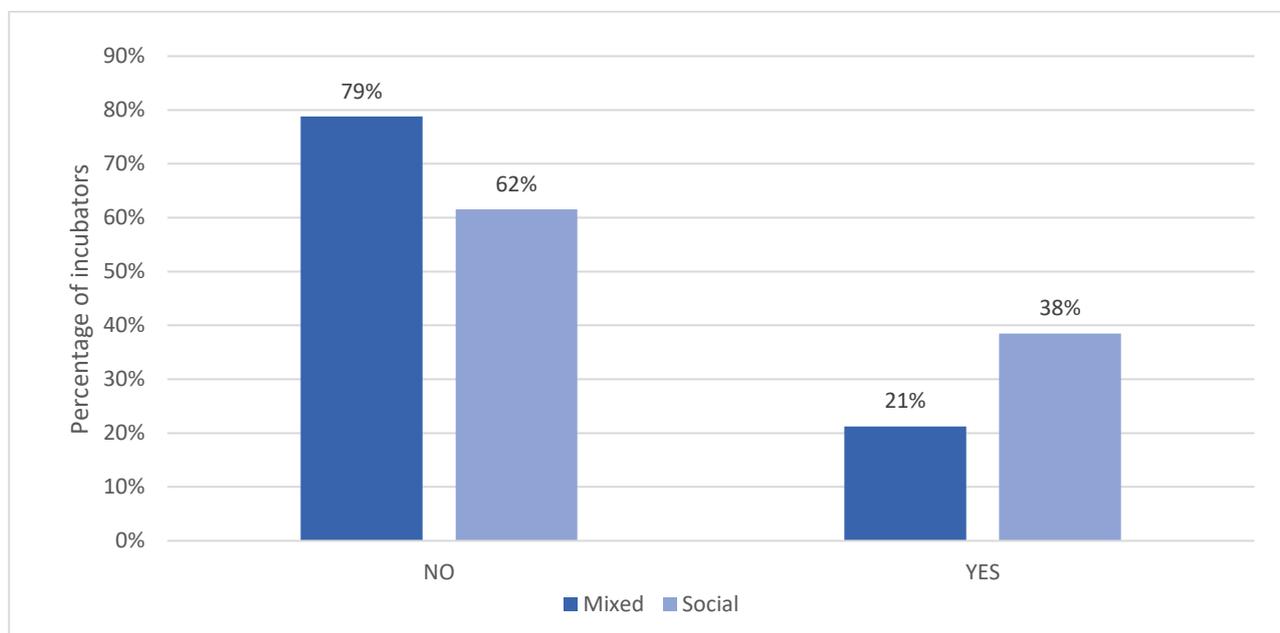
From the results, Mixed incubators seem to have either fewer difficulties in the incubation of Social Startups or an inferior level of understanding of the main problems characterizing this typology of

startups. In particular, given that Mixed Incubators are also less inclined in using measurements of Social Impact, there is the possibility that their level of attention to Social Startup peculiarities is lower than the one of Social Incubators.

The main problem indicated by both Mixed and Social incubators is the diversity of goals and languages. This diversity of goals is linked to what Doherty et al. (2014) called hybridity, which is at the same time source of legitimacy in front of stakeholders but can also lead to “mission drift” when the profit and social goal are not balanced and placed in a trade-off position, and, due to arising internal tensions, the organization accommodates the profit goal over the social goal.

The difficulties and peculiarities that emerge when incubating this type of startup might lead to the decision of incubators to offer specific services, tailored to serve the needs of the Social Startup niche. The decision of choosing to include these kinds of services in their service pool is highly strategic and might differ based on the number of startups that belong to one or the other category. To confirm this reasoning, a question in the survey asked Mixed and Social incubators whether they have offered specific services to the incubated Social Startups. Answers were registered and results are visible in Graph 51 below.

*Graph 51: Incubators answer whether they provide specific services to incubated Social Startups.*



*N Mixed Incubators =33 incubators – Data Source: Database Incubatori SIM 2022 e Database AIDA*

*N Social Incubators=13 incubators – Data Source: Database Incubatori SIM 2022 e Database AIDA*

## *Analysis and Results*

As expected, Social Incubators are more likely to offer specific services to Social Startups compared to Mixed Incubators. This might be due to the higher number of Social startups incubated by this typology of incubators (more than 50% of total incubated startups are Social Startups). However, even for Social Incubators, the majority of the sample does not provide specific services to Social Startups, signaling that, at least for most incubators, the service pool provided cover also the needs of this particular typology of startups.

## **5. Discussion**

The results of the data analysis provide an overview of the situation of incubation programs in Italy, with interesting results concerning all the most important aspects of Incubation. Most of the findings and the considerations that can be done by looking at these results are coherent with expectations coming from the analyzed studies that were presented in the Literature Review. In this part of the Thesis, the most interesting points that emerged from the data analysis results are linked to considerations and remarks made in the Literature, in an effort to synthesize common points and evidence points of attention.

First of all, the analysis confirms the fact that there is a lack of agreed-upon definitions and an agreed-upon taxonomy (Mian, Lamine, Fayolle, 2016), especially when talking about distinguishing between incubators and accelerators. Subjective perception of what can be considered an accelerator and what can be considered an incubator is extremely fallacious, and result in confusion and difficulties in discerning the two concepts, both from the point of view of Incubation programs and from the point of view of researchers. According to most of the Literature, an accelerator can't only be defined based on the stage where startups are when accelerated but is defined also by the contemporary presence of shared characteristics, like short fixed-term duration, a cohort model, a graduation day, and the provision of seed capital to tenants. As seen in the analysis, this definition of accelerators is not, however, shared by the population of incubators, that are considering themselves as accelerators, even when lacking some defining characteristics, like capital provision to tenants and short fixed-term duration. This lack of agreement on definitions is not merely an academic issue but has deep implications, given that, as evidenced by Fehder and Hochberg (2015) generalizing conclusions gathered from the analysis of accelerators to generic incubators might lead to errors. One of the main limitations of this study, shared with similar studies and research, might reside in the difficulties in discerning between incubation and acceleration programs, due to the fact that questions related to this issue are directly asked the population, which is generally unaware of this lack of agreement in the definitions. It might be optimal, in future research studies, to try to construct a definition of an acceleration program based on defining observable characteristics of the program, similar to the one given in the taxonomy part of the Literature review, and then distinguish the subset of the population belonging to the "accelerator" category based on whether they contemporary have all the defining characteristics.

## *Discussion*

Concerning characteristics regarding design choices related to the structuring of the incubation program, the results confirm what Literature generally suggests in that there are different approaches to program structuring. Each one of these approaches has common characteristics, due to different strategies and design choices. Pauwels, Clarysse, Wright and Van Hove (2016) suggest in particular that accelerators, seen as a “new generation incubation model”, are characterized by particular key design parameters with significant differences compared to “classic incubators” in the choice of services provided, selection process and provision of capital. Some of those differences are emerging also in the data analysis, with a subset of incubators using an “accelerator-like” model with shorter incubation time, propensity to use the cohort model, and the Call-Selection mechanism. The other approach is characterized by a longer incubation time, an open selection mechanism, and no cohort model. Social incubators and Private incubators tend to structure their program following the first approach while the second one is privileged by Business and Public incubators. The existence of patterns in the characteristics of incubation programs might be an important point to investigate as it would mean that some design choices are linked and aimed at a specific strategy, in a similar way to what Vanderstraeten and Matthyssens (2012) investigated with the choice of services, seen as a strategic choice tailored to fulfill a very precise strategy.

An important observation to make is that some of the results highlight the presence of very few highly successful incubators, in particular, analyses concerning incubators turnover, the number of Incubation requests received, and the total amount of funding received by incubated organizations, underline how a very narrow subset of the population is made of incubators that are on a very different level compared to the rest of the population, both in term of the impact made on the tenants and of commercial success. This observation can be linked to the findings of Grimaldi and Grandi (2005), who advocated for the existence of two different “models” of incubators, the first one supporting small entrepreneurial activities in local target markets, and the second one supporting highly promising entrepreneurial ideas that have the capacity to be disruptive but are also riskier. Of course, incubators belonging to the “model one” will have lower total turnover and an inferior total amount of funding received by the incubated tenants compared to incubators belonging to the “model 2” category. Even though attention is often addressed towards the “model 2” incubators, which generally incubate high-potential startups, the role of the “model 1” incubators don’t have to be underestimated. This is also true for Social Incubators, as expressed in Miller and Stacey (2004), since also Social Enterprises have different needs and potential, with some Social Startups willing to achieve large-scale and rapid growth and others willing to stay smaller or scale less rapidly.

## *Discussion*

The existence of two different types of incubators for Grimaldi and Grandi (2005) is a consequence of the existence of the different needs of startups with different potential and growth possibilities. These two types of startups, distinguished as typical startups and High Growth Firms (HGFs), have extremely different effects on innovative output, job creation, and wealth generation, and policymakers should focus on incentivizing the small subset of HGFs and eliminating incentives for the creation of small firms that do not have good enough probability of surviving, creating jobs and enhancing economic development (Shane, 2009; Mason and Brown, 2011).

One interesting observation that confirms one key concept of Vanderstraeten and Matthyssens (2012) is derived from the graphs related to the relevance of services provided. As expressed in the paper, the choice of providing a service should be coherent with the needs of the particular type of startups that are incubated. In the paper, differences in the expectations for such services from startups in focused and diversified incubators are highlighted. In the service analysis in this thesis, those differences in the services provided are evident in the distinction between Business, Mixed and Social incubators.

The differences in the provision of services between the different typologies of incubators are in line with the findings of Von Zedtwitz, and Grimaldi (2006), which proved how differences in competitive scope and strategic objectives influence the provision and quality of incubation services. The coherency observed between the graphs related to cost items and the graphs related to the relevance of services provided is an indication that the choice of a given service has an immediate effect on the expenses of an incubator. Choosing strategically the niche of startups to incubate in such a way as to reduce the cost associated with services is something possible, as evidenced for example by Virtual Incubators that, by choosing to incubate startups that do not need to rent a physical space, can focus on the provision of more relevant services and can limit the expenses related to facility management.

The study is highly focused on the role that incubators can have and are having as catalyzers and promoters of social entrepreneurship. The totality of the data analyzed and the graphs produced was analyzed through the lenses of Sansone's taxonomy that was introduced in the Literature Review, with the objective of identifying the main differences and peculiarities of incubators that choose to support Social Startups. An important part of the work and this Thesis is dedicated to giving an outlook of the peculiarities of incubating Social Startups, on the main sectors in which social tenants are active, and on the use of metrics of Social Impact. All the work is based on and linked deeply to the studies of Shaker A. Zahra and Mike Wright (2016), in the firm belief that Social Entrepreneurship

## *Discussion*

is an essential concept that must be fostered in order to go past the vision of entrepreneurship as mainly an economic engine and embrace the vision of entrepreneurship as an engine of blended value. Doherty (2014) was also essential in defining the characteristics of Social Enterprises, and consequently the concept of Social Startups that is essential in the use of Sansone's taxonomy.

In the aspects of Social Incubation, the overall outlook of the study is positive, with more than half the population of incubators that declare to support Social Startups and a strong diffusion in the last years of Social Incubators as evidenced by the graphs related to the age of incubators. However, this typology of incubators is still composed of overall small programs, with a low number of employees and turnover, with a huge part of their revenues and funding coming from donations. It is evident that these types of incubators need to grow in order to have a greater impact on the entrepreneurial ecosystem.

It can also be noticed how Social Incubators are more prone to declare that they are encountering more difficulties in incubating Social Enterprises compared to Mixed Incubators. The difficulties in incubating Social Enterprises are all based on the peculiarities of the organizations and might affect significantly the ability of incubators and accelerators of scaling these organizations, especially if the incubation programs do not change their typical incubation approach in favor of an appropriate approach, tailored to the needs and peculiarities of Social Enterprises (Casasnovas, Bruno, 2013). Incubators and accelerators, as well as investors, should take into account that, given that Social Enterprises deliberately harness market dynamics to address social issues (Fiona Wilson, James E. Post, 2013), meaning that these organizations are not profit-maximizing, the success or the impact of these organizations can't be measured only with traditional measures of economic success.

Also, it is interesting to notice how, similarly to what Fonseca and Jabbour (2012) have found about Brazil Incubators, Italian incubators tend to not use any particular metrics of environmental or Social Impact.

Another relevant point to take into consideration is related to the geographic distribution of incubators. The results of the study show again how Italy is divided into two main regions, with more than half of the incubators that are present in the North of Italy. The results of Fehder and Hochberg (2014) proved how the presence of an Ecosystem Accelerator in a target region can enhance the amount of funding in that target region and as such is able to stimulate the totality of the entrepreneurial ecosystem. Given the results of the research, policymakers willing to develop the entrepreneurial ecosystem in a target region, especially in the South of Italy should take into account this study and try to facilitate the constitution of this type of organization, maybe using a collaboration

## *Discussion*

model between the private and public sector, that, as evidenced in the research, is proved to work very well in Italy.

Regarding the successful collaboration of the Public and Private sectors, as evidenced by James Phills, Kriss Deiglmeier, and Dale T. Miller (2008), the shift from the vision of the Public sector from mainly an antagonist, a restrictor for entrepreneurial activities, to a facilitator and a partner in the development of entrepreneurial activities, is a key factor in the development of Social Innovation. The presence of a strong subset of Public-Private incubators (20% of the total population) in Italy is an indicator of how this collaboration is possible and could be a successful model of incubation especially targeted at the development of Social Innovation in regions that are behind in the development of an autonomous entrepreneurial ecosystem.

## **6. Conclusions**

The objective of the thesis is to provide a comprehensive update on the research on Italian incubators, including data from 2021, and to contribute to the understanding of the state of the incubation ecosystem in Italy. The main objectives of the thesis are to understand the differences between different typologies of incubators, especially with regard to the incubation of social startups, and to understand the differences between public and private incubators. The attention given to the social sphere and social startups is intentionally trying to push the vision of entrepreneurship towards the production of social value, as well as economic value. This will provide a more complete picture of the impact that incubators can have on society and help to inform decisions and actions related to supporting and fostering the growth of socially impactful startups in the country. Additionally, the thesis aims to enrich the quantitative results obtained in the research with qualitative points made in the literature. This will provide a more complete picture of the incubation ecosystem in Italy and help to inform decisions and actions related to supporting and fostering the growth of startups in the country. Overall, the thesis aims to contribute to the understanding of the incubation ecosystem in Italy and to support the growth and development of startups in the country, with a focus on socially impactful ventures.

Before expressing and summarizing the main conclusions of the research, it is useful to address the limitations of this study, in order to set boundaries for the applicability and interpretation of the results.

Firstly, the data collected is solely from Italy, and therefore, the results cannot be universally applied to other regions or countries. Secondly, the research is promoted by SIM, which is based at the Politecnico di Torino, and from partners that are mostly located in the Northern part of Italy, which introduces the possibility of geographic and regional bias in the data collected, given that the amount of contacts with incubators based in this region is surely higher than with southern regions. Similarly, the propensity to respond to the questionnaire might have been higher for incubators that have links with Universities or with research partners.

The study also lacks a comprehensive view of other incubation actors such as corporate incubators, universities, and research centers, which could provide a more comprehensive picture of the incubation ecosystem. Although an attempt to divide incubators also according to their belonging to the category of University and Corporate Incubators, the data analysis was mostly performed in relation to their belonging to a typology expressed in Sansone's taxonomy or their legal status. This

## *Conclusions*

limitation is also an interesting future research point, especially given the strong diffusion of Corporate Incubators and their different objectives compared to other typologies of incubators.

Additionally, there is a challenge in distinguishing incubators from accelerators, which could lead to inaccurate results and conclusions, as already expressed in the previous chapter. These limitations need to be taken into account when evaluating the findings of the study and interpreting its results.

The conclusions of the study suggest a positive outlook for incubation activities in Italy. The estimated total turnover in the country has reached 552 million euros, which is the highest in the last 6 years and an increase from the previous year's estimate of 348 million euros. The total number of employees in the population has grown to 674, leading to an estimation of the total number of employees involved in incubation activities close to 3300. Furthermore, the number of incubation requests has also increased compared to the previous year. The attention towards specific services provided remains largely unchanged, except for a positive increase in attention towards entrepreneurial and managerial training. However, the average total funding of incubated startups has decreased compared to the previous year, and the data is similar to the 2020 analysis, which was based on 2019 data.

Future improvements to the study on incubators in Italy can enhance its validity and provide more comprehensive insights into the incubation ecosystem. One improvement would be to distinguish in the analysis between different other typologies of incubators, such as Corporate and University incubators, but also Science Parks and Research Centers, which would provide a better understanding of the specific contributions of each type of incubator. Specific sections could be added to take into account the specificity of these particular types of incubation mechanisms.

Another improvement, as previously stated, would be to clearly differentiate between incubators and accelerators based on an objective set of defined characteristics. Additionally, the construction of indicators of dimensions and performances of incubators can provide a more in-depth understanding of the incubation ecosystem. These indicators could include financial data, the number of employees, and funding of incubated startups, as well as an average amount of funding per incubated startup. These enhancements would provide a more comprehensive picture of the incubation ecosystem and its impact on startups and the economy.

The study on incubators in Italy has a high level of usability, as it can be used in a comparative way year after year to detect changes related to the state of the incubation ecosystem in Italy. This information can be useful for policymakers and stakeholders who are interested in the development

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of the startup ecosystem and the role that incubators play in supporting startups. By tracking changes in the incubation ecosystem, policymakers can make informed decisions about how to support and foster the growth of startups in Italy.

Incubators themselves can also benefit from this study by using it to adapt their strategies to the context. For example, incubators can compare their performance with others and identify areas for improvement. They can also use the study to understand the strengths and weaknesses of the incubation landscape in Italy and make informed decisions about how to position themselves in the market.

Investors and entrepreneurs can also benefit from this information, as it provides a snapshot of the incubation landscape in Italy, which can help inform their investment and business strategies.

Whether it be for policymakers, incubators, investors, or entrepreneurs, the study provides valuable information that can help support the growth and development of startups in Italy, with specific attention to Social entrepreneurship and innovation.

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